ARCHAEOLOGICAL SERVICES
DURHAM UNIVERSITY

on behalf of
Stockton-on-Tees Borough Council

Londonderry Bridge
Durham Road
Stockton-on-Tees

archaeological assessment and recording

report 4174
May 2016

Durham University

Contents

Figures

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1. Summary

The project

1.1 This report presents the results of archaeological assessment and building recording conducted in advance of the demolition and replacement of Londonderry Bridge, Durham Road, Stockton-on-Tees. The assessment comprised a search of pertinent documentary and cartographic records, records of archaeological interventions, the Historic Environment Record, and a site walk-over survey.

1.2 The works were commissioned by Stockton-on-Tees Borough Council and conducted by Archaeological Services Durham University.

Results

1.3 Londonderry Bridge was a vernacular sandstone and brick structure, without any specific architectural features of particular importance; its historical significance is as part of the continued industrial development and growth of Stockton-on-Tees during the early 19th century and the patronage of the 3rd Marquess of Londonderry. The Bridge was constructed in 1828 to carry the Durham Road over Lustrum Beck and improve access between the Londonderry Estate and the port and industries in Stockton. It is described as being constructed as a 'four span masonry bridge'; however, the results of this study indicate that no channel was constructed between piers 2 and 3. Rather, the foundations of the walls in this area were buttressed in order to further stabilise the bridge on the southern bank of the beck. Flood channels were constructed to the north and south; the infilling of this latter channel post-dated the widening of the bridge. The inner loadbearing areas of the channels were constructed from early 19th century hand-made bricks lacking any identifying marks.

1.4 The bridge was widened between 1900 and 1923 by approximately 3m, providing a *c.*1.5m pedestrian footway on either side of the bridge; the piers were extended with poured concrete and bridged with steel lintels, creating the pedestrian walkway on either side. Whilst the alterations made in the early 20th century did not enhance the structure, they do underline the functional and utilitarian purpose of the bridge, positioned on what was, until relatively recently, the main route toward Durham.

Recommendations

1.5 There are no further recommendations with regard to the historic building survey and recording of the bridge.

2. Project background

Location (Figures 1 & 2)

2.1 The site is Londonderry Bridge, which carries Durham Road over the Lustrum Beck in Stockton-on-Tees (NGR centre: NZ 43880 19853). The bridge covers an area of approximately 270m^2 and is situated within an area of mixed commercial and residential properties.

Development proposal

2.2 Planning permission has been granted by Stockton-on-Tees planning department for the demolition of the existing bridge and its replacement as part of a flood alleviation scheme. The planning application reference number is 15/1650/FUL.

Objective

2.3 The objective of the project was to provide a record of Londonderry Bridge prior to demolition, together with an account of its historical and archaeological development and significance. During the demolition process further examination and recording of structural elements of the bridge were to be undertaken.

2.4 The regional research framework (Petts & Gerrard 2006) contains an agenda for archaeological research in the region, which is incorporated into regional planning policy implementation with respect to archaeology. In this instance, the archaeological work was designed to address agenda item ID22, Industry and Transport, in respect of bridge construction.

Specification

2.5 The works have been undertaken in accordance with a specification provided Tees Archaeology (Appendix 3) and in accordance with a written scheme of investigation provided by Archaeological Services Durham University (reference DS16.173r). The assessment works comprised the study of pertinent cartographic and other historical sources, records of previous archaeological interventions, and sites listed in the Historic Environment Record (HER) within 1km of the proposed development area. HER references are referred to in brackets throughout the text of this report, and are listed in Appendix 1. The historic building survey is at level 2, as defined in *Understanding Historic Buildings* (English Heritage 2006). A catalogue of photographs is presented in Appendix 3.

Planning guidance

2.6 This assessment and its recommendations are a considered response to the proposed development in relation to Government policy, as it is set out in the *National Planning Policy Framework*.

Dates

2.7 The field visits took place on 21st April, and between 8th July and the 14th of July 2016. This report was prepared for July 2016.

Personnel

2.8 Research, recording and report preparation work was carried out by Benjamin Westwood, with graphics by Janine Watson. The Project Manager was Daniel Still.

OASIS

2.9 Archaeological Services Durham University is registered with the **O**nline **A**cces**S** to the **I**ndex of archaeological investigation**S** project (**OASIS**). The OASIS ID number for this project is **archaeol3-252640.**

3. Landuse, topography and geology

Landuse

3.1 At the time of this study, the proposed development area comprised the bridge situated within an urban area with adjacent residential and commercial properties.

Topography

3.2 The elevation of the upper road surface of the bridge rises slightly from approximately 9.1m OD to the south-east to 9.8m to the north-west.

Geology and soils

3.3 The underlying solid geology of the area comprises Permian and Triassic sandstone of the Sherwood Sandstone Group, overlain by Devensian diamicton till.

4. Historical and archaeological development

Previous archaeological works

4.1 No previous archaeological works have been identified within the proposed development area. However, there have been numerous archaeological works in the vicinity.

4.2 Desk based assessments were undertaken between 2006 and 2008 over two areas, Queen's Park North (HER 377) and Clarence Street (HER 578), approximately 500m to the east of the bridge. Subsequently a programme of building recording (HER 609) was undertaken over a number of 19th-century industrial structures at Queen's Park North, including the remnants of Blair's Engine Works (HER 4123), the North Shore Branch Railway (HER 4265) and a related coal depot (HER 4124).

4.3 In 1997 building recording (HER 1232) took place in connection with redevelopment in Wellington Square and road improvements on the western side of Stockton High Street, some 700m to the south-east of Londonderry Bridge. A series of terraces along North Street and Smith Street (HER 8744) were subject to detailed internal and external inspection, with exemplar properties studied in greater detail with floor plans. This included properties along Bishopton Lane, The Baptist Tabernacle (HER 7723), former Co-op building (HER 8741) and commercial premises along Nelson Terrace. Subsequent archaeological monitoring (HER 140) during the installation of services did not identify any further archaeological features or deposits.

4.4 Building recording (HER 97) was also undertaken in 2004 in advance of the demolition of a Unitarian Church south of Londonderry Bridge. A further building recording project (HER 844) was completed in advance of the conversion of a former Quaker Friends Meeting House (HER 904) in 2011, detailing the former Meeting House (HER 8038) which went out of use and was replaced by the current building in 1814 and the location of an associated burial ground (HER 8039).

4.5 A resistivity survey was undertaken in 1997 within the churchyard of St. Thomas (HER 6367), located approximately 1km to the south-east. The survey attempted to locate the footprint of the former medieval chapel (HER 765) that is said to have stood to the south of the present church (HER 3511); however, no definitive trace of an earlier chapel was noted. The majority of the churchyard (HER 6367) to the south of the church was surveyed. The main anomaly of significance was a north-south aligned ditch (HER 6371) that ran parallel with the High Street. Watching briefs were undertaken in 2007 and 2010 within the churchyard and grounds of St Thomas's parish church (HER 501 and 955) during service installations and landscaping. The brick foundations of a former mortuary chapel (HER 6368), grave markers, and disarticulated human remains were identified. A later watching brief in 2014 (HER 974) was undertaken in Church Road to the north of the church due to the chance discovery of human remains during improvement works. The partial skeletal remains of at least three individuals were recovered and a further burial was partially exposed but left *in situ*. All were probably interred during the 19th century.

The prehistoric period (up to AD 70)

4.6 There is no direct evidence of prehistoric activity in the study area.

The Roman period (AD 70 to 5th century)

4.7 There is no direct evidence of Roman activity in the study area.

The medieval period (5th century to 1540)

4.8 The place name Stockton most likely derives from Old-English *stocc*, meaning either place from where logs are obtained, or estate belonging to a religious house, and *tun* meaning farm. The implication is then that the settlement at Stockton on the high ground close to the northern bank of the River Tees functioned as part of the specialised economy within the parish of Norton, and thus the estates of Durham Abbey (Watts 2002). Whilst there is no account of the manor of Stockton being vested to the Bishop of Durham, it is clear that both Norton and Stockton long been temporal possessions of the church prior to the granting of the Earldom of Sadberge to the Bishop in 1189 (Sowler 1972). No remains dating to the early medieval period have been identified within the study area, with the exception of a sculptured stone (HER 6356), inscribed with a 10th-11th century 'key pattern', discovered during building work and subsequently built into the 1905 extension of St Thomas's church.

4.9 Stockton became a borough in the 13th century, and a castle (likely a fortified manor house) is recorded from 1376. A market charter was granted by Bishop Bek in 1310, the local river port economy being dominated by the export of wool (Sowler 1972). The earliest planned component of the medieval settlement of Stockton (HER 3552) consisted of an agricultural village set out around a village green. Little is known of the 'green' village other than it was situated at the northern end of the present town. The village plan in north eastern England generally took the form of two rows of properties on either side of a green. Should this be the case with Stockton it is possible that the village was laid out on either side of the High Street with Regent Street and Bishop Street marking its approximate southerly extent and Bishopton Lane and King Street the northern extent. Alternatively properties may have overlooked a square green with continuous frontage on all sides. Early maps of the town indicate two possible village greens to the east of the present church of St. Thomas, beneath the modern municipal buildings and police station.

4.10 No record of the old medieval chapel (HER 765) survived the construction of the present church of St. Thomas (1710-12), which is thought to stand slightly to the north of the original structure. The first chapel at Stockton was made before 1237 and may have had a much earlier origin. It then became a parochial chapelry practically independent of the parish church at Norton. Later it was described as the free chapel of St. Thomas the Martyr. Geophysical survey of the churchyard (HER 6367) did not identify any remains of the chapel, but did record the location of a boundary ditch (HER 6371).

The post-medieval period (1541 to 1899)

4.11 The town continued to grow in the 16th century, with the largely agricultural economy being supplemented by industries such as tanneries, breweries, and timber production (Stockton-on-Tees Borough Council, 2006). From the late medieval period onwards shipbuilding becomes increasingly important to the development of the town, together with the port and associated industries such as sail and rope making. By the 18th century Stockton had overtaken Yarm to become the most important river port in the region, serving the nearby Durham coalfields (*ibid*).

4.12 In the early 19th century large engineering projects were undertaken to straighten sections of the River Tees and shorten the journey to the sea, ensuring the continuing viability of the port. Goods for export continued to flow into the town, particularly following the construction of the Stockton and Darlington railway, which greatly increased the prosperity of the town (Sowler 1972). The combination of readily available coal, iron ore from newly discovered deposits in the Cleveland hills, and limestone from Yorkshire transformed the Tees valley. Heavy industry, steel production and engineering dominated the local economy, and the populations of Stockton and nearby Middlesbrough swelled (Stockton-on-Tees Borough Council, 2006).

4.13 Londonderry Bridge was constructed between 1828-9, the keystone being laid by the 3rd Marquess of Londonderry on the 9 December 1828. The bridge carries Durham Road over Lustrum Beck and, whilst some distance from Londonderry Estate at Wynyard Hall, it improved communication and access to Londonderry interests in the town and the port. The earliest map evidence comes from the 1844 tithe plan (Figure 4). Whilst the nearby 'Brown's Bridge', to the south-west, is named no label is attached to Londonderry Bridge. The pasture field, meadow, and associated dwelling house and gardens located to the north of the bridge are listed in the tithe apportionment as being owned by the Rev. John Gilpin and occupied by George Cummings. Both fields to the immediate south of the bridge are again owned by the Rev. Gilpin, with the south-eastern meadow being occupied by William Morton, and the south-western by Andrew Brown.

4.14 The 1st edition Ordnance Survey (OS) map of 1859 (Figure 5) shows little change to the area; however, the Londonderry Bridge is labelled and shown in more detail. As the bridge crosses the beck, it widens slightly as it reaches the northern bank. The southern bank of the Lustrum Beck is marked as forming the Municipal Boundary. Similarly, 2nd edition OS mapping in 1899 (Figure 6) shows little change had occurred in the near vicinity of the bridge, the exception being some residential house with allotments being constructed some distance from the bridge to the north-east. An 'old clay pit' marked along the Durham Road to the south-east is likely the brickearth pit of West Stockton (HER 4247).

4.15 The increased prosperity of the town is reflected in the number of sites and buildings dating from this period, most located in the historic core of the town to the east and south-east of the Londonderry Bridge (HER 8622). Those from the early post-medieval period include the almshouse (HER 763) located on the High street, the Quaker meeting house (HER 823), and a wall at Knowles Street car park (HER 3547). Also of note is the site of the Town Pump, which was recorded from 1722. Several houses and buildings dating from the 18th century have also been noted on the High Street (HER 7637; 7638; 7639; 7652; 7655 7656; 7657), on Church Road (HER 892; 893; 894; 7620), and also Dovecote Street (HER 897), Nelson Terrace (HER 3273) and the Riverside Inn (HER 3548). As noted above, St Thomas's church, together with the churchyard gates and the Metcalfe Tomb (HER 3511; 7634; 7635) also date from the 18th century, as does a further Friend's Meeting House with associated burial ground (HER 8038; 8039; 4955).

4.16 Similarly, many 19th-century houses and residential buildings have been included on the Historic Environment Record, including a number on Norton Road (HER 6532; 6533; 6534; 6535; 6536; 7659; 7660; 7662 7663), Dovecote Street (HER 904; 5519; 7621; 7622; 7623; 7626), Bishopton Lane (HER 7612; 7613), Brunswick Street (HER 7618; 7619), Tarring Street (HER 6952), Garbutt Street and High Street (HER 7630; 7653), Smith Street (HER 7671; 8744), William Street (7681), Victoria Terrace (HER 8461), Mill Street (HER 8469), and St. Bernard, Worthing and Buchanan (HER 6953). Bishopton House (HER 8735), the Board on Bishopton Road (HER 8736) and a well outside 150 High Street (HER 7204) are also recorded.

4.17 The public houses, inns and hotels noted are The Spotted Cow on Major Street (HER 8373), the Sun Inn on High Street (HER 7661), Queens Hotel (HER 426), the Station Hotel (HER 8737), Leeds Hotel (HER 8738), and the Mulberry Tree (HER 8745), whilst a Temperance Hall (HER 8430) is recorded on Dovecote Street. A number of churches and ancillary buildings are recorded, including Brunswick Methodist Chapel (HER 896), a mortuary chapel at St. Thomas's (HER 6368; 6369; 6370), the Church of St Mary (HER 7658, Norton Road Congregational Church (8685), Small Hall Salvation Army Barracks (HER 8427) and Stockton Unitarian Church (HER 4934). In addition a Masonic Lodge (HER 4935) and former Register Office at 23 Nelson Terrace (HER 8742) are recorded.

4.18 As might be expected, a number of commercial and industrial sites are recorded. The foundries and engineering works included are Portrack Lane iron working site (HER 1821), North Stockton Engineering Works (4120), Blair's Engine Works and coal depot (HER 4123; 4124), Phoenix Works and West Stockton iron working site (HER 4238; 4239), Bishopton Lane Brass Works (HER 4245), Ford Street Gas Works and Kirby Street gas holder (HER 4254; 4255), Vulcan rivet works, rivet and tool shop (HER 4256), Westbourne Ironworks and Clarence Foundry (HER4257; 4258), Globe Elevator Works and Stockton Forge Works (HER 4260; 4262), Perseverance Boiler Works and Moor Steel and Iron Works (HER 4271; 4272), and Ebblewhite's Foundry (HER 5302). Steam mills are recorded at Thompson Street (HER 4243) and on Dovecote Street (HER 4262). Rope-making industries listed are the Patent Rope Manufactory (HER 4121), Ropery Street and Ropewalk (HER 4163; 4164) and Dovecote Street Ropewalk (HER 4165). Canvas works are recorded on Bishopton Road (HER 4166; 4246). Several brickyards and tilemaking sites are noted, including Stockton Brickyard and Clarence Brick Works (HER 4125; 4126), Portrack Lane manufacturing site and yard (HER 4127; 4128), Stockton brick and tilemaking site

(HER 4139) and North Stockton brick and tilemaking site (HER 4137). Brickearth pits are noted at West Stockton (HER 4237), Norton Road (HER 4241; 4242), and near Blair's Engine Works (HER 4259). Other industrial sites include North Stockton malt kiln (HER 4138), North End saw mill (HER 4244), tobacco and corn mills on Bishopton Lane (HER 4252; 4253), Durham Street Warehouse (HER 8477), a workshop to the rear of 22 Dovecote Street (HER 8743), Primrose Hill Bakery on Durham Road (HER 8478) just to the north-east of Londonderry Bridge and Lustring House Mill (HER 4107) to the south-west.

4.19 Sites listed connected to the development of the railway in Stockton include Norton Road Railway Station (HER 4163), and engine house and retaining wall at Stockton station (HER 4167; 7840), and an extensive section of the N. E. R. North Shore Branch line (HER 4265).

The modern period (1900 to present)

4.20 Traditional industries began to decline in Stockton in the early 20th century, and economic focus shifted in the mid-20th century from heavy engineering to more specialised chemical engineering, particularly focused further down the Tees in new plants being constructed in and around Middlesbrough (Sowler 1972; Stockton-on-Tees Borough Council, 2006). Later 20th-century development of the town centre in Stockton saw wide-ranging changes to road layout, redevelopment of former industrial areas, and construction of new commercial areas and shopping centres (*ibid*).

4.21 By 1923 (Figure 7) OS mapping evidence show that the development of the town of Stockton has reached the Londonderry Bridge, with the area around the bridge being laid out with residential terraced housing, whilst to the immediate north-west of the bridge Rudd's School (HER 4983; later Newtown Infant School) was constructed in 1906. The exception is the area to the south-east of the bridge, which remained open undeveloped land. The form of the bridge also appears to have changed; the slight narrowing of the bridge shown on previous OS mapping is not evident. Later mapping in 1947 and the 1960s (Figures 8 and 9) show little change: a few buildings have been built to the south-east of the bridge, however much of the area here remains undeveloped. Further buildings and extensions have been added to the Newtown School.

4.22 A number of sites in the near vicinity of the bridge are listed on the Historic Environment Record, including Newton Methodist Church (HER 4982) located just 200m to the east and St. Paul's church on Bishopton Road (HER 6537) located 400m to the east.

4.23 Further listings in the wider study area include the Baptist Tabernacle on Wellington Street (HER 7723) and the Jackson tomb at the church of St. Thomas (HER 7636). Other listings include residential buildings on Bishopton Road (HER 8739; 8740) and commercial premises including a refuse destructor station dating from *c*.1918 (HER 4425), a bank on the High Street (HER 7654), Sparks' Daylight Bakery (HER 7836), former Co-op buildings on Wellington Street (HER8741), and the Globe Theatre (HER 7845).

4.24 Listings related to World War I include stables on Dixon Street (HER 8447) and the later war memorial on the High Street (HER 907). A World War II pillbox is located adjacent to 174 Durham Lane (HER 6885).

The buildings

4.25 There are several listed buildings within the study area, all lying in excess of 400m to the south-east of Londonderry Bridge and listed in the HER information given above (Appendix 1): non are impacted by the proposed development.

Scheduled ancient monuments and other designated heritage assets

4.26 The single scheduled ancient monument within the study area relates to the medieval Market Cross (SMR 34583) in Stockton, located 1km to the south-east of the bridge. Londonderry Bridge lies approximately 700m to the north-west of the Stockton Town Centre Conservation Area.

5. The bridge

Introduction (Figure 3)

5.1 The bridge was approximately 25m long and 8.5m wide. Two major phases of bridge construction were visible: the initial narrow phase of the bridge was visible in the road way, with the modern cast-iron bollards marking the approximate extent of the original bridge width (Figures 10 and 11). As discussed above, the bridge was widened to provide pedestrian access to either side of the roadway; map evidence indicates that this took place in the early 20th century. The five bridge piers discussed below are numbered sequentially, from the south.

South-west elevation

5.2 The squared and dressed sandstone blocks of the first phase of the bridge were visible to the north only in the area of the main channel and the northern circular channel, recessed beneath the upper pedestrian footway and parapet of the later phase (Figures 12, 13). The outer edges of both channels were finished with square sandstone blocks to form the arches. The main channel, visible above the waterline between piers 3 and 4, was constructed from hand-made bricks (measuring 228x110x70 mm) arranged in a simple stretcher bond over the upper courses of the arch barrel, and with a row of headers every fifth row on the lower sections (Figure 14). Examination of the cross-section of the channel following the removal of the outer sandstone facing during demolition revealed a thickness of three brick courses (Figure 32). The circular channel to the north (between piers 4 and 5) was completely visible above the waterline and was similarly lined with bricks arranged solely in a stretcher bond, two courses thick. Examination of the bricks from both channels following demolition did not reveal any identifying marks or stamps.

5.3 The later additions to the bridge were clearly visible as additions to the original structure. Four concrete piers are visible (pier 1 being buried within made ground), having been added to the face of the original bridge elevation, with steel lintels ('I' beams) between the piers. Examination of the lintels during later demolition of the bridge revealed they were forged at Dorman Long & Co. Ltd in Middlesbrough (Figures 33 and 34). The blocked channel to the south between piers 1 and 2 was not visible in this elevation due to made ground infilling the area against the elevation of the southern bank of the Lustrum Beck. The upper sections of the piers and the parapet were constructed from sandstone blocks similar to those of the original

structure. These are likely to be original features, moved outward when the pedestrian sections of the bridge were added (Figure 15). A very modern brick repair was visible to the south of the main channel in the upper portion of the bridge elevation, but below the parapet (Figure 16).

Parapets and roadway

5.4 Several sections and sandstone blocks in the upper parapet were very weathered and degraded (Figure 17). This was particularly apparent in the lower courses of the parapet, indicating that some upper sections and blocks have been replaced.

5.5 The parapet was topped with decorative finials and a handrail (Figure 18), whilst the pillars topping the piers at either end of the bridge had sandstone caps (Figure 19-22). The inner parapet stood to a height of 1m above the south-east pavement and roadway, which were surfaced with tarmac (Figure 23). Eleven cast-iron bollards (with a break for the bus-stop) were placed along the edge of the pedestrian pavement. A traffic-calming section with a lowered kerb projected into the roadway to the south, relating to the position of the bus-stop and shelter just to the north of the bridge. The pedestrian walkway to the north-east was paved, and had thirteen cast-iron bollards along the edge of the pavement. Weathering and degradation of some sandstone blocks was again visible, particularly on the inner face of the northern parapet (Figure 24).

North-east elevation

5.6 The north-eastern elevation of the bridge was similar to that of the south-west (Figure 25); however, much more of the elevation is visible, particularly at the south (Figure 26), and all of the concrete piers were visible. The upper section of a blocked channel was located between piers 1 and 2, of which about 0.7m was visible (Figure 27). The channel opening was infilled with very modern bricks arranged in a simple stretcher bond, with a single row of headers toward the ground level. During preparatory works for the demolition of the bridge the circular channel was re-excavated and shown to be similar in form to the northern-most channel (Figure 35). All three channels were shown to be similarly finished with squared sandstone block forming the arches. During the later demolition of the bridge a date of 1828 was recorded inscribed upon the keystone of the arch of the main channel (Figure 36). This section of bridge also provided an internal view of pier 1, showing that a 1.3m-wide section of concrete was poured against the original pier to accommodate the pedestrian walkway (Figure 28). The original pier was clearly visible, constructed from squared dressed sandstones, and projected from the original bridge elevation for *c.*0.4m. The original stone capping of the bridge, upon which we can assume the parapet was sited, projected slightly from the lower elevation by *c.*0.1m. Again, the steel lintels and concrete base of the pedestrian walkway were apparent.

5.7 Between piers 2 and 3 further modifications of the bridge design was visible, with a *c.*0.5m wide vertical portion of the sandstone elevation abutting a section that sloped outward toward the base, functioning to widen the bridge foundations following the crossing of the beck (Figure 29). An OS bench mark was identified on the stone work, and a circular blocked hole in the vertical part of the elevation here probably marked the position of an original drain or other fixing. There was no visible indication of a further infilled channel in this area indicating this section was part of the original structure. This was confirmed during demolition; the span between piers 2 and 3 was found to contain backfill, rubble and clay (Figure 37).

Demolition

5.8 Following the closure of the bridge, demolition commenced with the removal of the upper parapets and road surfaces (Figure 38). Following the removal of steel lintels and modern concrete piers from the second phase of construction, material sealing the bridge spans was then excavated to expose the brick arches of the northern and central channels (Figures 39 and 40).

5.9 Once exposed, the brick arches were collapsed and brickwork removed for examination (Figures 41 and 42). The removal of the northern-most channel revealed large oak beams beneath the brickwork, laid as a working surface during construction of the bridge (Figure 43). Deposits of sandstone and brick rubble had been placed directly between and above the arches during construction. This was then sealed by deposits of clay (up to 2m thick), upper backfill deposits containing modern services, and road surfaces.

Discussion

5.10 Londonderry Bridge was constructed to carry the Durham Road over Lustrum Beck, and improve access between the Londonderry Estate and the port and industries in Stockton. The bridge was a constructed under the patronage of the 3rd Marquess of Londonderry, with the keystone, identified in the north-eastern arch, laid by the Marquess on the 9th December 1828. The bridge is described as being constructed as a 'four span masonry bridge'; however, the results of this study indicate that no channel was constructed between piers 2 and 3. Rather, the foundations of the walls in this area were buttressed, and extensively infilled, in order to further stabilise the bridge on the southern bank of the beck. Geotechnical investigations of this area previously noted backfill commensurate with this section of the bridge being an original solid abutment (Lavender 2015). Flood channels were constructed to the north, immediately adjacent to the main channel between piers 4 and 5, and to the south between piers 1 and 2; the channels are broadly symmetrical in form. The infilling, following the silting-up, of the southern channel appears to post-date the widening of the bridge. The inner loadbearing areas of the channels were constructed from hand-made bricks lacking identifying frogs or stamps, but conforming to the form and dimensions of early 19th century bricks (McComish 2015). Map evidence indicates that the bridge was widened between 1900 and 1923 by approximately 3m, providing a *c.*1.5m pedestrian footway on either side of the bridge; the piers were extended with poured concrete and bridged with steel lintels, creating the pedestrian walkway on either side (Figures 30 and 31).

6. Assessment

6.1 Londonderry Bridge is a vernacular sandstone and brick structure, without any specific architectural features of particular importance; its historical significance is as part of the continued industrial development and growth of Stockton-on-Tees during the early 19th century, and of the patronage of the 3rd Marquess of Londonderry.

6.2 The alterations made in the early 20th century did not enhance the structure, consisting mainly of poured concrete piers, walkways, and exposed steel lintels. They do however underline the functional and utilitarian purpose of the bridge, positioned on what was, until relatively recently, the main route towards Durham.

7. Recommendations

7.1 There are no further recommendations with regard to the historic building survey and recording of the bridge.

8. Sources

Cartographic sources

Ordnance Survey 1st edition, 1859
Ordnance Survey 2nd edition, 1899
Ordnance Survey 3rd edition, 1923

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Stockton-on-Tess Borough Council, 2006 *SPD4: Conservation Areas and Historic Environment Folder, including all Conservation Area Appraisals and Management Plans: Supplementary Planning Document*

Watts, V., 2002 *A dictionary of County Durham Place-Names.* English Place-Name Society, Nottingham

Durham County Hall Archive

DDR/EA/TTH/1/228 Stockton-on-Tees township (Stockton-on-Tees parish). Tithe apportionment and map 1844

Websites

http://mapapps.bgs.ac.uk/geologyofbritain/home.html
http://magic.defra.gov.uk/

Geotechnical works

(see above: Lavender 2015)

Appendix 1: Historic Environment Record

The tables include sites recorded within the vicinity of the proposed development area (within an approximate radius of 1km from the site).

Historic Environment Record

(PRN = Public Record Number, SAM = Scheduled Ancient Monument)

PRN	SAM	Description	Date
763		Almshouse	Post Medieval
765		St. Thomas Graveyard and Chapel	Medieval
823		Meeting House	Post Medieval
892		Nos. 70 & 72 Church Road, Stockton	18th Century
893		Nos. 74 & 76 Church Road, Stockton	18th Century
894		No. 78 Church Road, Stockton	18th Century
896		Brunswick Methodist Chapel	19th Century
897		No. 32 Dovecot Street, Stockton	18th Century
904		No. 62 Dovecot Street, Stockton	19th Century
907		War Memorial, High Street, Stockton	20th Century
1821		Portrack Lane Iron Working Site	19th Century
3273		Nelson Terrace	18th Century
3511		Church Of St. Thomas, High Street	18th Century
3521		The Town Pump	17th Century
3547		Wall at Knowles St. Car Park	Post Medieval
3548		The Riverside Inn, Stockton	18th Century
3552		Stockton Village	Medieval
4107		Lustring House	19th Century
4120		North Stockton Engineering Works	19th Century
4121		Patent Rope Manufactory	19th Century
4123		Blair's Engine Works	19th Century
4124		South Of Blair's Engine Works, Coal Depot	19th Century
4125		Stockton Brickyard	19th Century
4126		Clarence Brick Works, Brick And Tilemaking Site	19th Century
4127		Portrack Lane, Brick And Tilemaking Site	19th Century
4128		Portrack Lane Brickyard	19th Century
4136		Norton Road Railway Station	19th Century
4137		North Stockton Brick And Tilemaking Site	19th Century
4138		North Stockton Malt Kiln	19th Century
4139		Stockton Brick And Tilemaking Site	19th Century
4162		Wind Of Steam Mill	19th Century
4163		Ropery Street	19th Century
4164		Ropewalk	19th Century
4165		Dovecote Street Ropewalk	19th Century
4166		Bishopton Lane Canvas Works	19th Century
4167		Engine House	19th Century
4168		Stockton Station, Bishopton Lane	19th Century
4237		West Stockton Brickearth Pit	19th Century
4238		Phoenix Works	19th Century
4239		West Stockton Iron Working Site	19th Century
4241		Norton Road Brickearth Pit	19th Century
4242		Norton Road Brickearth Pit	19th Century
4243		Thompson Street Steam Mill	19th Century
4244		North End Saw Mill	19th Century
4245		Bishopton Lane Brass Works	19th Century
4246		Bishopton Lane Canvas Works	19th Century
4252		Bishopton Lane Tobacco Factory	19th Century
4253		Bishopton Lane Corn Mill	19th Century
4254		Ford Street Gas Works	19th Century
4255		Kirby Street Gas Holder	19th Century
4256		Vulcan Rivet Works, Rivet And Tool Shop	19th Century
4257		Westbourne Ironworks	19th Century
4258		Clarence Foundry	19th Century

PRN	SAM	Description	Date
4259		Brickearth Pit near Blairs Engine Works	19th Century
4260		Globe Elevator Works	19th Century
4265		N. E. R. North Shore Branch	19th Century
4262		Stockton Forge Works	19th Century
4271		Perseverance Boiler Works	19th Century
4272		Moor Steel And Iron Works	19th Century
4425		Refuse Destructor Station	20th Century
4934		Stockton Unitarian Church	19th Century
4935		Masonic Lodge	19th Century
4955		Millfield House, 84 Dovecot Street	19th Century
4982		Newton Methodists Church	20th Century
4983		Rudd's School	20th Century
5302		Ebblewhite's Foundry	19th Century
5519		45-53 Dovecote Street, Stockton	19th Century
6156		Stockton Parish Church	Early Medieval
6367		St. Thomas Churchyard	Medieval
6368		St. Thomas, Stockton Mortuary Chapel	19th Century
6369		St. Thomas, Stockton Mortuary Chapel	19th Century
6370		St. Thomas, Stockton Mortuary Chapel	19th Century
6371		Boundary Ditch, Churchyard Of St. Thomas, Stockton	Medieval
6532		2-8 Norton Road, Stockton	19th Century
6533		31 Norton Road, Stockton	19th Century
6534		33-35 Norton Road, Stockton	19th Century
6535		37 Norton Road, Stockton	19th Century
6536		39 Norton Road, Stockton	19th Century
6537		St. Paul's Church, Bishopton Road	20th Century
6885		Pillbox adjacent To 174 Durham Lane, Norton	World War II
6952		Tarring Street, Stockton	19th Century
6953		St. Bernard, Worthing And Buchanan	19th Century
7204		Well outside 150 High Street, Stockton	19th Century
7612		Nos. 55-61 Bishopton Lane, Stockton	19th Century
7613		Nos. 63-81 Bishopton Lane, Stockton	19th Century
7618		No. 1 Brunswick Street, Stockton	19th Century
7619		No. 2 Brunswick Street, Stockton	19th Century
7620		No. 16 Church Road, Stockton	18th Century
7621		Wall Of No. 62 Dovecot St, Stockton	19th Century
7622		No. 64 Dovecot Street, Stockton	19th Century
7623		No. 66 Dovecot Street, Stockton	19th Century
7626		No. 98 Dovecot Street, Stockton	19th Century
7630		No. 41 Garbutt Street, Stockton	19th Century
7634		Gates Of Church Of St. Thomas	18th Century
7635		Metcalfe Tomb, Church Of St. Thomas	18th Century
7636		Jackson Tomb, Church Of St. Thomas	20th Century
7637		No. 16 High Street, Stockton	18th Century
7638		No. 25 High Street, Stockton	18th Century
7639		No. 25 High Street, Stockton	18th Century
7652		No. 134C High Street, Stockton	18th Century
7653		No. 135 High Street, Stockton	19th Century
7654		No. 136 High Street, Stockton (Bank)	20th Century
7655		Nos 140 & 141 High Street, Stockton	18th Century
7656		Nos 148 &149 High Street, Stockton	18th Century
7657		No. 153A/153B High Street, Stockton	18th Century
7658		Church Of St Mary, Stockton-On-Tees	19th Century
7659		No. 29 Norton Road, Stockton	19th Century
7660		No. 41 Norton Road, Stockton	19th Century
7661		The Sun Inn/No. 24 High Street	19th Century
7662		Nos. 60-82 Norton Road, Stockton	19th Century
7663		No. 43 Norton Road, Stockton	19th Century
7671		Nos. 15 & 16 Smith Street, Stockton	19th Century
7681		Nos. 32, 33 And 34 William Street, school	19th Century
7723		Baptist Tabernacle, Wellington St.	20th Century

PRN	SAM	Description	Date
7836		Sparks' Daylight Bakery, Stockton	20th Century
7840		Stockton Station Retaining Wall	19th Century
7845		Globe Theatre, Stockton High Street	20th Century
8038		Friend's Meeting House, Stockton	18th Century
8039		Friends Burial Ground, Dovecote Street, Stockton	18th Century
8373		The Spotted Cow, Major Street	19th Century
8426		Queen's Hotel	19th Century
8427		Small Hall, S. A. Barracks	19th Century
8430		Temperance Hall, Dovecote Street	19th Century
8447		Dixon Street Stables	World War I
8461		2, Victoria Terrace	19th Century
8469		17, Mill Street	19th Century
8477		Durham Street Warehouse	19th Century
8478		Primrose Hill Bakery, Durham Road	19th Century
8622		Londonderry Bridge, Durham Road	19th Century
8685		Norton Road Congregational Church	19th Century
8735		Bishopton House	19th Century
8736		The Board, Bishopton Road	19th Century
8737		The Station Hotel, Bishopton Lane	19th Century
8738		The Leeds Hotel, Bishopton Lane	19th Century
8739		7 Bishopton Lane, Stockton	20th Century
8740		21 Bishopton Lane, Stockton	20th Century
8741		Former Co-op, Wellington Street	20th Century
8742		Former Register Office, 23 Nelson Terrace	19th Century
8743		Workshop rear of 22 Dovecote Street, Stockton	19th Century
8744		Smith Street, Stockton	19th Century
8745		The Mulberry Tree, Stockton	19th Century
34583	*	Stockton market cross	Medieval

Listed buildings

PRN	Description	Grade
892	70 & 72 Church Road, Stockton	II*
893	74 & 76 Church Road, Stockton	II*
894	78 Church Road, (Columbia House), Stockton	II*
897	32 Dovecot Street, Stockton	II*
904	62 Dovecot St. (Friends Meeting House), Stockton	II*
907	St. Thomas, Stockton	II*
907	War Memorial, High Street, Stockton	II*
3511	St. Thomas, Stockton	I
3511	Church of St. Thomas, High St. Stockton	I
4168	Stockton Railway Station, Bishopton Lane, Stockton	II
6532	2-8 Norton Road & 1 King Street, Stockton	II
6533	31 Norton Road, Stockton	II
6534	33-35 Norton Road, Stockton	II
6535	37 Norton Road, Stockton	II
6536	39 Norton Road, Stockton	II
6537	St. Paul's Church, Bishopton Road	II
7612	55-61 Bishopton Lane, Stockton	II
7613	63-81 Bishopton Lane, Stockton	II
7618	1 Brunswick St. Stockton	II
7619	2 Brunswick St. Stockton	II
7620	16 Church Road, Stockton	II
7621	64 Dovecot Street, Stockton	II
7623	66 Dovecot Street, Stockton	II
7626	98 Dovecot St. Stockton	II
7630	41 Garbutt Street, Stockton	II
7634	Gates of Church of St. Thomas, High St. Stockton	II
7637	16 High Street (The Haven Restaurant), Stockton	II
7638	25 High Street, Stockton	II
7639	26 & 27 High St. (Lloyd's Bank), Stockton	II

PRN	Description	Grade
7652	134c High Street, Stockton	II
7653	135 High Street (Freeman Hardy & Willis), Stockton	II
7654	136 High Street (Midland Bank), Stockton	II
7655	140 & 141 High Street, Stockton	II
7656	148 & 149 High Street, Stockton	II
7657	153A & 153B High Street, Stockton	II
7658	Church of St Mary, Norton Road, Stockton	II
7659	29 Norton Road, Stockton	II
7660	41 Norton Road, Stockton	II
7661	The sun Inn & 24 High Street, Stockton	II
7662	60-82 Norton Road, Stockton	II
7671	15 &16 Smith Street, Stockton	II
7681	32, 33, 34 William Street, Stockton	II
7836	Sparks Daylight Bakery, Bishopton Avenue, Stockton	II
7840	Retaining Wall of Stockton Railway Station	II
7845	Globe Theatre, High Street, Stockton-On-Tees	II

Previous archaeological interventions

PRN	description
97	Stockton Unitarian Church: building recording
140	Wellington Square, Stockton: watching brief
377	Queen's Park, Norton Road, Stockton on Tees, desk based assessment
501	Churchyard of St. Thomas, Stockton: watching brief
503	Churchyard of St. Thomas, Stockton: geophysical survey
578	Clarence Street, Stockton: desk based assessment
609	Queen's Park, Stockton on Tees: building recording
844	62 Dovecot Street, Stockton: building recording
955	Stockton Parish Church: watching brief
974	Church Road (south side), Stockton-on-Tees: watching brief
1232	Wellington Square North Street, Stockton - Areas A-Q: building recording

Appendix 2: Catalogue of photographs

Project name: Londonderry Bridge (photographic survey)

Camera: Canon G16

Frame	Facing	Description
1	E	Oblique view across bridge
2	E	Oblique view across bridge
3	S	Oblique view across bridge
4	S	Oblique view across bridge
5	W	Oblique view across bridge
6	W	Oblique view across bridge
7	N	Oblique view across bridge
8	N	Oblique view across bridge
9	SW	Internal elevation of bridge south-western parapet, south-east portion
10	SW	Internal elevation of bridge south-western parapet, south-east portion
11	SW	Internal elevation of bridge south-western parapet, north-west portion
12	SW	Internal elevation of bridge south-western parapet, north-west portion
13	NE	Internal elevation of bridge north-eastern parapet, north-west portion
14	NE	Internal elevation of bridge north-eastern parapet, north-west portion
15	NE	Internal elevation of bridge north-eastern parapet, south-east portion
16	NE	Internal elevation of bridge north-eastern parapet, south-east portion
17	W	Oblique view of internal elevation of south-western parapet
18	W	Oblique view of internal elevation of south-western parapet
19	S	Oblique view of internal elevation of south-western parapet
20	S	Oblique view of internal elevation of south-western parapet
21	W	Elevation: south-western parapet, south-west pillar
22	W	Elevation: south-western parapet, south-west pillar
23	NE	Elevation: south-western parapet, south-west pillar
24	NE	Elevation: south-western parapet, south-west pillar
25	NE	External elevation of bridge south-western parapet, south-east portion
26	NE	External elevation of bridge south-western parapet, south-east portion
27	N	Oblique view of external elevation of south-western parapet
28	N	Oblique view of external elevation of south-western parapet
29	NE	External elevation of bridge south-western parapet, north-west portion
30	NE	External elevation of bridge south-western parapet, north-west portion
31	N	Detail of south-west elevation of north-east circular channel
32	N	Detail of south-west elevation of north-east circular channel
33	N	Detail of bridge extension and beam, south-western parapet
34	N	Detail of bridge extension and beam, south-western parapet
35	NE	View of south-west external elevation of bridge
36	NE	View of south-west external elevation of bridge
37	SW	Elevation: south-western parapet, north-west pillar
38	SW	Elevation: south-western parapet, north-west pillar
39	NW	Elevation: north-eastern parapet, north-west pillar
40	NW	Elevation: north-eastern parapet, north-west pillar
41	N	Elevation: north-eastern parapet, south-east pillar
42	N	Elevation: north-eastern parapet, south-east pillar
43	W	Elevation: north-eastern parapet, south-east pillar and pier
44	W	Elevation: north-eastern parapet, south-east pillar and pier
45	SW	External elevation of bridge north-eastern parapet, south-east portion
46	SW	External elevation of bridge north-eastern parapet, south-east portion
47	W	External elevation of bridge north-eastern parapet, north-west portion (oblique view)
48	W	External elevation of bridge north-eastern parapet, north-west portion (oblique view)
49	W	View of north-east external elevation of bridge
50	W	View of north-east external elevation of bridge
51	SW	View of sealed culvert, north-eastern elevation of bridge
52	SW	View of sealed culvert, north-eastern elevation of bridge

Frame	Facing	Description
53	SE	View beneath bridge: elevation showing original stone bridge and concrete pedestrian addition
54	SE	View beneath bridge: elevation showing original stone bridge and concrete pedestrian addition
55	SW	View beneath bridge: elevation showing original stone bridge and concrete pedestrian addition
56	SW	View beneath bridge: elevation showing original stone bridge and concrete pedestrian addition
57	W	View beneath bridge: main channel and concrete pedestrian addition
58	W	View beneath bridge: main channel and concrete pedestrian addition
59	NE	Modern brick repair to external south-western parapet of bridge
60	NE	Modern brick repair to external south-western parapet of bridge
61	SW	Detail of degraded sandstone, north-west section of internal south-western parapet
62	SW	Detail of degraded sandstone, north-west section of internal south-western parapet
63	NE	Detail of degraded sandstone, north-west section of external south-western parapet
64	NE	Detail of degraded sandstone, north-west section of external south-western parapet
65	SW	Detail of repair to south-western parapet, internal elevation
66	SW	Detail of repair to south-western parapet, internal elevation
67	NE	Detail of degraded sandstone and repairs, north-west section of internal north-eastern parapet
68	NE	Detail of degraded sandstone and repairs, north-west section of internal north-eastern parapet
69	NE	Detail of degraded sandstone, south-east section of internal north-eastern parapet
70	NE	Detail of degraded sandstone, south-east section of internal north-eastern parapet
71	NW	View along carriageway toward bridge
72	NW	View along carriageway toward bridge
73	SE	View along carriageway toward bridge
74	SE	View along carriageway toward bridge
75	-	Detail of date on keystone, north eastern elevation, main channel
76	SW	Expanded detail of date on keystone, north eastern elevation, main channel
77	NW	Main channel, beck culverted, immediately prior to demolition
78	NW	Detail of steel lintel in-situ, north-east elevation
79	NE	Detail of brickwork, main channel
80	NW	Detail of northern channel, immediately prior to demolition
81	-	Detail of makers stamp, steel lintel
82	SW	Southern channel, following re-excavation and backfilling
83	N	North-east elevation, during demolition
84	NE	Removal of parapets and road surfaces, during demolition
85	NE	Removal of parapets and road surfaces, during demolition
86	NE	Removal of parapets and road surfaces, during demolition
87	NE	Removal of parapets and road surfaces, during demolition
88	NE	Removal of parapets and road surfaces, during demolition
89	NE	Removal of parapets and road surfaces, during demolition
90	NE	Removal of parapets and road surfaces, during demolition
91	NE	Removal of parapets and road surfaces, during demolition
92	SE	South-west elevation, during demolition
93	NE	Excavation of clay over northern channel, during demolition
94	NE	Removal of parapets and road surfaces, during demolition
95	NE	Removal of parapets and road surfaces, during demolition
96	NW	North-east elevation, during demolition
97	S	Removed steel lintels
98	S	Northern channel during excavation and demolition
99	S	Northern channel during excavation and demolition
100	S	Northern channel during excavation and demolition
101	S	Northern channel during excavation and demolition
102	SE	Northern channel during excavation and demolition
103	SW	Main channel, cross section, prior to demolition
104	SW	Main channel, cross section, prior to demolition
105	-	Keystone with inscribed date, removed from the bridge

Frame	Facing	Description
106	-	Keystone with inscribed date, removed from the bridge
107	-	Keystone with inscribed date, removed from the bridge
108	N	North-east elevation during demolition
109	-	Benchmark stone removed from north-east elevation
110	NW	Detail of rubble backfill, north-east elevation between piers 2 and 3
111	NW	Detail of rubble backfill, north-east elevation between piers 2 and 3
112	W	North-east elevation during demolition
113	S	Main channel exposed prior to demolition
114	S	Main channel exposed prior to demolition
115	S	Main channel exposed prior to demolition
116	NE	Demolition of main channel
117	NE	Demolition of main channel
118	NE	Demolition of main channel
119	NE	Demolition of main channel
120	NE	Demolition of main channel
121	NE	Demolition of main channel
122	NE	Demolition of main channel
123	NE	Demolition of main channel
124	NE	Demolition of main channel
125	NE	Demolition of main channel
126	NE	Demolition of main channel
127	NE	Demolition of main channel
128	NE	Demolition of main channel
129	NW	Demolition of main channel
130	W	Demolition of main channel
131	NE	Detail of wooden beams removed from beneath northern channel
132	NE	Demolition of main channel
133	SW	Southern channel during excavation
134	SW	Southern channel during re-opening prior to excavation

Appendix 3: Project specification

Brief for historic building recording at Londonderry Bridge, Durham Road, Stockton-on-Tees

1 Introduction

1.1 Site location

Londonderry Bridge carries Durham Road over Lustrum Beck. The national grid reference for the site is NZ 43880 19853. The bridge is in active use by traffic and pedestrians.

1.2 The proposed development

A planning permission has been granted by Stockton-on-Tees planning department for the demolition of the existing bridge and its replacement as part of a flood alleviation scheme (Ref No: 15/1650/FUL).

1.3 Heritage summary

Londonderry Bridge (HER 8622) was constructed in 1828-9 and the keystone was laid by the 3rd Marquess of Londonderry on the 9 December 1828. The Marquess was particularly active with improvements to the Wynyard Estate in the 1820s. Although at some distance from Wynyard Hall a bridge at this location would improve communication and access to the Estate.

The bridge was constructed as a four-span masonry bridge, with a parapet of four courses with pillars and stone caps to the ends. Two of the original arches have been blocked and the bridge has been widened to create a footpath on either side.

The bridge was subject to an initial assessment for listing by Historic England in February 2016, but the application was not taken forward to a full assessment and the bridge was not listed as being too altered.

1.4 Previous archaeological work

No previous archaeological work has taken place at the site.

2 Aims

2.1 Planning requirements

The results of the historic building recording are required to allow Stockton-on-Tees Borough Council to discharge the planning condition (Planning Application No: 15/1650/FUL, Condition No. 4) relating to the heritage asset within the development area.

2.2 Research objectives

The historic building recording should attempt to define: -

- The construction, engineering techniques, phasing and use of Londonderry Bridge.

This is in line with the Regional Research Agenda for the area (Petts & Gerrard 2006) sections ID22.

2.3 Professional Standards

The project should be carried out in line with: -Chartered Institute for Archaeologists 2014 Charter and By-Law & Code of Conduct CIfA and Yorkshire, The Humber and the North East 2009 A Regional Statement of Good Practice for Archaeology in the Development Process

3 Methodology

3.1 Desk based assessment

3.1.1 The desk based assessment should be produced according the guidance given in Chartered Institute for Archaeologists 2014 Standard and Guidance for Archaeological Desk Based Assessment CIfA and its associated Introduction and Appendices.

3.1.2 The desk based assessment should review the following sources within 1 km of the development area: -

- The Historic Environment Record (held by Tees Archaeology)
- The National Record of the Historic Environment (held by Historic England)
- Historic maps including all historic editions of the Ordnance Survey plans (including those circa 1861, 1898, 1923, 1954 & 1975).
- Aerial Photographs including those held at Tees Archaeology including the 1946-48 RAF prints and any other relevant items in the collection.
- Written local histories including the Victoria County History and any other relevant local volumes.
- Any geological or geotechnical data that is available for the site.
- Teesside Archives and Durham County Council Archives, particularly for any archival documents including estate records, early directories, electoral registers and planning applications.
- Any surviving deeds for the property held by the current owner.

3.2 Historic Building Survey

3.2.1 The historic building survey should comprise a photographic, drawn and written record of the bridge to the Level 2 standards detailed by English Heritage 2006 Understanding Historic Buildings: A guide to good practice English Heritage. The survey should be produced according the guidance given in Chartered Institute for Archaeologists 2014 Standard and Guidance for the Archaeological Investigation and Recording of Standing Buildings or Structures CIfA and its associated Introduction and Appendices.

3.2.2 A visual assessment should be made of all buildings on the site. A written account should be made giving the precise location of the buildings and their features, a summary descriptive statement, building materials, possible dates, a summary of the plan, form, function, age and development sequence.

3.2.3 The photographic record should consist of:

- general views of the buildings.
- all external elevations including details of openings and other features.
- general views of the bridge along with details of features of interest including decorative details.
- constructional details, including any details which might help to phase the structures.

3.2.4 A digital camera of at least 10 mega pixels should be used for all aspects of the photographic work to produce high quality images from which significant enlargements can be made. A second series of images should be taken on a 35mm SLR camera using black and white film for archival purposes.

3.2.5 An appropriate scale should be present in all photographs. Artificial lighting should be used where necessary.
3.2.6 Full and detailed photographic record sheets cross-referenced to the prints, negatives, slides and scale plans should be produced.
3.2.7 A measured scale plan drawing of the bridge should be made and included in the report at an appropriate scale that shows the general layout with annotated features of interest.
3.2.8 Periodic visits should be made to the bridge during the demolition process to record any additional details revealed, particularly those relating to its construction and phasing.

4 Written Scheme of Investigation

4.1 The current brief should not be considered sufficient to enable the execution of the project. A Written Scheme of Investigation will be required to provide the basis for a measurable standard for monitoring. The method statement should be prepared in response to this brief in the format set out in Appendix 2 of English Heritage. 1991. Management of Archaeological Projects.
4.2 The method statement should particularly:-
- demonstrate the techniques, materials and recording systems to be employed
- provide a provisional programme for undertaking the fieldwork, processing of the data, report preparation and the deposition of the project archive
- identify the staff involved, their qualifications, and those who will be carrying out specialist assessments
- demonstrate that the work will be undertaken in accordance with all relevant health and safety legislation.

5 Monitoring

5.1 The Tees Archaeology Officer will monitor all archaeological projects carried out within the area. The first stage of monitoring will be to agree the Written Scheme of Investigation specified in this brief.
5.2 The Tees Archaeology Officer or his representative will be notified in writing at least two weeks in advance of the fieldwork taking place and should be allowed on site to inspect and monitor the work at any reasonable time.
5.3 The monitoring will be in the form of a visit or number of visits by a member of Tees Archaeology and the completion of a monitoring form on site. The archaeological contractor will be notified if standards contained in the Written Scheme of Investigation are not being met.
5.4 The report for the work and deposition of archive will also be monitored and standards enforced where required.

6 Report and Recommendations

6.1 The information from the fieldwork should be brought together in a bound report. The report should present the information together with local, regional and national parallels. Reference and comparisons should be made to contemporary sites.
6.2 The report should include: -
i) an executive summary including dates of fieldwork, the names of the persons undertaking the work, the commissioning client, OASIS record number, unique site code and a summary of the results including details of any significant finds or features
ii) a location map sufficient to be able to define the extent of the site and location of fieldwork
iii) a description of the aims of the work referenced to the appropriate Research Framework and development background
iv) a description of the methodologies employed
v) a description of the results of the work
vi) an interpretation of the development of the site
vii) detailed interpretation of each phase of archaeological activity
viii) specialist reports on all relevant subject matter
ix) supporting illustrations, plans and photographs
x) a map regression exercise for the general area
xi) a walk around description of the bridge
xii) an appendix listing the photographic material and including a plan or series of plans showing the location and direction of each photograph taken.
xiii) A conclusion which refers back to the aims of the project and indicates whether or not these aims have been met and clearly indicating if further archaeological work is required.
xiv) References and sources
6.3 It is not envisaged that the report is likely to be published, but it should be produced with sufficient care and attention to detail to be of academic use to future researchers. A copy of this brief and a quantified index to the field archive should also be bound into the back of the report.
6.4 Three printed copies and one digital version (.pdf-a) of the report should be forwarded to the Tees Archaeology Historic Environment Record.

7 Archive

7.1 All original site records and post-excavation material (paper based, photographic and digital) along with finds and sample residues should be transferred to a permanent archive following completion of the project. The site archive should be prepared in line with the guidance given in Archaeological Archives Forum. 2007. Archaeological Archives: A Guide to Best Practice in Creation, Compilation, Transfer and Curation. A.A.F.
7.2 The documentary and photographic archive should be deposited with Tees Archaeology at Sir William Gray House, Clarence Road, Hartlepool, TS24 8BT. Tees Archaeology acts as a permanent store for this material on behalf of the districts of Hartlepool and Stockton-on-Tees. This should be donated to Tees Archaeology by the Archaeological Contractor by means of a Transfer of Title form.

7.3 Unless overridden by National Law any artifacts recovered from the site belong to the landowner. The contracting archaeologist should arrange for the artifacts to be deposited with Tees Archaeology. Tees Archaeology acts as a permanent store for archaeological finds for the Museums Services of the boroughs of Hartlepool and Stockton-on-Tees. A completed Transfer of Title Deed should accompany any material deposited with Tees Archaeology. Tees Archaeology must have legal ownership of artefacts in order to justify expenditure on, documentation, packaging, storage and research that each item will require and to allow future transfer to the appropriate museum.

7.4 Site photography should be provided in both conventional black and white and colour digital formats. The black and white film photography should be captured on a 35mm SLR camera using conventional (not chromogenic) silver-based film only, such as Illford FP4 or HP5, or Delta 400 Pro that is replacing HP5 in certain film sizes (such as 220). Dye-based films such as Ilford XP2 and Kodak T40CN are unacceptable due to poor archiving qualities. Film should be processed to British Standard 5699 which is the archival ideal and is recognised as suitable for long-term storage. Negatives and 6" x 4" prints should be provided in archive stable wallets suitable for hanging in a filing cabinet.

7.5 Digital images should be captured on a SLR camera at a minimum resolution of 10 mega-pixels. The camera must be set at the largest file size and highest picture quality. Images are acceptable as high quality .jpg files or camera .raw files. If the .raw setting is used the archive must include a set of images saved as .tiff files as manufacturer specific specialist software may be required to open the .raw files.

8 OASIS

8.1 Tees Archaeology supports the Online Access to Index of Archaeological Investigations (OASIS) Project. The overall aim of the OASIS project is to provide an online index to the mass of archaeological grey literature that has been produced as a result of the advent of large scale developer funded fieldwork.

8.2 The archaeological contractor must therefore complete the online OASIS form at http://ads.ahds.ac.uk/project/oasis/ within 3 months of completion of the work. Contractors are advised to ensure that adequate time and costings are built into their tenders to allow the forms to be filled in.

8.3 Technical advice should be sought in the first instance from OASIS (oasis@ads.ahds.ac.uk) and not from Tees Archaeology.

8.4 Once a report has become a public document by submission to or incorporation into the HER, Tees Archaeology will validate the OASIS form thus placing the information into the public domain on the OASIS website.

8.5 The archaeological consultant or contractor must indicate that they agree to this procedure within the specification/project design/written scheme of investigation submitted to Tees Archaeology Section for approval.

9 Health and Safety

9.1 Health and Safety issues will be addressed principally by the archaeological contractor and the developer. The archaeological contractor will set out their health and safety procedures in the Written Scheme of Investigation. Contractors are expected to abide by the 1974 Health and Safety Act and its subsequent amendments. Safe working practice should be adopted according to the legislation and follow the guidance given in Federation of Archaeological Managers and Employers 2010 Manual of Health and Safety in Field Archaeology. It is recommended that a risk assessment for any fieldwork project is completed prior to the start of works.

Brief prepared by: Peter Rowe (peter.rowe@hartlepool.gov.uk; 01429 523458).
Date of Brief: 23 March 2016

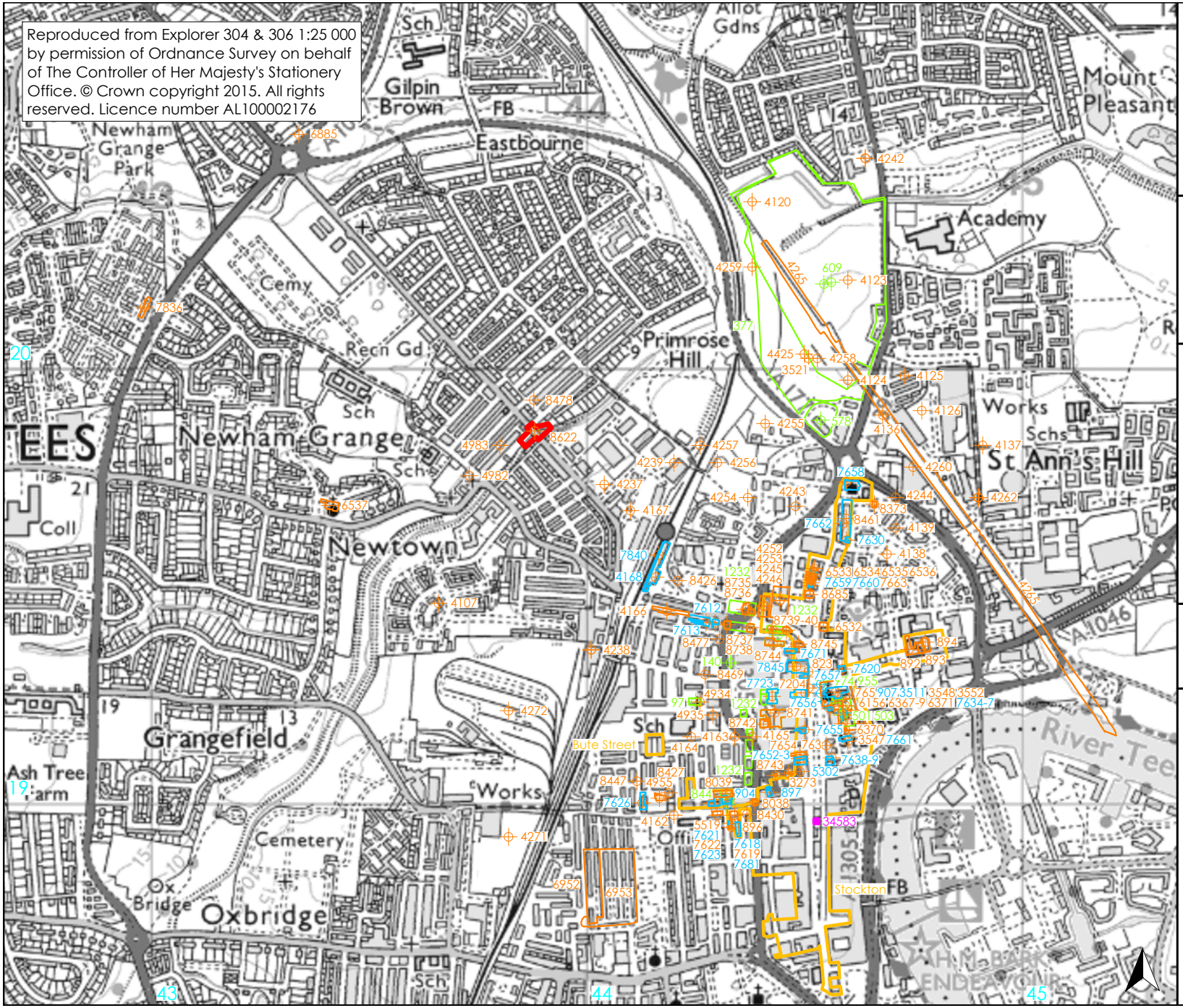

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Figure 1: Site location and Historic Environment Record

0 500m
scale 1:12 500 for A4 plot

- proposed development area
- HER site
- event
- listed building
- scheduled monument 34583
- conservation area

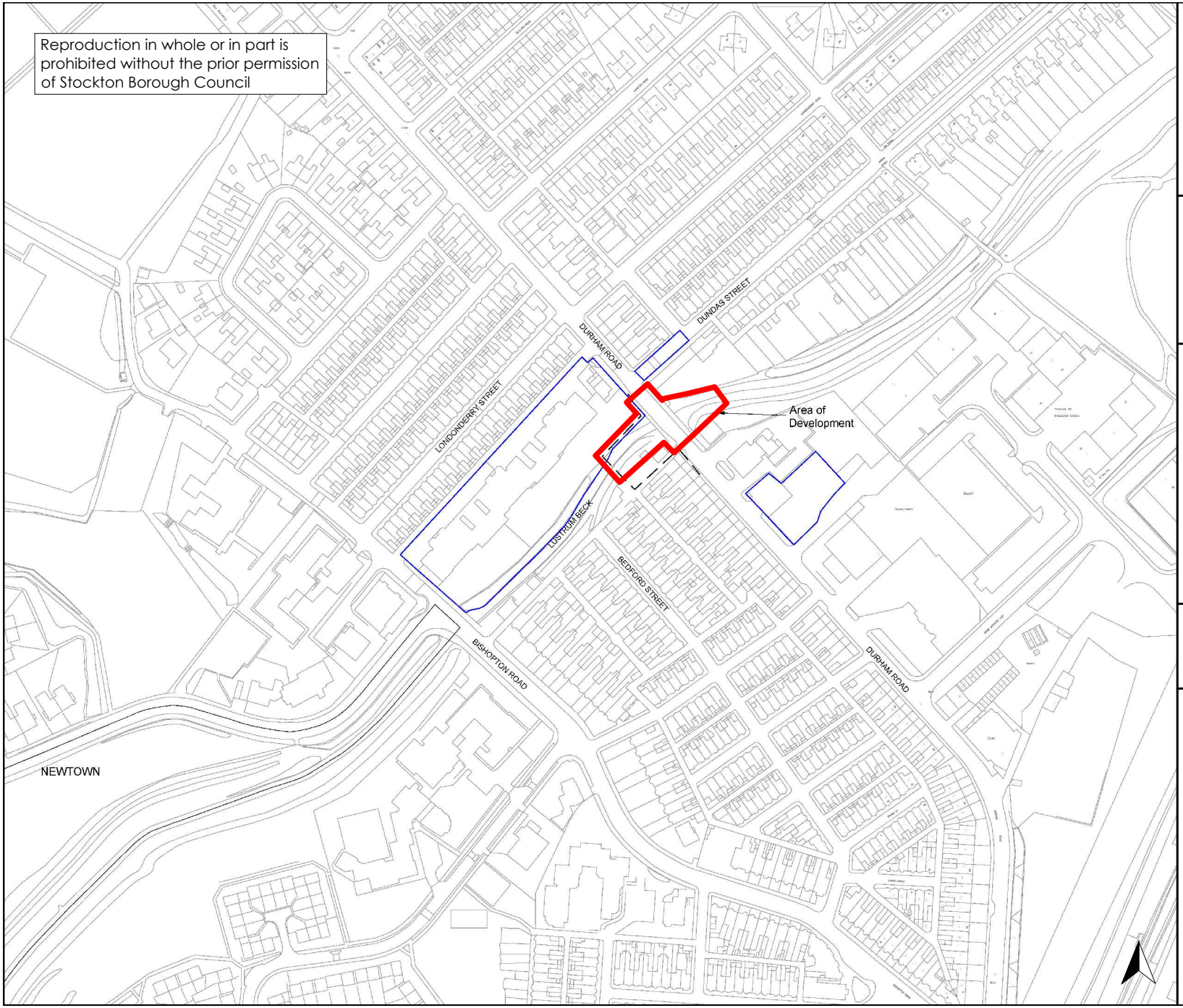

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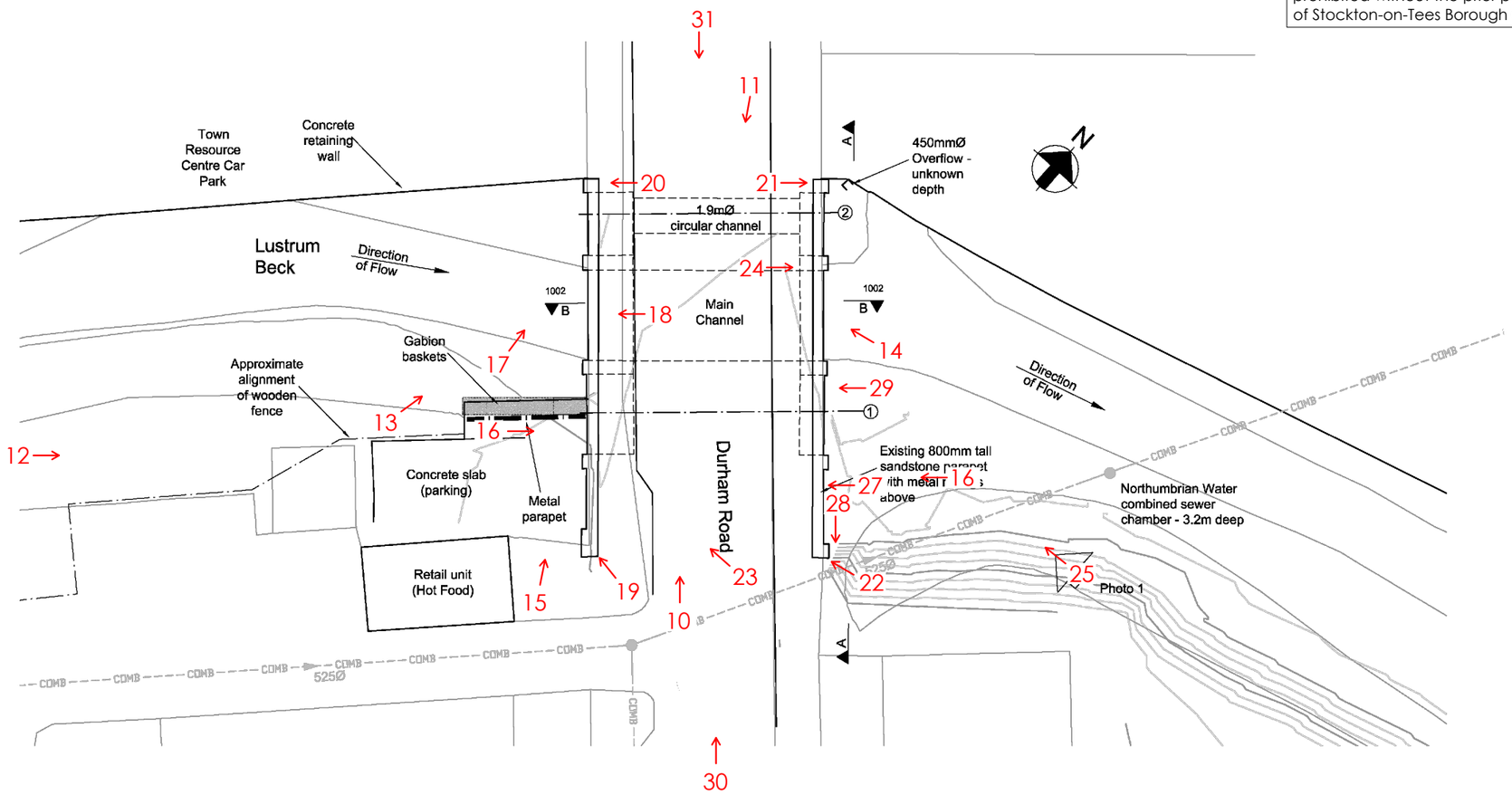
Figure 2: Site as existing

0 150m
scale 1:3000 for A4 plot

area of development



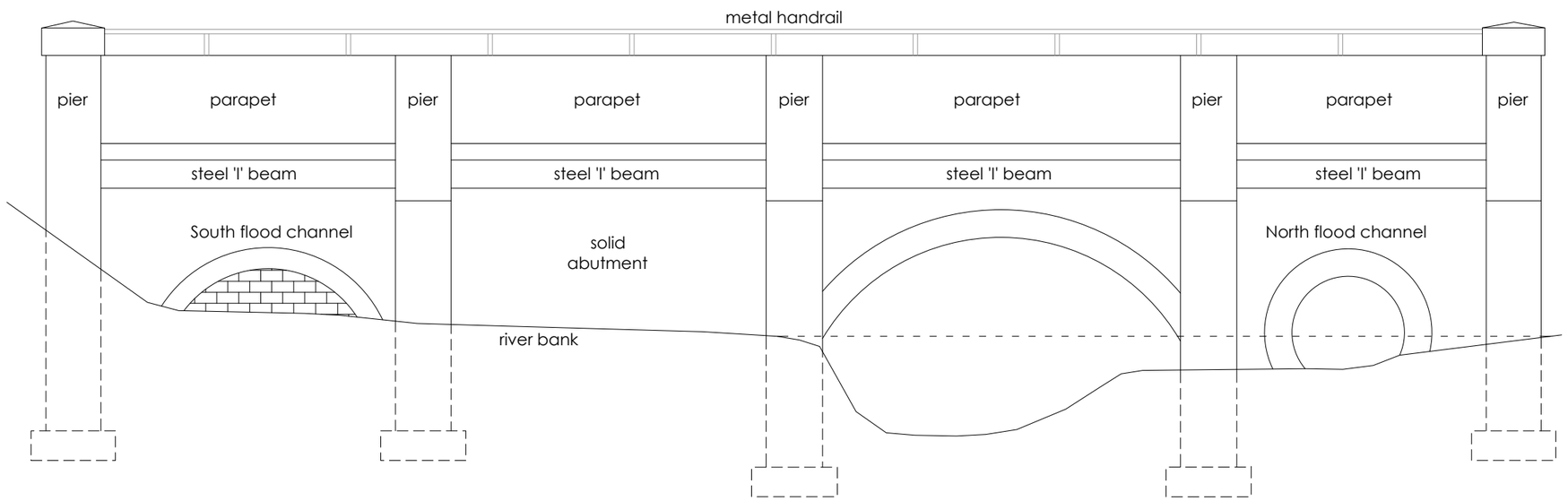


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Figure 3: Plan and elevation

0 15m
scale for plan 1:300 for A3 plot

0 3m
scale fro elevation 1:75 for A3 plot

13 photograph

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Figure 4: Extract from the Tithe map, 1844

0 100m
approximate scale 1:2500 for A4 plot

approximate location of proposed development area

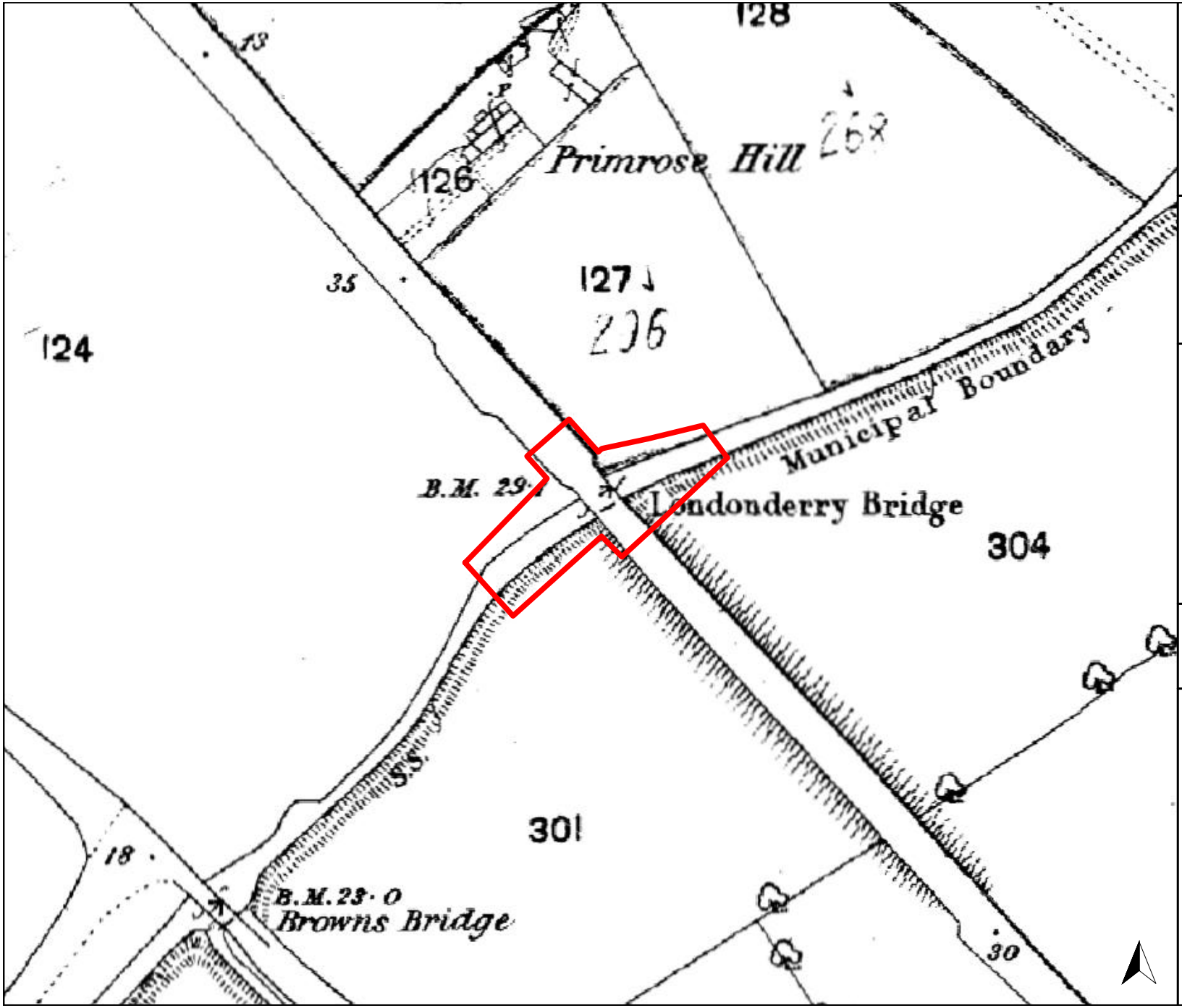

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Figure 5: Extract from the 1st edition Ordnance Survey map, 1859

0 75m
scale 1:1500 for A4 plot

proposed development area

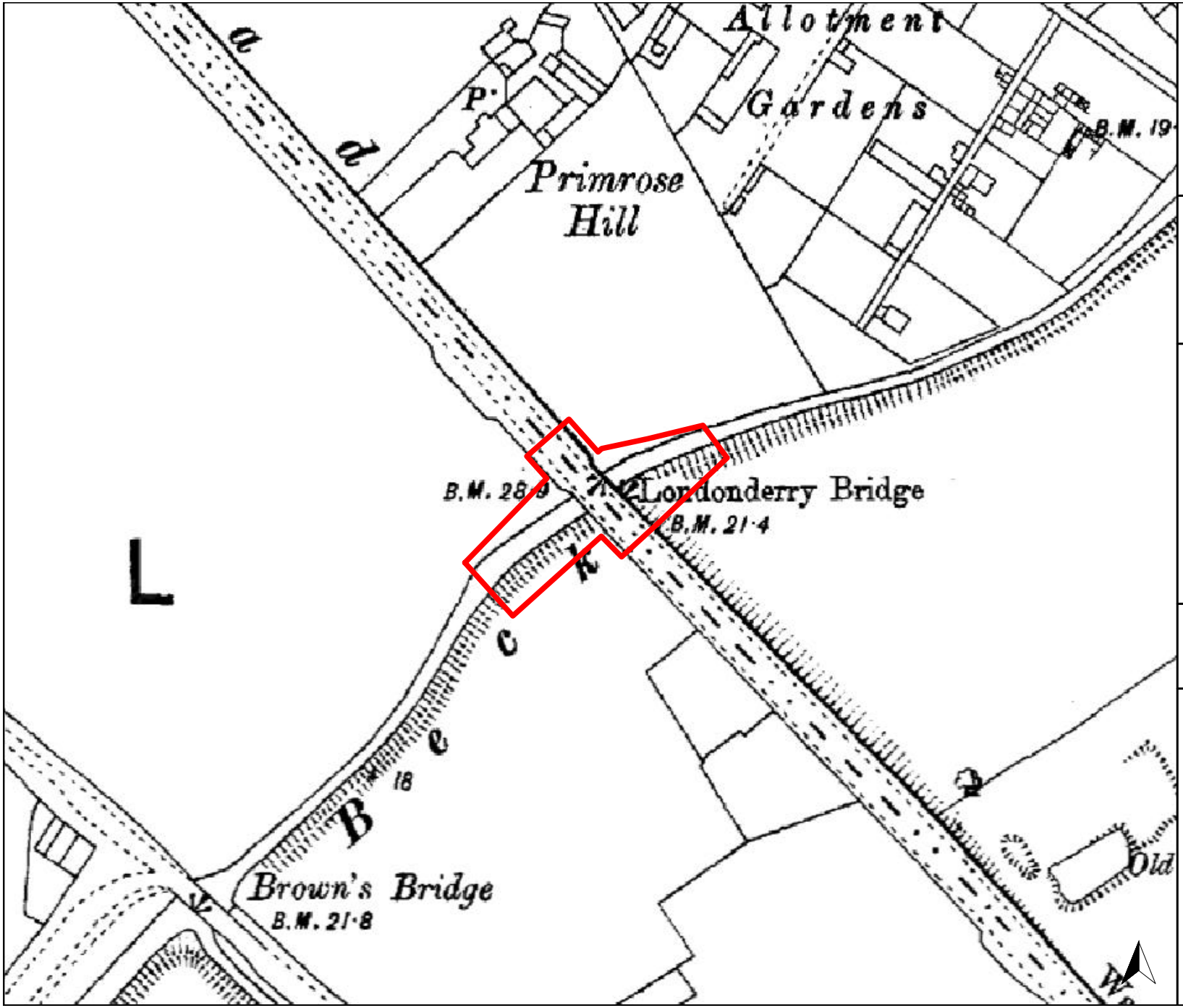

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Figure 6: Extract from the 2nd edition Ordnance Survey map, 1899

0 75m
scale 1:1500 for A4 plot

proposed development area

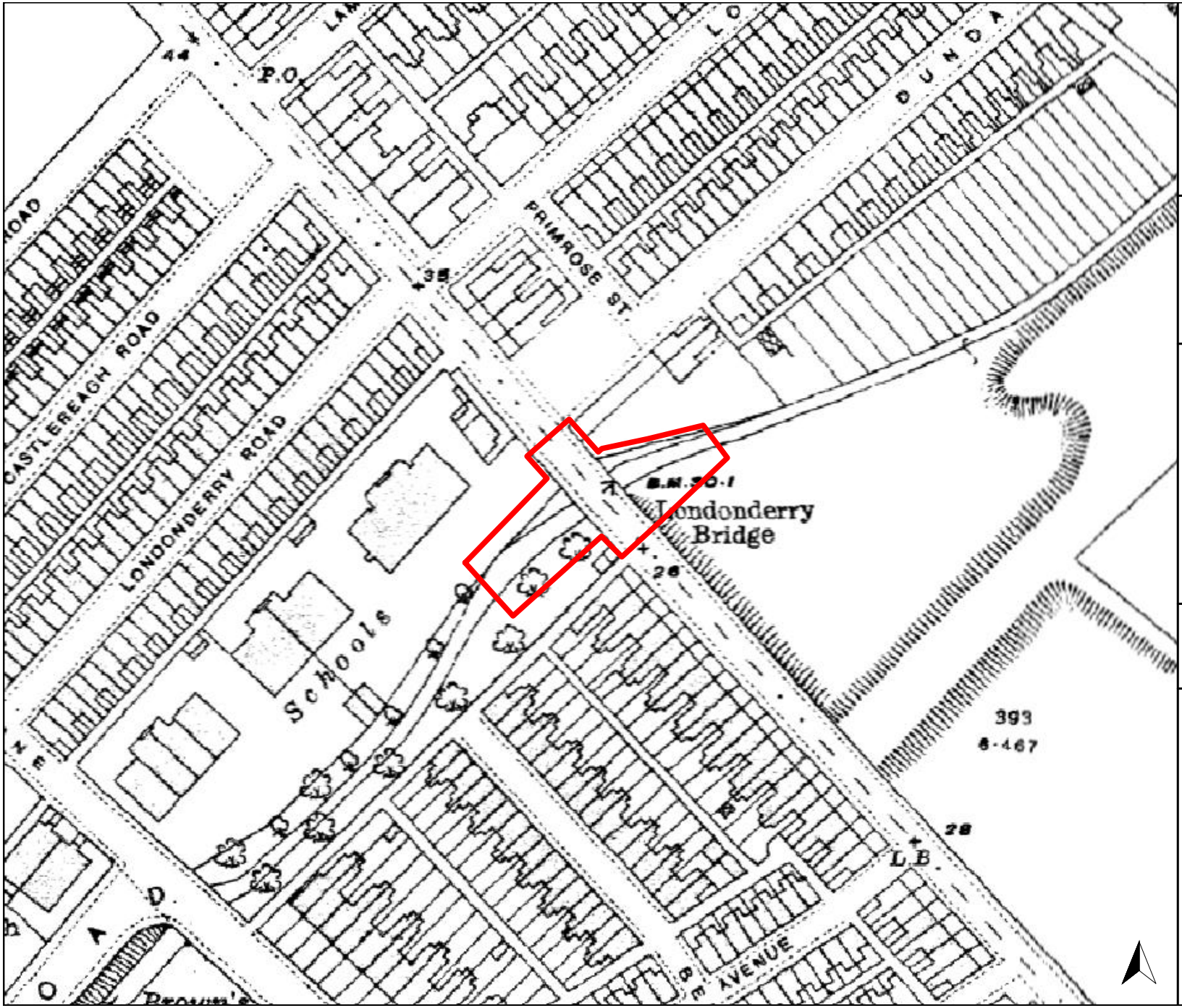

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Figure 7: Extract from the 3rd edition Ordnance Survey map, 1923

0 75m
scale 1:1500 for A4 plot

proposed development area

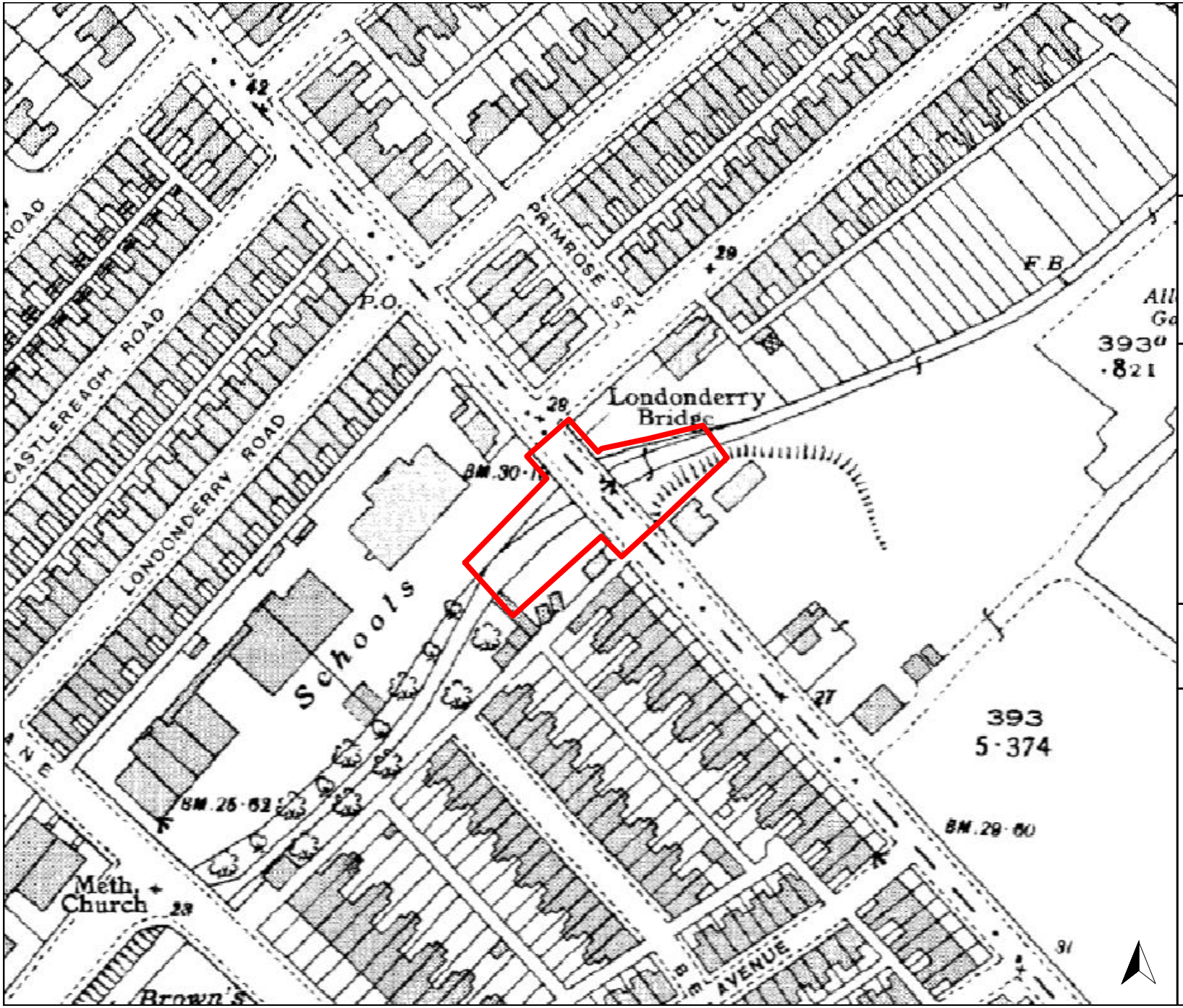

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Figure 8: Extract from the 4th edition Ordnance Survey map, 1947

0 75m
scale 1:1500 for A4 plot

proposed development area

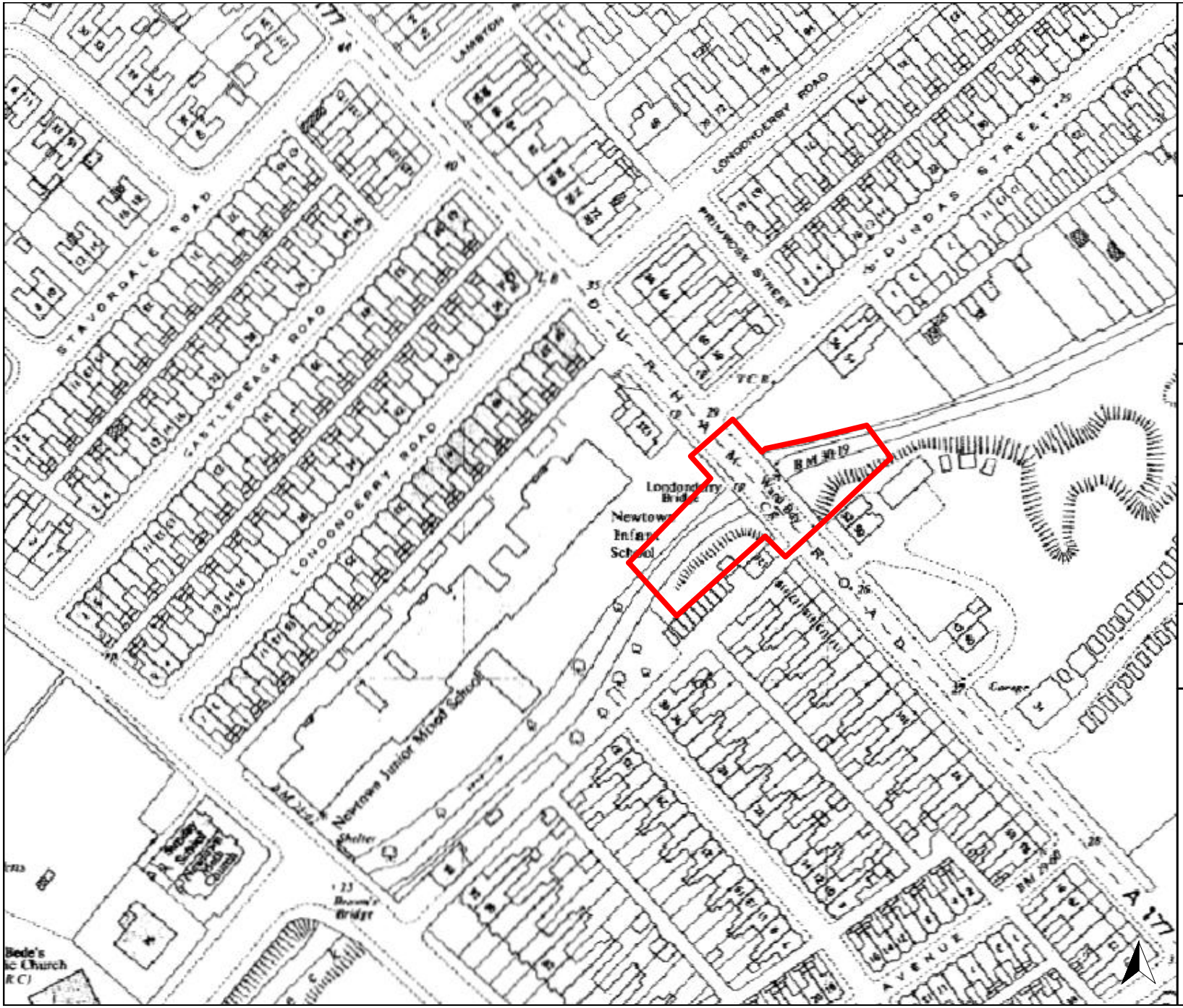

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Figure 9: Extract from the 1960s Ordnance Survey map

0 7.5m
scale 1:1500 for A4 plot

proposed development area

Figure 10: Oblique view across the bridge, looking north

Figure 11: Oblique view across the bridge, looking south

Figure 12: South-western elevation, looking north-east

Figure 13: South-western elevation, detail of main channel and northern flood channel, looking north-east

Figure 14: North-eastern elevation, detail of main channel showing internal brickwork of the barrel arch, looking west

Figure 15: South-western elevation, external parapet, looking north

Figure 16: South-western elevation, detail of modern brick repair below parapet between piers 2 and 3, looking north-east

Figure 17: South-western elevation, detail of eroded blocks in the parapet, looking north

Figure 18: Internal view of the south-west parapet showing finials and a handrail, looking south-west

Figure 19: South-western pillar, looking west

Figure 20: North-western pillar, looking south-east

Figure 21: North-eastern pillar, looking north-east

Figure 22: South-eastern pillar and concrete pier, looking west

Figure 23: South-western inner parapet, looking west

Figure 24: North-eastern inner parapet, showing eroded and replaced blocks, looking north-east

Figure 25: North-eastern elevation, looking west

Figure 26: North-eastern elevation, detail of piers 1-3 and spans, looking south-west

Figure 27: North-eastern elevation, detail of infilled flood channel between piers 1 and 2, looking south-west

Figure 28: North-eastern elevation, detail of pier 1 showing original stone pier and concrete addition, looking south-east

Figure 29: North-eastern elevation, detail of buttress between piers 2 and 3, looking west

Figure 30: View across the bridge and along the Durham road, looking north-west

Figure 31: View across the bridge and along the Durham road, looking south-east

Figure 32: Main channel following the removal of stone facing, looking south-west

Figure 33: Detail of early 20th century steel lintel, showing makers mark

Figure 34: The steel lintels removed, looking south

Figure 35: Southern-most channel during re-excavation, looking south-west

Figure 36: Detail of the keystone in the north-eastern arch of the main channel

Figure 37: View of the backfill in the span between piers 2 and 3, looking south-west

Figure 38: Removal of parapet and road surfaces, looking north-east

Figure 39: The excavation and demolition of the northern-most channel, looking east

Figure 40: The excavation of the main channel, looking south-east

Figure 41: Demolition of the main channel, looking north-east

Figure 42: The main channel, following demolition, looking north-east

Figure 43: Wooden beams recovered from beneath the northern channel, looking north-east