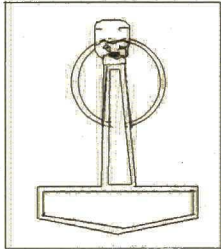


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ARCHAEOLOGICAL WATCHING BRIEF

AT

CROFT BRIDGE,

CROFT,

NORTH YORKSHIRE

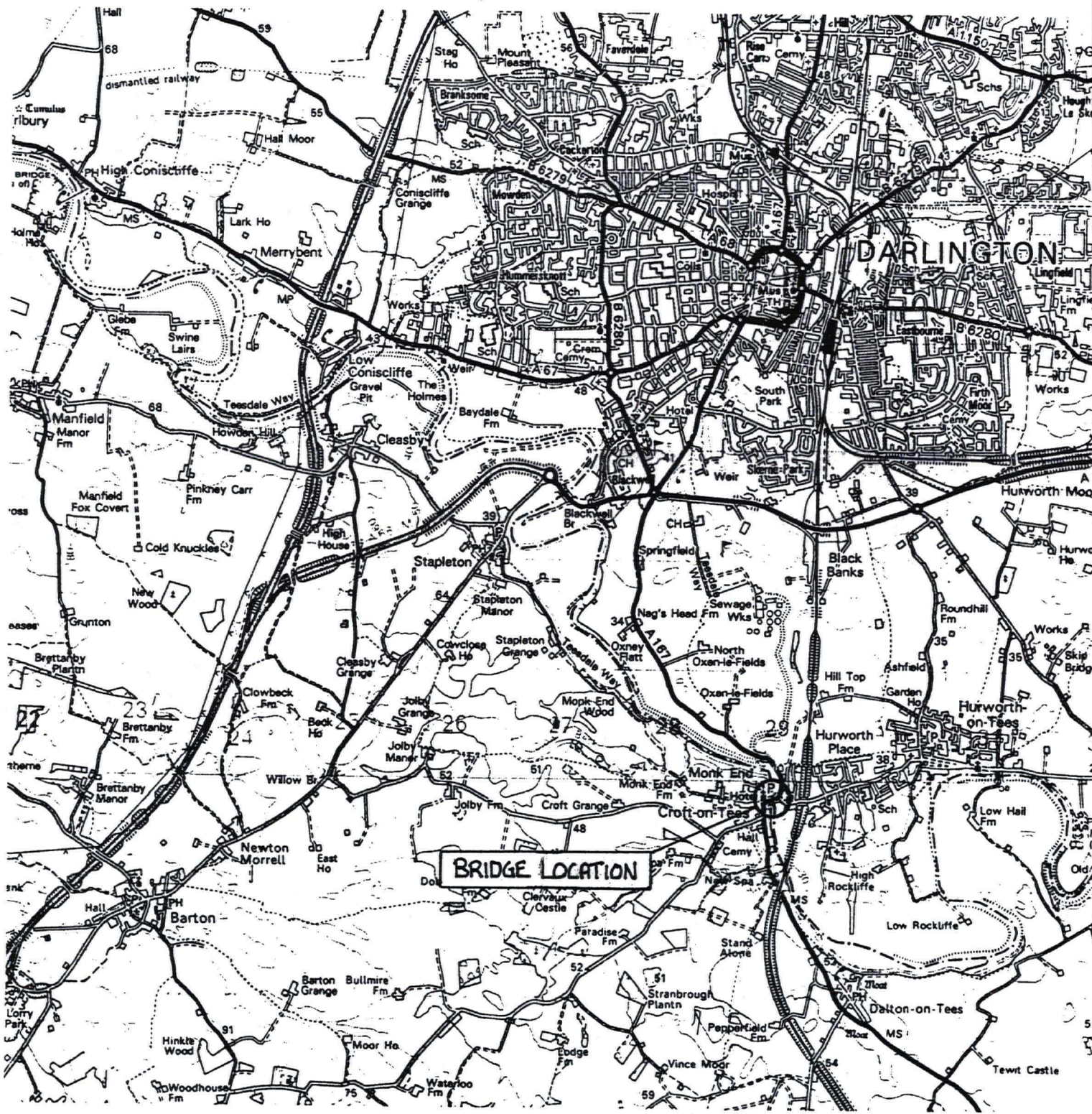
FOR

NORTH YORKSHIRE COUNTY COUNCIL

ENVIRONMENTAL SERVICES

ALISON CLARKE

NOVEMBER 1997



LOCATION PLAN
1:50000

CROFT BRIDGE TRIAL HOLES PLAN 1

ARCHAEOLOGICAL WATCHING BRIEF AT CROFT BRIDGE, CROFT, NORTH YORKSHIRE

1. INTRODUCTION

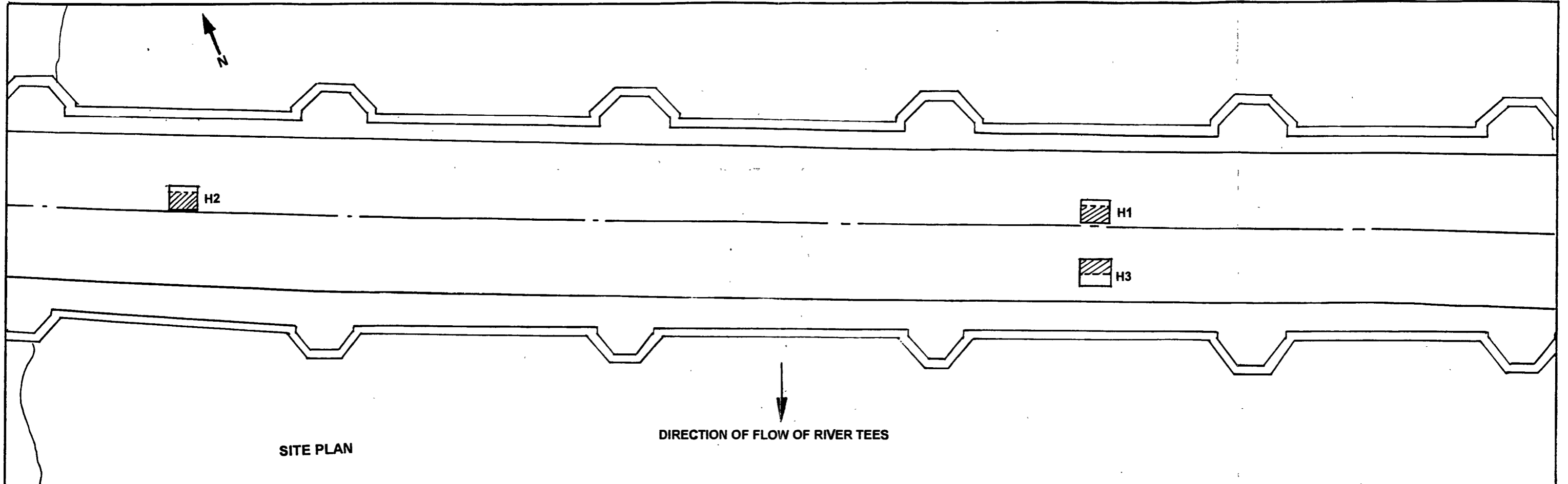
- 1.1 The bridge over the River Tees at Croft-on-Tees, Richmondshire, North Yorkshire, is a Scheduled Ancient Monument, County No. 73 (N.G.R. NZ289098) (Plan 1).
- 1.2 In October 1997 North Yorkshire County Council Environmental Services proposed to carry out trial excavations on the bridge to ascertain the internal structure in order to evaluate the need for strengthening.
- 1.3 An application for scheduled monument consent for the necessary works was sought from the Department for Culture, Media and Sport, and this was granted.
- 1.4 The work was carried out on 30th and 31st October 1997.

2. HISTORY OF THE BRIDGE

- 2.1 The earliest mention of the bridge is in the reign of Edward III, when the piers were worn away or undermined, which may account for a pontage grant made in 1356, for the replacement of the bridge which had been swept away in a flood of that year.
- 2.2 In 1531 the bridge is recorded as having seven arches of stone work. It is unclear whether this is the fourteenth century bridge or a later replacement, but the listing notes on the bridge regard at least part of the existing bridge as dating from the fifteenth century, and Pritchett regards the mask corbels on the eastern or downstream face as being fourteenth century.
- 2.3 The bridge was rebuilt or restored in part at least in 1673. This rebuild is recorded in a plaque on the downstream parapet.
- 2.4 It was restored again in 1781 by Thomas Bott, as recorded on an inscription on the south-east cutwater. A more major rebuild of the bridge took place in 1795, when Robert Carr designed and completed a widening of the existing structure by nearly twenty feet, effectively doubling the width of the bridge.
- 2.5 The extant structure then consists of Carr's bridge to the upstream or north side, and an earlier bridge which is likely to have elements of the 1673 bridge and previous bridges dating back possibly to the fourteenth century. It has six double chamfered pointed arches on the downstream face, with a further small round arch at the eastern end, and triangular plan cutwaters with swept tops. The stone is mainly squared red sandstone, with restorations in grey ashlar sandstone. The upstream face has similar arches, except that the small end arch is pointed, and the stone is grey ashlar sandstone throughout. The cutwaters have double chamfered plinths. The parapet on the downstream side is projecting and is mounted on small shield-shaped brackets, with semi-octagonal refuges above each cutwater. On the upstream side the parapet projects on modillions, but is otherwise similar.

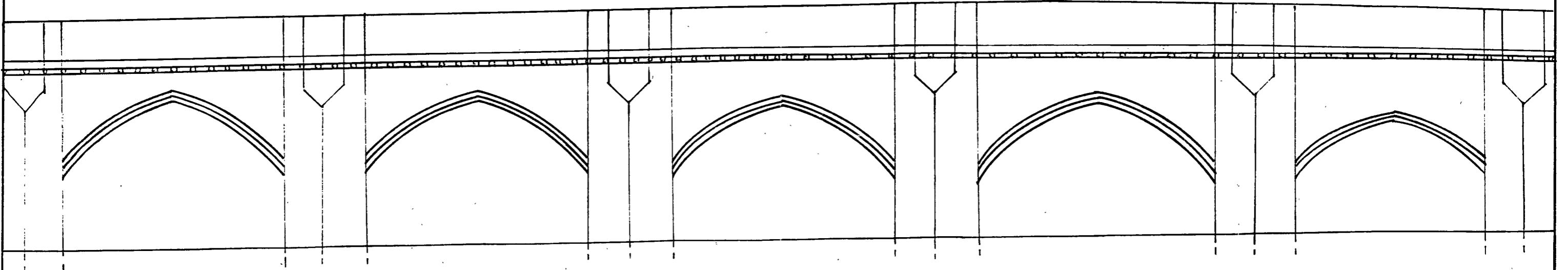
3. THE WORKS

- 3.1 Three trial holes were machine excavated, two in the northern, eighteenth century side of the bridge, and one in the southern, older carriageway (Plan 2, Plates 1-3).



SITE PLAN

DIRECTION OF FLOW OF RIVER TEES



SOUTH ELEVATION

CROFT BRIDGE TRIAL HOLES PLAN 2

SCALE 1:200

3.2 The first trial hole (Plan 3), in the northern carriageway, was over the second main arch from the eastern end, and measured 115 by 151 cm. It was positioned near to the crown of the road in order to avoid services which run along the bridge in a number of places. The tarmac road base extended for 14cm. below the surface, and beneath it was a concrete base 16cm. thick. Under the concrete was a mid-brown compacted sandy loam with a high percentage of pebbles and small cobbles and some broken pieces of red sandstone. This layer became sandier and paler with depth, and the percentage of cobbles increased.

At 160cm. below the surface the stones were set into a hard brown clay matrix, which lay immediately above the yellowish-grey sandstone slabs forming the top of the arch (Plates 4 and 5). One of these was exposed at a depth of 179cm. below the surface. A slight height difference, of .6cm., was noted between the north and south side of this slab, which was taken to represent part of the ribbing running parallel to the road across the arches.

3.3 The second trial hole (Plan 4) was over the second arch from the western end, and was in a similar position in the carriageway. It measured 127cm. by 142cm. The first 43cm. were similar in composition to the first hole, consisting of tarmac over concrete, below which was a layer of brown sandy loam with pebbles and small cobbles. Below this however was a layer of decayed red sandstone in pieces and evident as a red sandy deposit, with small pieces of yellow-grey sandstone also intermittently present. At a depth of 51cm. to 56cm. was a large piece of red sandstone.

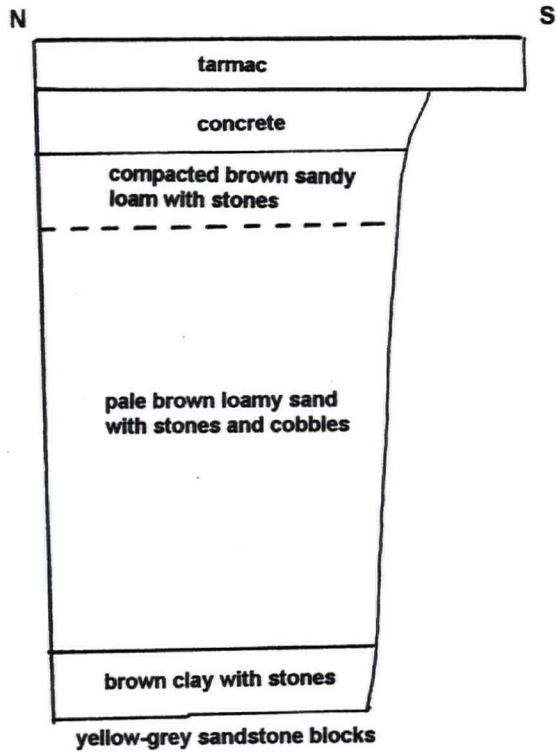
By 71cm. below the surface the fill was composed of red sandstone blocks roughly mortared together with a coarse low grade crumbly sandy aggregate (Plate 6). These blocks formed a solid surface between 33 and 49cm. thick, which rested directly on the yellow-grey sandstone of the arch which was encountered at a depth of 104cm from the surface (Plate 7).

3.4 The third trial hole (Plan 5), on the southern or downstream carriageway, was opposite the first hole, over the second main arch from the eastern end. It was positioned centrally in the carriageway, and measured 133cm. by 169cm., although the whole width was not fully excavated and the dimensions of the lower part of the hole were 70cm. by 169cm. Tarmac and concrete formed the top 26cm. of the fill, below which were cobbles set in a brown sandy loam with some decayed red sandstone.

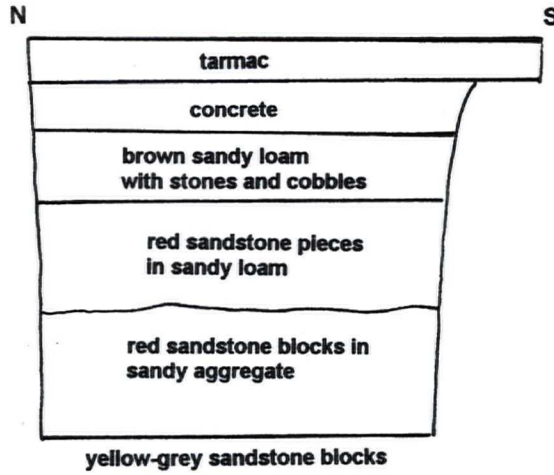
At 70cm. below the surface was a solid layer of red sandstone blocks mortared together with a similar aggregate to that in the second trial hole (Plate 8). A thin layer of pale yellow brown sand beneath the sandstone blocks overlaid further layers of red sandstone with some yellow-grey sandstone and occasional pebbles which extended to a depth of 192cm. below the surface (Plate 9). At this depth the blocks of the arch construction were encountered (Plate 10). These were of yellow-grey sandstone, but their form was not so clear as in the first two holes as they were immediately below a layer of hard red sandstone blocks, as little as possible of which were removed.

4. INTERPRETATION

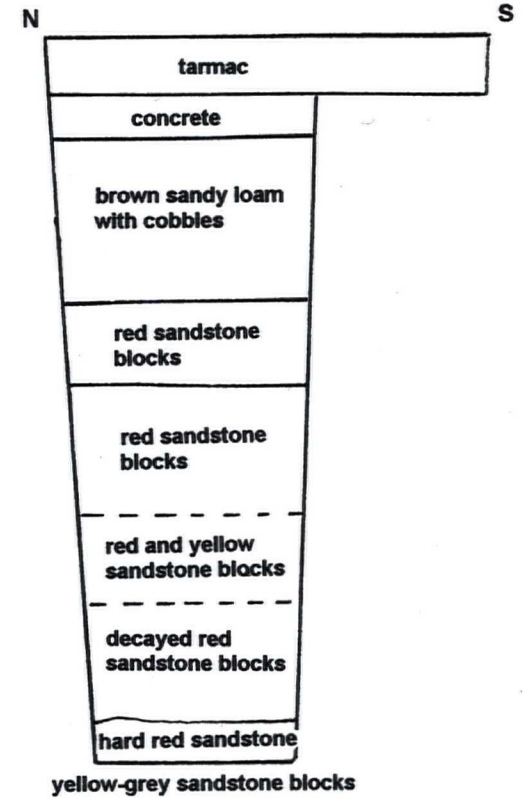
4.1 The two trial holes on the northern, upstream side of the bridge revealed the grey sandstone blocks of the arch construction very clearly. The depth of the eastern arch top was 179cm. below the surface, and the western arch top was 104cm. below the surface. The



PLAN 3 H1 - WEST FACING SKETCH SECTION
 SCALE 1:20



PLAN 4 H2 - WEST FACING SKETCH SECTION
 SCALE 1:20



PLAN 5 H3 - WEST FACING SKETCH SECTION
 SCALE 1:20

CROFT BRIDGE TRIAL HOLES

difference in depth may be explained by the rise in the surface of the ground towards the eastern end of the bridge.

It seems likely that some of the red sandstone from the earlier bridge was reused to form part of the sub-base of the widened bridge at the western end, which was then topped up with cobbles and sand. The eastern hole contained only occasional pieces of red sandstone; the sub-base of the road here was composed almost entirely of cobbles and sand.

- 4.2 The single trial hole in the southern, downstream side of the bridge showed a slightly different construction. The sandy cobble fill in the upper layers was similar and probably represents the same sub-base.

Below this, however, a more solid red sandstone construction was present, and presumably represents the infill above the arch of the earlier bridge. The presence of pebbles among the red sandstone confirms that it was not part of the arch rib, but the blocks were considerably more solid and extensive than on the second trial hole at the western end of the bridge. It seems likely that these blocks pre-date the 1795 widening of the bridge. The depth of the arch stonework on this side was 192cm. below the surface. This was deeper than in the hole on the northern carriageway opposite, and may reflect a lower ground surface on the earlier bridge.

5. CONCLUSIONS AND ASSESSMENT

- 5.1 The trial holes successfully identified the height of the arches of the bridge. The damage to the structure of the bridge was minimal. No artefacts were recovered.
- 5.2 A difference in construction between the northern and southern sides of the bridge was identified. This was to be expected from the known history of the bridge. The existence of red sandstone blocks above the arch stonework of the southern side is of interest as these may predate Carr's 1795 bridge. It would be preferable to leave them undisturbed and in situ if any further work is carried out on the bridge, and they should certainly be fully recorded if they are likely to be disturbed.



Plate 1. H1 Location



Plate 2. H2 Location



Plate 3. H3 Location

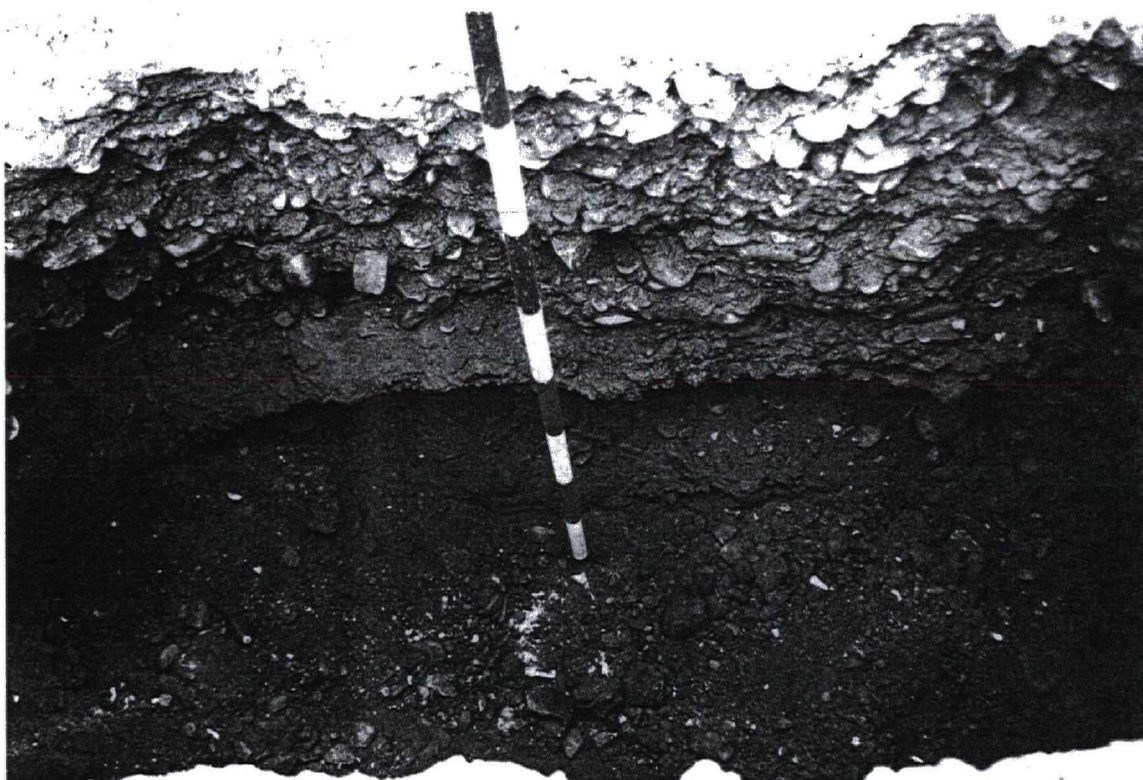
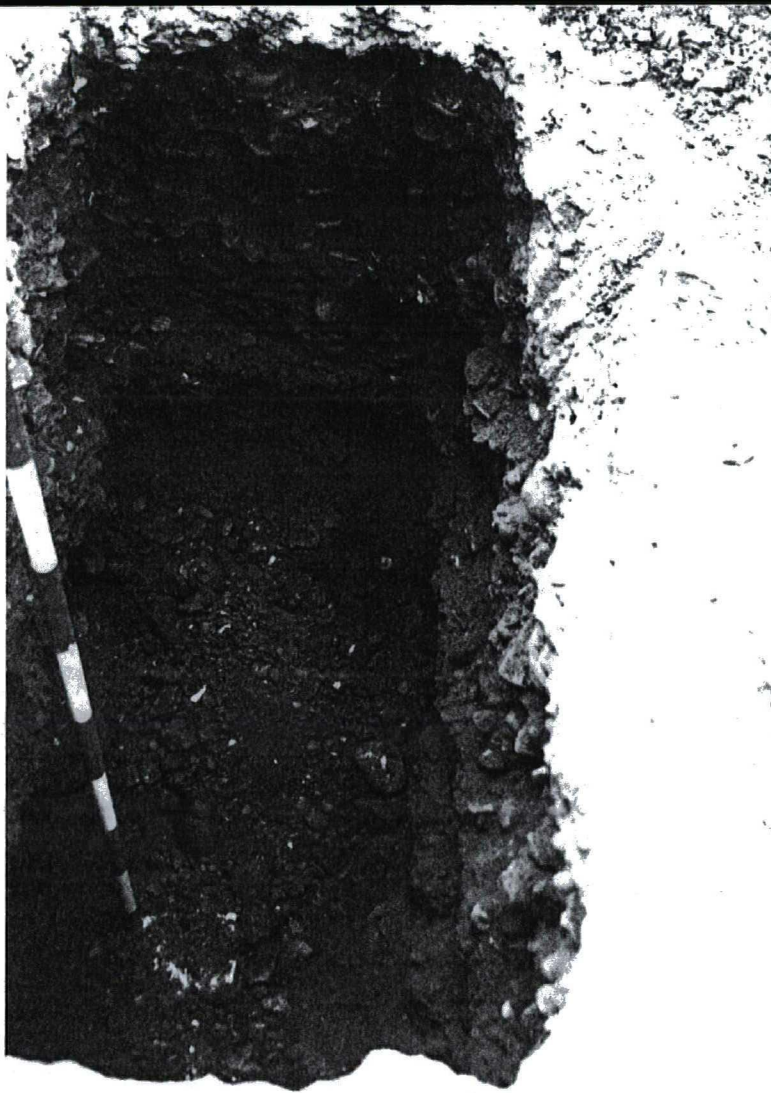


Plate 4. Arch stone at base of H1



**Plate 5. Arch
stone at base
of H1**

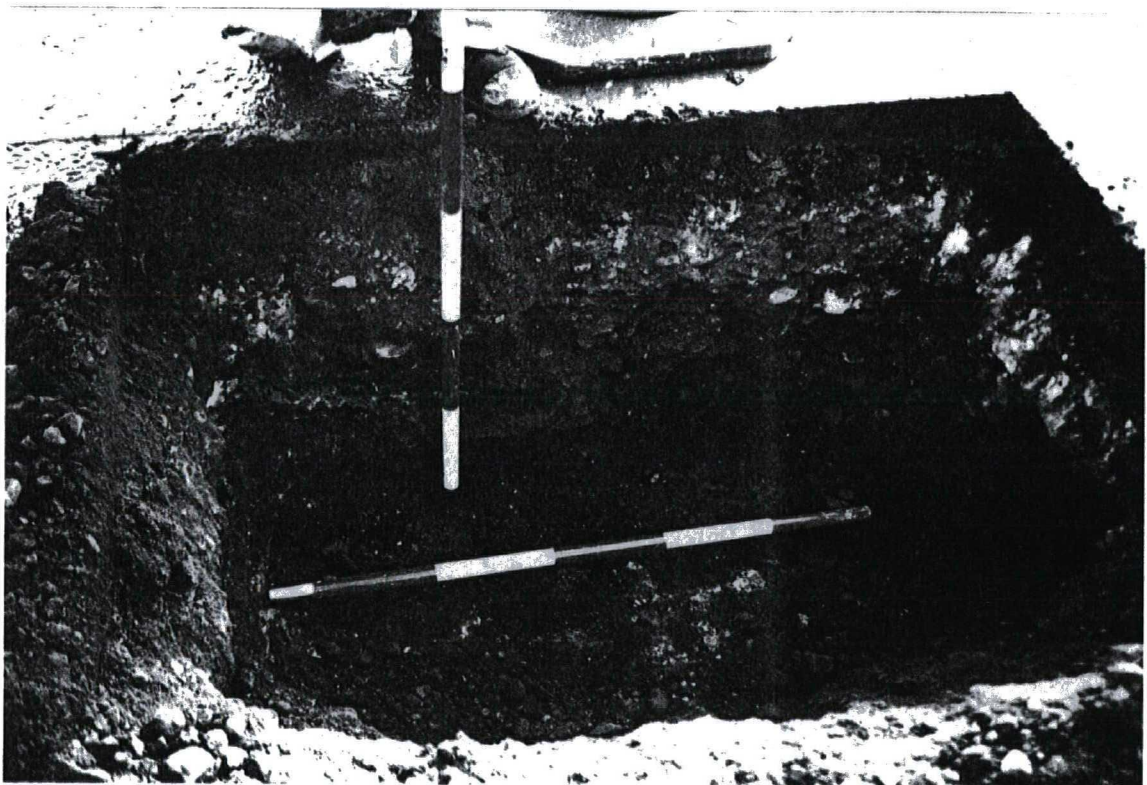


Plate 6 Red sandstone layer in H2

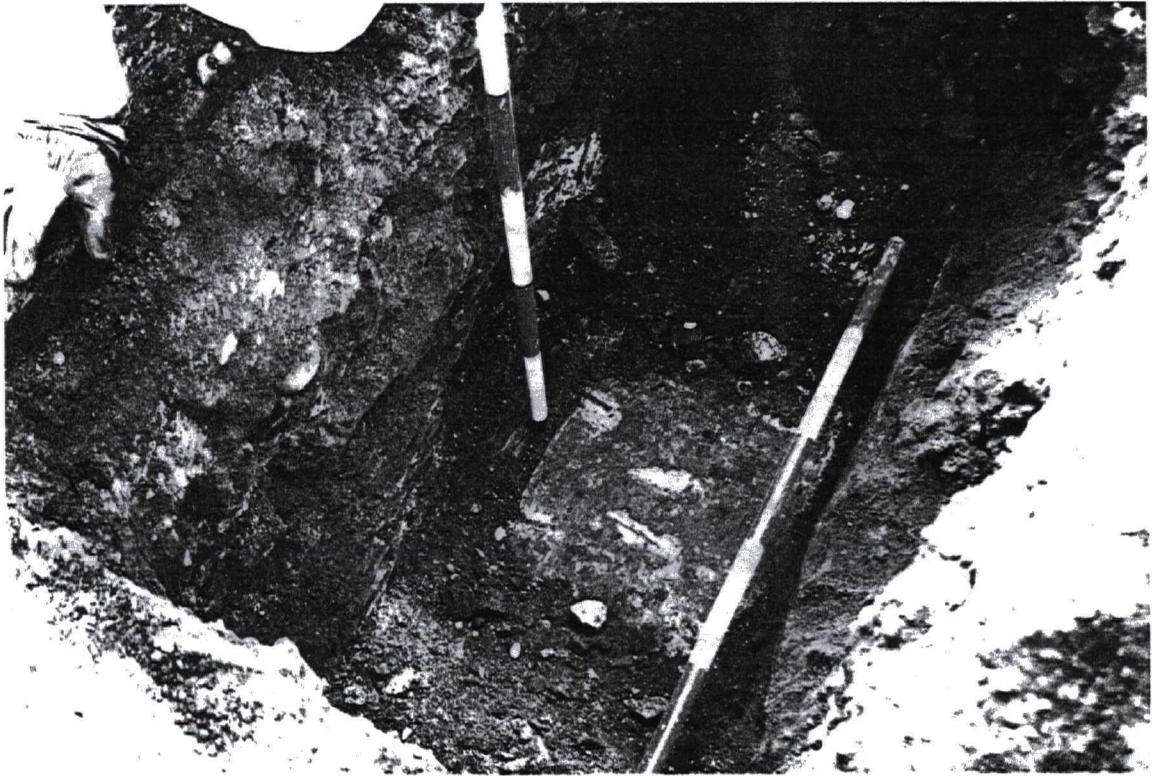


Plate 7. Arch stone at base of H2

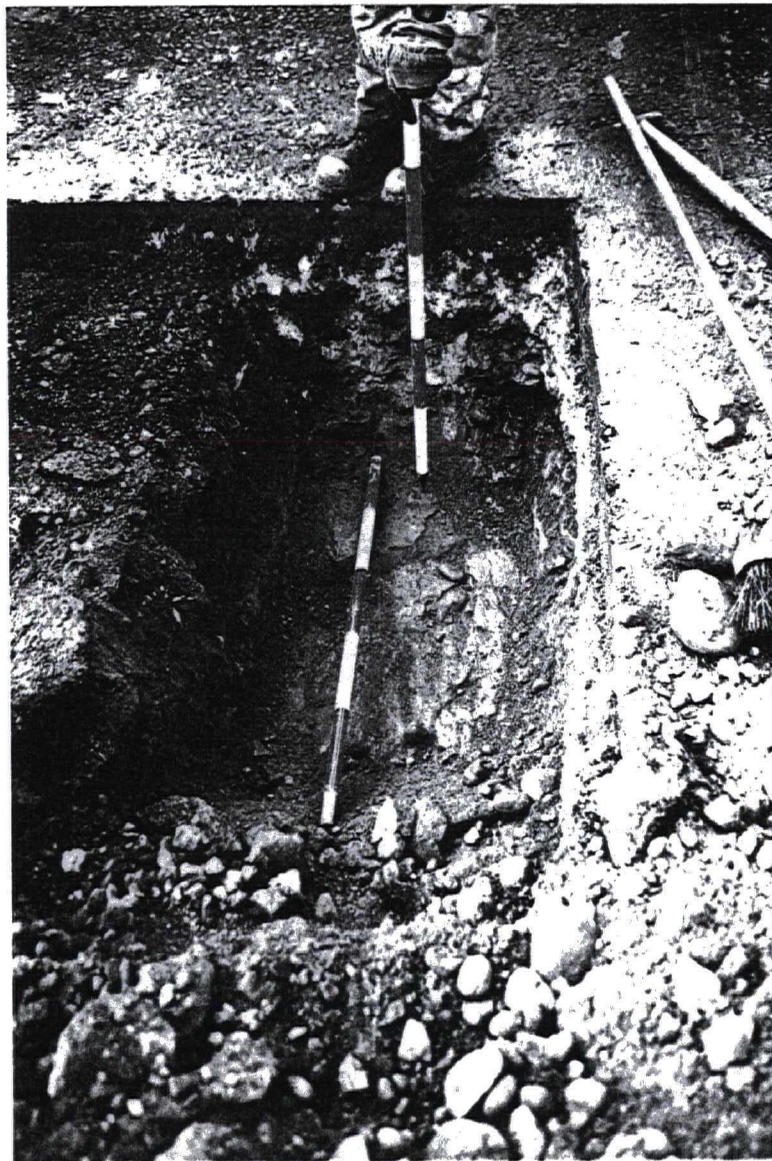


Plate 8. Red sandstone layer in H3

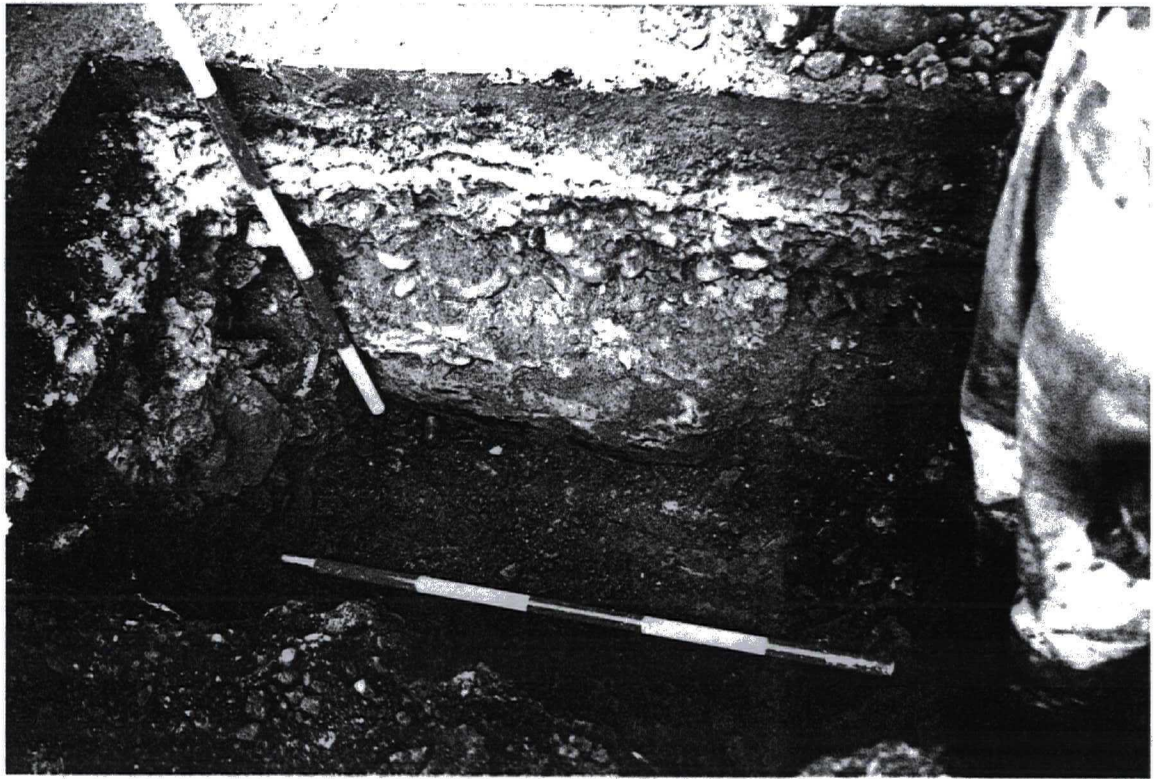


Plate 9. Lower red sandstone layer in H3



**Plate 10.
Section and
Base of H3**