

*BIRMINGHAM UNIVERSITY
FIELD ARCHAEOLOGY UNIT*

**An Archaeological Watching Brief
at
Creswell Crags, Nottinghamshire**

B.U.F.A.U.



Birmingham University Field Archaeology Unit

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by
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1.0 Summary

An archaeological watching brief at Creswell Crag was conducted by Birmingham University Field Archaeology Unit, in the period 12th-28th June 1996, during ground investigations for a proposed relocation of a Severn Trent Water Limited sewage works and an associated pipeline. Creswell Crag is recognised as a Site of Special Scientific Interest, and, as such, any below-ground investigations have the potential value of adding to or complementing our understanding of the area. Although the Crag themselves have been subject to archaeological excavation and research since the 19th century, no below-ground archaeological investigations had been conducted within the relocation area proposed by Severn Trent Water, and the potential for survival of archaeological deposits, their nature and condition, was unknown. A total of twenty-one trial pits was monitored and in all but two the sequence of deposits was defined as natural. Trial Pit 16 contained a modern drainage gully, whilst Trial Pit 21 was seen to contain a number of deposits which are thought to relate to a former mill pond which was drained in the late-19th century.

2.0 Introduction

This report describes the results of an archaeological watching brief carried out at Creswell Crag, Nottinghamshire, and should be read in conjunction with geological trial-pit and borehole logs prepared for Severn Trent Water. The archaeological monitoring was undertaken by Birmingham University Field Archaeology Unit on behalf of Severn Trent Water Limited and it fulfilled a planning application requirement that archaeological monitoring should be maintained throughout the Ground Investigation Contract. The ground investigations were conducted in advance of the proposed relocation of a sewage works site and an associated pipeline.

The archaeological monitoring was conducted in accordance with the Institute of Field Archaeologists watching brief guidelines, and with a Project Design which was prepared by Birmingham University Field Archaeology Unit (Mould 1996), and approved by Nottinghamshire and Derbyshire County Councils. This brief conformed to PPG 16 guidelines.

3.0 The Site and its Location (Figures 1 and 2)

The site, which lies within a designated Site of Special Scientific Interest, is located to the southwest of Creswell Crags, and runs along the border of Nottinghamshire with Derbyshire. It comprises two areas of agricultural land, currently under barley crop, situated on the southwest and northeast sides of the A616 (NGR SK 529735 and NGR SK 532738 respectively). The site lies at a significantly lower level than the Crags themselves, and forms one part of an undulating open landscape which extends from the base of the Crags. The geology of this area comprises bands of limestone and sandstone, overlain by layers of loamy soil or clay and sand.

4.0 Objectives

The objectives of this archaeological watching brief were:

- 1) to maintain an archaeological presence throughout the excavation of trial pits by Severn Trent Water. Initially it had been intended that all boreholes should also be monitored. However, the absence of archaeological deposits within the majority of the trial pits indicated that minimal or no information would be gathered from this exercise.
- 2) the preservation by record of archaeological structures and deposits affected by the excavation of trial pits.
- 3) to compile a full, written, drawn and photographic record of the stratigraphy observed within the trial pits.
- 4) to recover any archaeological artefacts from within the trial pits.
- 5) to establish the degree of preservation of any features, their extent, condition, nature, character, quality and date.

5.0 Method

An archaeological presence was maintained throughout the excavation of trial pits. All stratigraphic sequences were recorded, even where no archaeological deposits were identified, and contextual information was supplemented by plans, sections and photographs which together form the site archive. No artefacts were recovered. The archive is presently housed at Birmingham University Field Archaeology Unit.

6.0 The Archaeological Results

Twenty-one trial-pits were mechanically excavated to a minimum depth of 2m and to a maximum depth of 4.5m. The natural bedrock was contacted in each trial-pit.

Trial-Pit 1

1/1	Ground level - 0.30m	Barley, root-mat and topsoil.
1/2	0.30m - 0.60m	Buff grey-brown clay-sand.
1/3	0.60m - 1.60m	Coarse sand-gravel. Metal service pipe.
1/4	1.60m - 2.20m	Large (10-50cm), angular and sub-angular, limestone. Water table at 1.60m.

Trial-Pit 2

2/1	Ground level - 0.30m	Barley, root-mat and topsoil.
2/2	0.30m - 0.80m	Yellow/buff brown sand-loam. 15-20% medium-large sub-rounded stones.
2/3	0.80m - 1.70m	Red clay.
2/4	1.70m - 2.60m	Mottled red-brown/yellow-grey sand.
2/5	2.60m - 3.40m	Mixed mudstone, limestone, clay and sand.
2/6	3.40m - 3.90m	Limestone. Water table at 3.40m.

Trial-Pit 3

3/1	Ground level - 0.30m	Barley, root-mat and topsoil.
3/2	0.30m - 0.90m	Buff brown loam.
3/3	0.90m - 1.50m	Red-brown sand. Medium-large sub-rounded stones.
3/4	1.50m - 2.20m	Red-brown mudstone.
3/5	2.20m - 2.70m	White-grey sandstone.

Trial-Pit 4

4/1	Ground level - 0.30m	Barley, root-mat and topsoil.
4/2	0.30m - 0.80m	Yellow-brown, silty sand-loam. 10% medium sub-rounded stones.
4/3	0.80m - 1.60m	Limestone.

Trial-Pit 5

5/1	Ground level - 0.35m	Barley, root-mat and topsoil.
5/2	0.35m - 1.00m	Red-brown, silty, clay-sand. Decaying tree roots.
5/3	1.00m - 1.50m	Red-brown sand-clay. <5% 5-8cm sub-rounded stones.
5/4	1.50m - 2.20m	Red-brown sand.
5/5	2.20m - 2.90m	Red-brown sandstone. Water table at 2.20m.

Trial-Pit 6

6/1	Ground level - 0.40m	Barley, root-mat and topsoil.
6/2	0.40m - 1.00m	Red-brown, silty, clay-sand. 5%: 5cm sub-rounded stones.
6/3	1.00m - 1.70m	Red-brown sand-clay.
6/4	1.70m - 2.70m	Mottled red-brown/grey-yellow mudstone and sandstone. Water table at 2.60m.
6/5	2.70m - 3.80m	Red-brown sandstone.

Trial-Pit 7

7/1	Ground level - 0.45m	Barley, root-mat and topsoil.
7/2	0.45m - 1.50m	Red-brown, clay-sand. <5% 1-3mm gravel inclusions, 5-8cm sub-rounded stones.
7/3	1.50m - 2.30m	Red-brown silt-sand. 10% 8-10cm sub-rounded stones.
7/4	2.30m - 4.00m	Red-brown sandstone.

Trial-Pit 8

8/1	Ground level - 0.40m	Rough pasture, root-mat and topsoil.
8/2	0.40m - 1.00m	Red/orange-brown, silty, clay-sand.
8/3	1.00m - 1.90m	Red-brown sand-clay.
8/4	1.90m - 2.20m	Limestone.

Trial-Pit 9

9/1	Ground level - 0.35m	Rough pasture, root-mat and topsoil.
9/2	0.35m - 1.10m	Red-brown sand-clay.
9/3	1.10m - 2.40m	Red-brown sand.
9/4	2.40m - 3.00m	Red-brown clayey mudstone/sandstone.
9/5	3.00m - 4.20m	Red-brown sand.
9/6	4.20m - 4.40m	Red-brown sandstone.

Trial-Pit 10

10/1	Ground level - 0.30m	Barley, root-mat and topsoil.
10/2	0.30m - 0.80m	Red-brown, slightly silty, clay-sand.
10/3	0.80m - 1.80m	Red-brown sand-clay.
10/4	1.80m - 4.50m	Red-brown sandstone, grey-white laminations.

Trial-Pit 11

11/1	Ground level - 0.40m	Barley, root-mat and topsoil, sparse charcoal flecks.
11/2	0.40m - 1.30m	Orange-brown, silty sand, clay lenses occurring.
11/3	1.30m - 4.30m	Red-brown sandstone, grey laminations.

Trial-Pit 12

12/1	Ground level - 0.20m	Barley, root-mat and topsoil.
12/2	0.20m - 0.80m	Red-brown clay-sand.
12/3	0.80m - 1.80m	Red-brown semi-compacted sandstone.
12/4	1.80m - 2.40m	Red-brown sandstone, grey laminations.

Trial-Pit 13

13/1	Ground level - 0.30m	Barley, root-mat and topsoil.
13/2	0.30m - 1.50m	Orange/red-brown, silty, clay-sand.
13/3	1.50m - 2.20m	Red-brown slightly compacted sandstone.
13/4	2.20m - 2.50m	Red-brown sandstone.

Trial-Pit 14

14/1	Ground level - 0.30m	Barley, root-mat and topsoil.
14/2	0.30m - 0.75m	Mottled red/orange-brown, clay-sand. Organic, rooty, 4mm gravel inclusions.
14/3	0.75m - 1.40m	Red-brown semi-compacted sandstone.
14/4	1.40m - 1.60m	Red-brown sandstone. Clay lenses.

Trial-Pit 15

15/1	Ground level - 0.35m	Barley, root-mat and topsoil.
15/2	0.35m - 1.10m	Red-brown, silty, sand-clay. Organic leaching. Dense coal inclusions.
15/3	1.10m - 1.70m	Red-brown, moist, crumbly, clay-sand.
15/4	1.70m - 2.30m	Red-brown mudstone/sandstone. Coal inclusions.
15/5	2.30m - 2.50m	Red-brown sandstone.

Trial-Pit 16

16/1	Ground level - 0.35m	Barley, root-mat and topsoil. 10-15% medium-large sub-rounded stones.
16/2	0.25 - 0.68m	Steep-sided, flat-bottomed cut, filled with orange-brown loamy sand. Aligned northeast-southwest, to form a right-angle with present-day field boundary. Cuts 16/1 and 16/3.
16/3	0.35m - 1.40m	Red-brown clay.
16/4	1.40m - 1.80m	Red-brown, silty, sand-clay.
16/5	1.80m - 1.90m	Red-brown sandstone.

Trial-Pit 17

17/1	Ground level - 0.35m	Barley, root-mat and topsoil.
17/2	0.35m - 0.80m	Orange-brown silt-sand. Occasional 5-8cm sub-rounded stones.
17/3	0.80m - 1.60m	Red-brown, sandy, clay. Small coal inclusions.
17/4	1.60m - 2.20m	Red-brown sandstone.
17/5	2.20m - 2.35m	Yellow sandstone.
17/6	2.35m - 2.50m	Red-brown sandstone.

Trial-Pit 18

18/1	Ground level - 0.30m	Barley, root-mat and topsoil.
18/2	0.30m - 0.70m	Brown silty-sand.
18/3	0.70m - 1.90m	Orange-brown sand, with desiccated clay.
18/4	1.90m - 2.90m	Mottled grey-orange sand and slightly compacted sandstone.
18/5	2.90m - 3.20m	Red-brown friable clay.
18/6	3.20m - 3.30m	Red-brown sandstone. Water table at 3.20m.

Trial-Pit 19

19/1	Ground level - 0.20m	Barley, root-mat and topsoil.
19/2	0.20m - 0.75m	Buff brown silty-sand, limestone fragments. 10% sub-rounded stones.
19/3	0.75m - 1.20m	Red-brown sand, 30% limestone fragments.
19/4	1.20m - 2.15m	Limestone. Water table at 1.90m.

Trial-Pit 20

20/1	Ground level - 0.20m	Rough pasture, root-mat and topsoil.
20/2	0.20m - 0.80m	Red-brown sand-gravel.
20/3	0.80m - 1.20m	Limestone fragments.
20/4	1.20m - 1.50m	Limestone, red-brown sand-gravel.
20/5	1.50m - 1.60m	Limestone fragments.
20/6	1.60m - 2.50m	Red-brown mudstone.
20/7	2.50m - 3.60m	Red-brown, slightly compacted sandstone.
20/8	3.60m - 3.90m	Red-brown sandstone. Bands of limestone within sandstone fragments. <1% sub-rounded stones. Water table at 3.60m.

Trial-Pit 21

21/1	Ground level - 0.15m	Rough pasture, root-mat and topsoil.
21/2	0.15m - 0.35m	Orange-grey clay.
21/3	0.35m - 0.65m	Dark brown humic layer.
21/4	0.65m - 0.80m	Grey-brown, humic, shelly, gleyed silty-clay. Two samples taken.
21/5	0.80m - 1.70m	Brown-black peat deposit, decaying roots.
21/6	1.70m - 3.00m	Limestone, mixed with red sand-clay. Water table at 2.80m.

An initial visual inspection of the samples taken from 21/4 by Dr. David Smith (University of Birmingham) indicated a high level of insect, pollen, plant-macro and molluscan remains within the gleyed clay. The samples are presently housed at Birmingham University Field Archaeology Unit.

7.0 Discussion of the Archaeological Results

The sequence of deposits was seen to be natural in all but two of the twenty-one trial pits. A negative feature (16/2), recorded in the southwest-facing section of Trial Pit 16, was cut from the level of topsoil (16/1), through the underlying red-brown clay (16/3). The projected alignment of this feature would have formed a right angle with the present-day field boundary, and it is likely that this represents a modern drainage gully.

Trial Pit 21 was located in the far northeast corner of the site, close to the boundary with Creswell Crag and the existing Crag pond. The ground conditions were noticeably different here. This corner of the field was under rough pasture and, in contrast to the rest of the field, had only a very thin layer of topsoil overlying a series of gleyed deposits, which were only partially compacted. The location of Trial Pit 21 appears to correspond with that of a former mill pond, which existed up to the late-19th century, when it was drained on the orders of the Duke of Portland (Gilbertson and Jenkinson 1984). The sequence of deposits (described above) within the uppermost 1.70m of Trial Pit 21 may, therefore, represent a sequence of sediments within this former pond. Unfortunately, no artefacts were recovered from these layers and it is not possible to provide any date for their deposition.

8.0 Assessment of the Archaeological Importance of the Proposed Development Area at Creswell Crag

Prior to the commencement of this watching brief no below-ground archaeological investigations had taken place within the two areas shown on Figures 2 and 3, and the potential for the survival of archaeological deposits, their nature and condition, was unknown. This watching brief has demonstrated that although there appears to be no evidence of human activity within the southwestern area, evidence of historical activity has survived in the northeastern area.

Creswell Crag is recognised as a Site of Special Scientific Interest, and its archaeological significance lies with its evidence of Palaeolithic occupation, and with the technological and

cultural processes followed by its inhabitants. Although no evidence of Palaeolithic activity was recorded by this watching brief, the value of the archaeological resource in this area should not be underestimated. Surviving archaeological deposits within the immediate environs of Creswell Crags still have the potential to shed light on its geological, environmental, archaeological and historical development.

9.0 Implications and Proposals

9.1 Implications

Although no archaeological deposits or artefacts were recovered from the southwestern half of the site, the proposed relocation would, nevertheless, affect deposits within a designated area of special interest. It is, therefore, suggested that a watching brief be maintained throughout any groundworks within this half of the proposed relocation site.

Within the northeastern half of the site, the deposits identified as being of archaeological interest in Trial Pit 21 survived within the uppermost 1.70m. They are located within the immediate vicinity of an existing sewage pipeline, to which a new pipeline is to be connected. The survival of these deposits would certainly be compromised by the laying of a new pipeline, which, it is understood, will be laid at a depth of 2m.

9.2 Proposals

The proposals below provide an outline of the archaeological mitigation fieldwork which could be required if the proposed relocation is approved. The precise nature of such mitigation would need to be determined following the completion of a final location design and with the approval of Nottinghamshire County Council.

- 1) Provision should be made for the recovery of further samples from the immediate vicinity of Trial Pit 21, specifically from deposits 21/2 - 21/5. These deposits are considered to have potential for yielding a high level of insect, pollen, plant-macro and molluscan remains (Smith pers comm.), and if provision could be made for their dating, the information gained could enhance our understanding of sedimentology within the gorge environs.
- 2) Should significant archaeological remains be recorded during the recovery of these samples, provision should be made for a more intensive archaeological presence, which would allow for the full excavation and recording of the remains in advance of further groundworks, allowing for their preservation by record.
- 3) On completion of such further works, it may be appropriate to prepare an assessment of the significance of the findings, in accordance with the recommendations of Management of Archaeology Projects (English Heritage 1991), with a view to further analysis and publication of the results in a local archaeological journal.

11.0 References

Gilbertson, D.D. and Jenkinson, R.D.S. 1984 *In the Shadow of Extinction: A Quaternary Archaeology and Palaeoecology of the Lake, Fissures and Smaller Cavcs at Creswell Crags, SSSI.*

Mould, C.A. 1996 *Project Design for an Archaeological Watching Brief at Creswell Crags. Severn Trent Water Ground Investigation Contract.*

12.0 Acknowledgements

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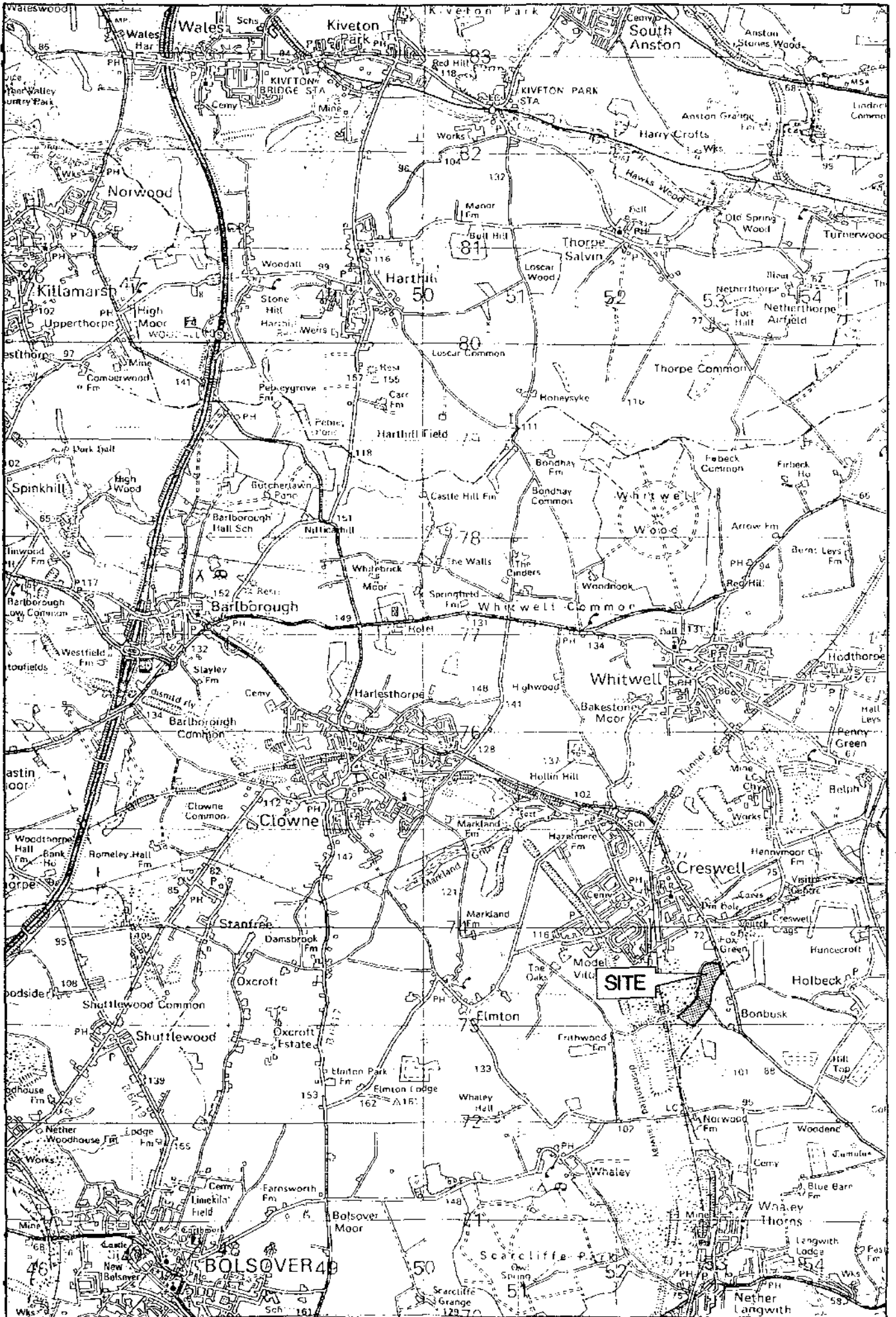


Fig.1

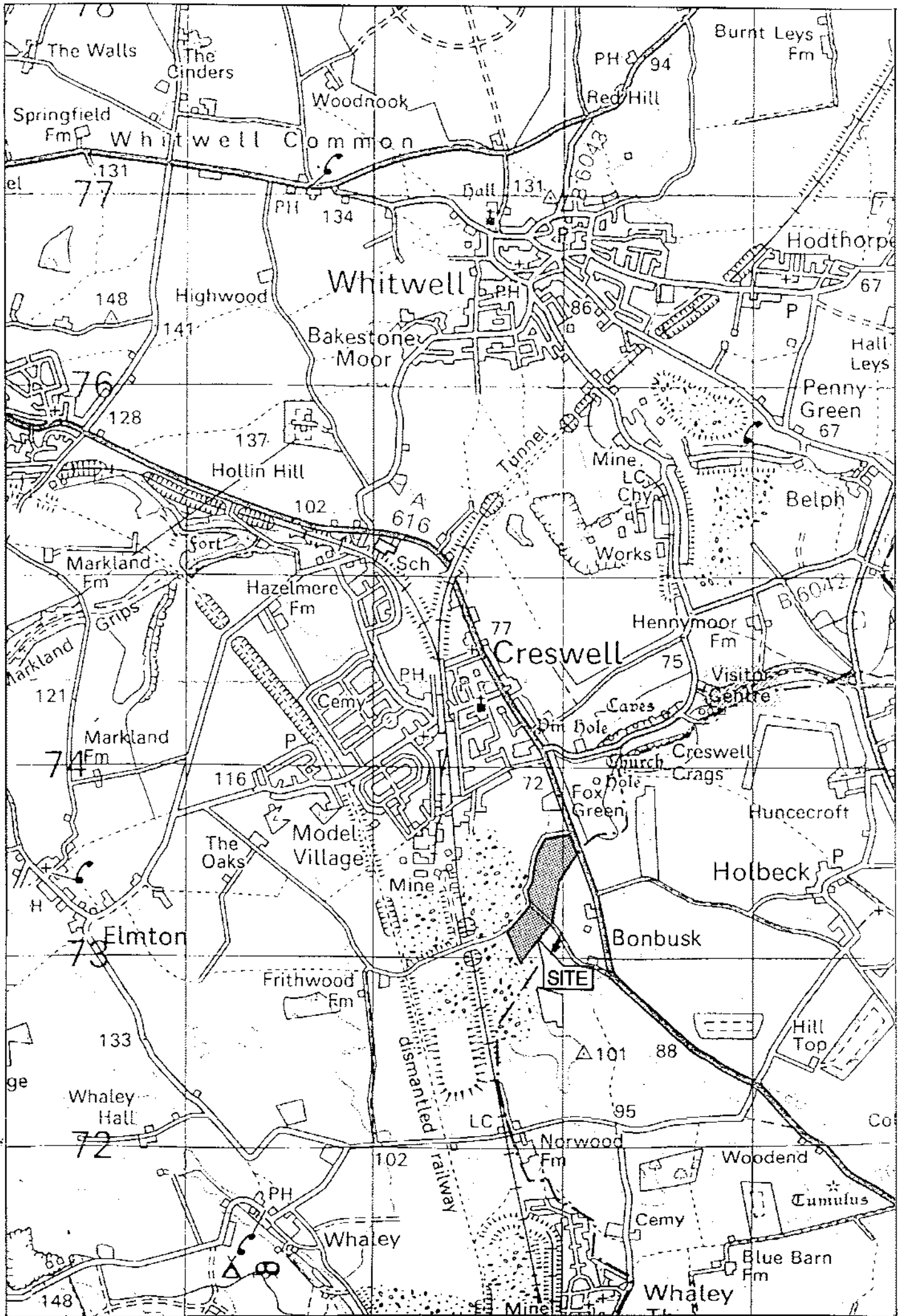


Fig2

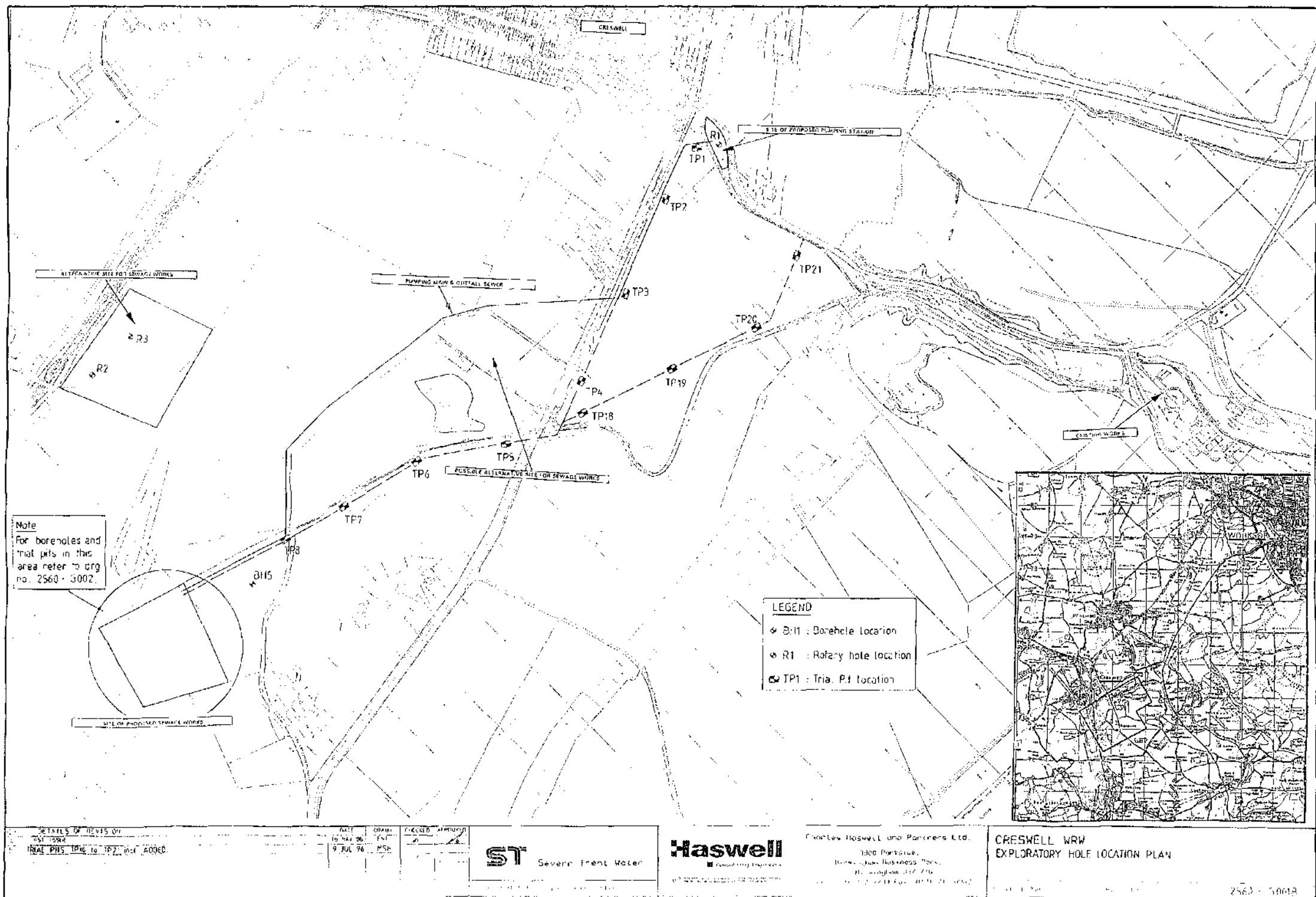
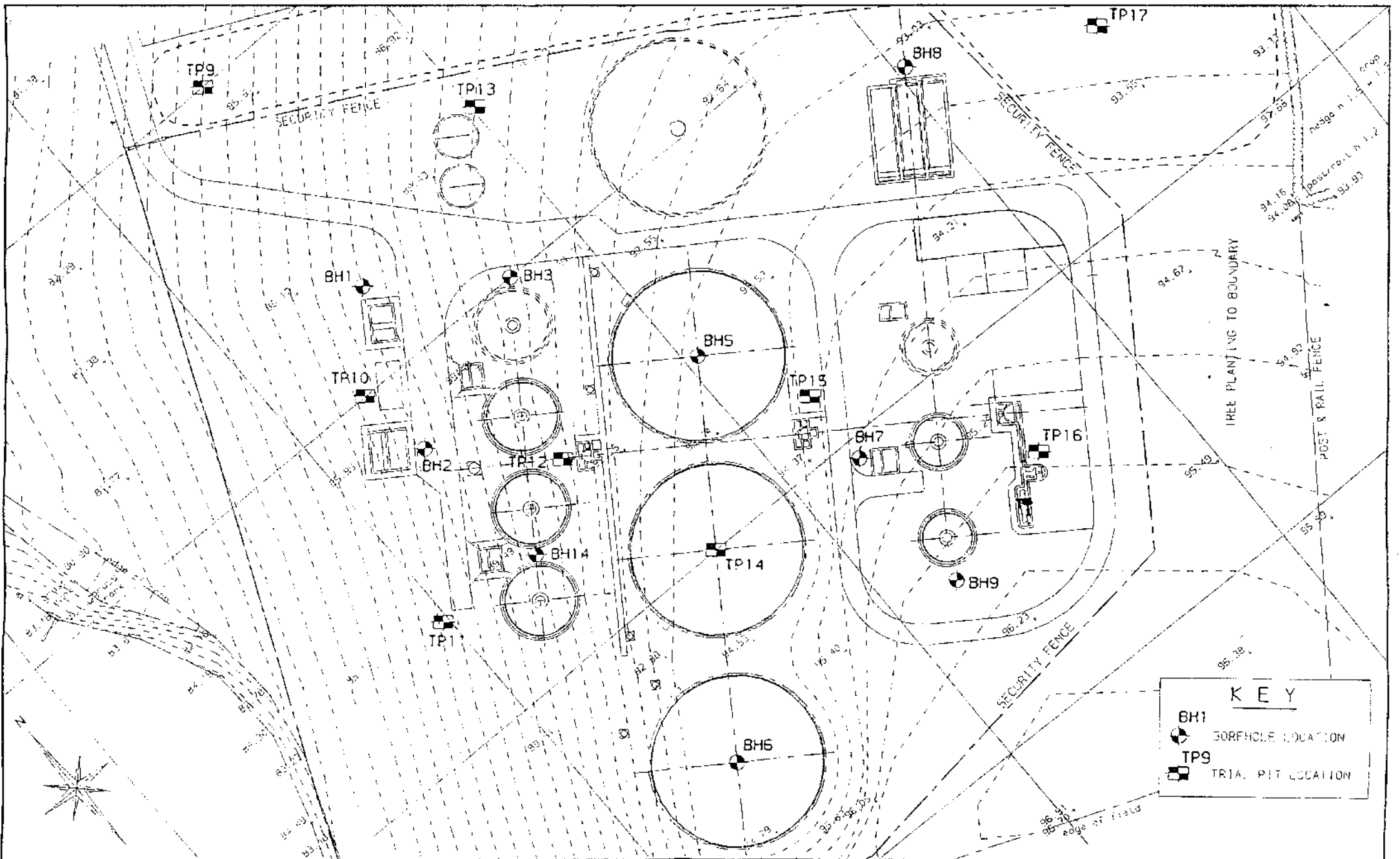


Figure 3



KEY

- BH1 BOREHOLE LOCATION
- TP9 TRIA. PIT LOCATION

REV.	DETAILS OF REVISION	DATE	DRAWN	CHECKED	APPR.
1	FIRST ISSUE	17 JUN 96	TM		
2					
3					
4					
5					

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 EXPLORATORY HOLE LOCATION PLAN
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Figure 4