Langdale/ Scafell Pike Neolithic Axe Factory Management Project

Interim Report 1991/1992

National Trust

LANCASTER UNIVERSITY ARCHAEOLOGICAL UNIT

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Langdale / Scafell Pike Neolithic Axe Factories Management Project

Interim results of Archaeological Fieldwork in 1991/1992

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Introduction

In response to the rapidly, deteriorating condition of the neolithic axe factories around the summits of the Langdale Pikes, a management programme has been established to record and consolidate the fragile working-sites. It is undertaken jointly by the Lancaster University Archaeological Unit and the National Trust and is financed by English Heritage and the National Trust.

Axe factory groups exposed by foot-paths were in the most immediate need of consolidation work and the first season of work(1990/1991) concentrated on the Harrison Path group, which has been severely damaged by both water erosion and visitor pressure. A comprehensive survey and a series of excavations were undertaken in advance of extensive path repair work. Two other path site groups (Thorn Crag & Harrison Combe) were also surveyed and a monitoring programme was established throughout the Langdale and Scafell Pike areas to determine the extent of erosion on all the sites.

During the second season (1991/1992), the excavation and consolidation programme was extended onto the Thorn Crag site group which is also affected by footpath erosion. The proposed path repair work will result in the narrowing of the width of the present, erosion scar; the sites on the up-slope side of the path will be turf covered and protected, but working areas on the down-slope side of the path will be damaged. Three trenches were excavated to record the threatened sections of the working-sites prior to their consolidation.

Excavation was also undertaken of a small site (HC 219, survey plan 4) in the middle of the Harrison Combe path, which had been exposed the previous year but had markedly deteriorated since its discovery and was now under severe threat of destruction.

It was originally intended that the survey programme be extended onto other site groups affected by path erosion (Loft Crag Path, Dungeon Ghyll Path and Stake Beck). However a scrambling guide book has recently been published which includes a number of routes through the Top Buttress area. The large axe factory sites of this area are very vulnerable to any surface activity, but, because of their inaccessibility, are in a good condition. This fragile equilibrium could become irrevocably disturbed if even a relatively small number of scramblers start to use the routes across the buttress. It was therefore decided to initiate the consolidation of the axe factory sites at the earliest opportunity. The first stage was a detailed and accurate contour survey of the axe factories (below). The second stage (April/May 1992) will involve covering two axe factories (TB 92 & 94, survey plan 4) with turfs air lifted in from the Mart Crag Moor area.

The results of the 1991 field work are summarised within three individual reports:

Management and Survey programme	-	J.Quartermaine
Thorn Crag and Harrison Path Excavations	-	P.Tostevin
Site 219 (Harrison Combe) excavation	-	D.Hodgkinson

Management and Survey Programme Report

J. Quartermaine

The monitoring programme was established in 1990/1991 to identify areas of greatest erosion, threatening the axe factories, and enable the efficient targeting of management resources. The main element of the programme is a photographic record of all sites from fixed locations; this was completed during this season of field work with the addition of photographs of all working-sites on the northern side of Scafell Pike.

During the first season painted flakes were set in a line across two, Top Buttress working-sites (TB 94 & 98, plan 4) as an experiment to monitor scree movement. This proved to be successful and showed that the surface scree is moving erratically downslope at about 2m per year. The same procedure will be adopted for sites: TB 102, 103, 106 & 161 (survey plan 4).

Since the setting up of the monitoring programme (July 1990), a significant change in the condition of some sites has been observed. On the Harrison Combe path two small working-sites (219 & 220) have been subject to continued foot-path erosion and their condition has significantly deteriorated during the year.

On Top Buttress the vegetation cover is contracting erratically, resulting in the exposure of two sites (198b and 204) since the previous year. A further two sites (92 & 111), have noticeably less vegetation cover than is shown in the 1990 photographs. Most of these areas of eroding vegetation are away from the main scrambling routes; they do not appear to be a result of human activity and although it is suspected that intensive sheep grazing may be a contributory factor, this has yet to be proven.

The observed decrease in vegetation cover, coupled with the prospect of increasing numbers of scramblers in the area highlights the immediate need for consolidation work on these the best preserved of the large axe factory groups. It is intended to import compatible, upland turfs from Mart Crag Moor, by helicopter, and experimentally cover two of the larger working-sites (92 & 94). If this method proves an effective means of protecting the sites, it will be extended onto the other sites of the group in future years.

Top Buttress Survey

The first stage of the consolidation programme is the accurate and comprehensive recording, by photography and survey, of the working-sites with respect to their associated landscape. It is intended that they should also be photographed from the helicopter platform immediately prior to the import of turfs using both 35mm and medium format cameras.

A full topographic survey of the Top Buttress area was undertaken this season, at a scale of 1:250, which recorded the present extents of the working-sites and all significant topography (crags, scree, boulders and prominent sheep trods).

At each site group, permanent control stations were set up and have been accurately tied into the national grid; as part of the monitoring programme it will now be possible to measure any subsequent changes, however subtle, in the spatial extent of the sites.

A close contour survey of the area was undertaken with detail points at 1-2m separation. Over 2,700 points were used to generate the contour and isometric digital terrain models of the Top Buttress surface (cf. enclosed maps).

During the survey season the weather was unsettled, and a number of days were lost because of persistent rain. As a result it was not possible to complete the survey of Top-Buttress. Sites 110 & 111, at the western end, were omitted, as was the bottom terrace of the buttress, which includes the lowest run-off elements of some of the larger sites. However, these areas will not be affected by the April/May 1992 consolidation work and it is hoped to complete the survey in the next season (1992/3).

Excavation Programme Report

P. Tostevin

Small scale excavations were undertaken on the line of proposed path consolidation. Their purpose was to investigate the extent and substance of the axe working deposits prior to path repair. Three trenches were excavated at the Thorn Crag site group and one at the Harrison Path group.

Trench 1 - Thorn Crag, site 187 (plan 8): 5m x 1.5m

The surface layers comprised turf, topsoil and loose gravelly scree above a compact gravelly loam which was limited to the area of the path erosion. Beneath these was a layer of fine dark peat which contained a number of flakes, particularly at the north-west end of the trench. The main concentration of worked material was contained within a layer of brown loam below the peat. The majority of the flakes were small (mainly between 5mm and 20mm across). In the north-west corner of the trench was a shallow but distinct layer of silty loam which also contained a small number of flakes.

Trench 2 - Thorn Crag, site 187 (plan 8): 5m x 1.5m

Trench 2 was excavated one metre to the south-east of Trench 1 to establish the extent of site 187 along the proposed course of the path. The surface layers were similar to those observed in Trench 1 and comprised turf and topsoil and run-off from the main path consisting of loose scree. Beneath the scree in the north east corner was a layer of compacted gravelly loam which contained a small quantity of redeposited flakes. Below these horizons was a layer of dark peaty loam which contained a significant quantity of flakes especially in the south-east corner. The greatest quantity of worked material was within the layer of brown loam below the peat with the highest concentrations found at either end of the trench. A small quantity of charcoal was found sealed beneath the lower layer of worked flakes and there was no evidence of any localised disturbance. A sample was taken (4.5g), which it is hoped will be acceptable for an accelerator date.

The excavation of trenches 1 and 2 did not define a limit to site 187 on the south or south-east side but confirmed that it was much greater than the extent of the surface scatter.

Trench 3 - Thorn Crag, site 189 (plan 8): 2m x 1m

The surface horizon comprised dark peaty loam; it contained between 50% and 60% of medium sized pebbles and also a very small quantity of flakes. At the north-west end of the trench, beneath the topsoil, was a layer of brown loam similar to that found in trenches 1 and 2; it contained a very small quantity of worked material.

The results of this excavation suggest that considerable erosion has already taken place, destroying the majority of *in situ* material.

Trench 4 - Harrison Path, site 171 (plan 5): 2m x 1m

Only a small area of stratigraphy remained *in situ* on the west side of the trench. There was also only a very small quantity of worked material in the dark peaty layer and the brown loam below. Beneath the scree in the middle of the trench was natural subsoil.

Summary

Sites 189 & 171 were already badly eroded and proposed path repair work will not result in the destruction of significant archaeological

deposits. Much of the area of site 189 that will be affected by the path repair has now been excavated; however, because of its extent and good state of preservation, a small area of archaeological stratigraphy will be destroyed during repair work.

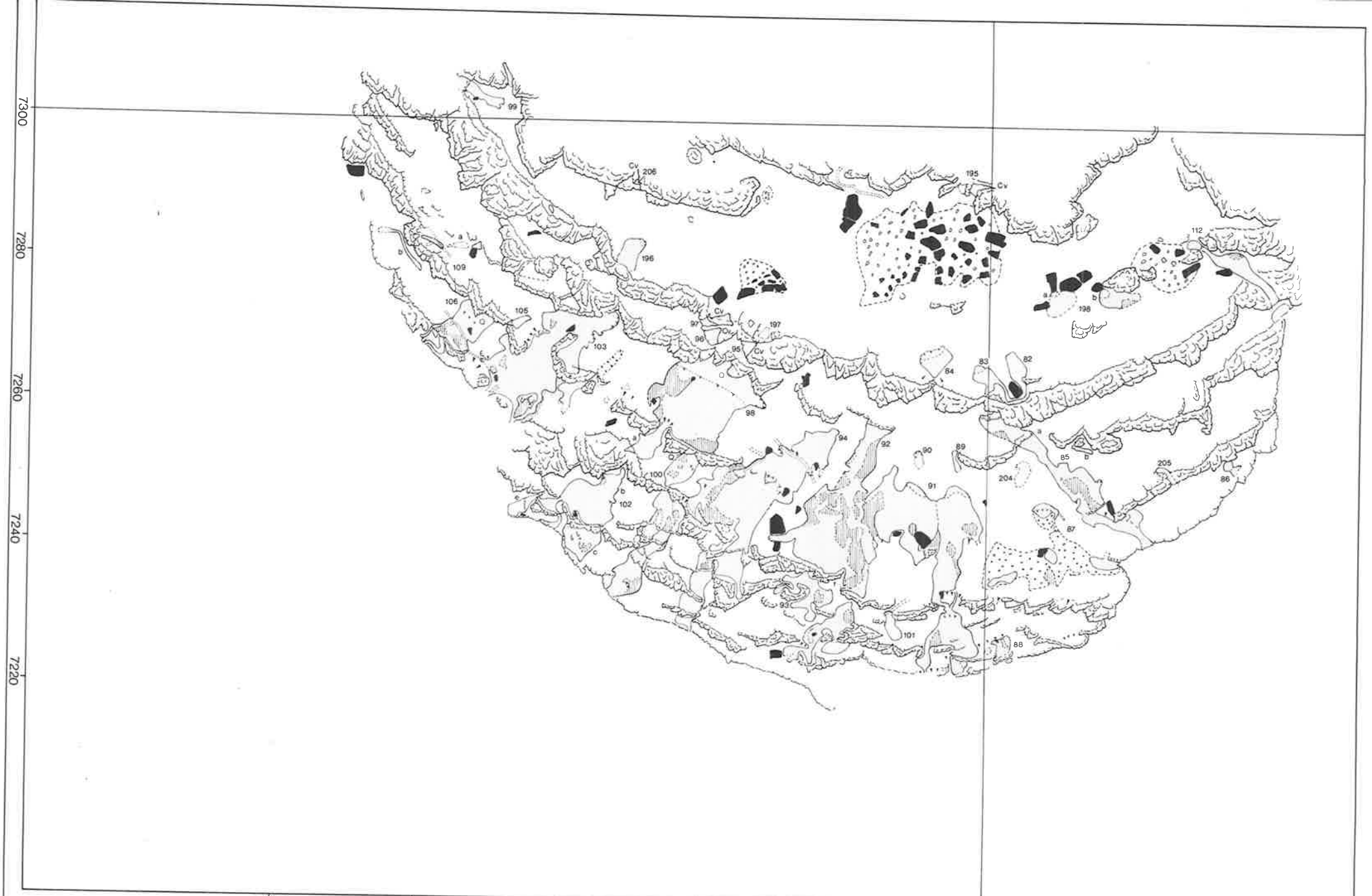
Excavation of site 219 on Harrison Combe

D. Hodgkinson

The rapid deterioration of this small working floor, since its initial exposure the previous year, prompted an urgent rescue excavation. Photographs of the floor, from 1990, show a very well-defined and localised scatter (0.8m x 0.5m) of about 60 flakes; by July 1991 this had become a more ill-defined, and larger scatter (1.2m x 0.6m) of about 30 flakes. The extent of the original scatter was broadly edged by a ring of large stones (0.2m diam.) which has helped preserve the deposit and may have been a structural element of the original floor. The floor was found to comprise a single, thin layer of flakes overlying a 0.1m deep peat deposit. Beneath the peat was a deposit of brown, humic loam which was directly on top of bedrock.

The size and depth of the flake deposit suggests that it comprised waste material from the production of only one axe. The source material was probably a naturally detached block, originating from the higher band of fine grained tuff.

The presence of peat/humic loam beneath the flakes suggests that the episode of axe manufacture follows the establishment of peat formation and the clearance of high altitude woodland from the immediate locality.



LANGDALE AXE FACTORY

MANAGEMENT SURVEY

PLAN NAME

TOP BUTTRESS

Key

Sites

Vegetation

Scree

Fine Flakes

20m

DRAWN BY JQ

DATE

SCALE 1: 250

SITE CODE

SHEET No. TB1

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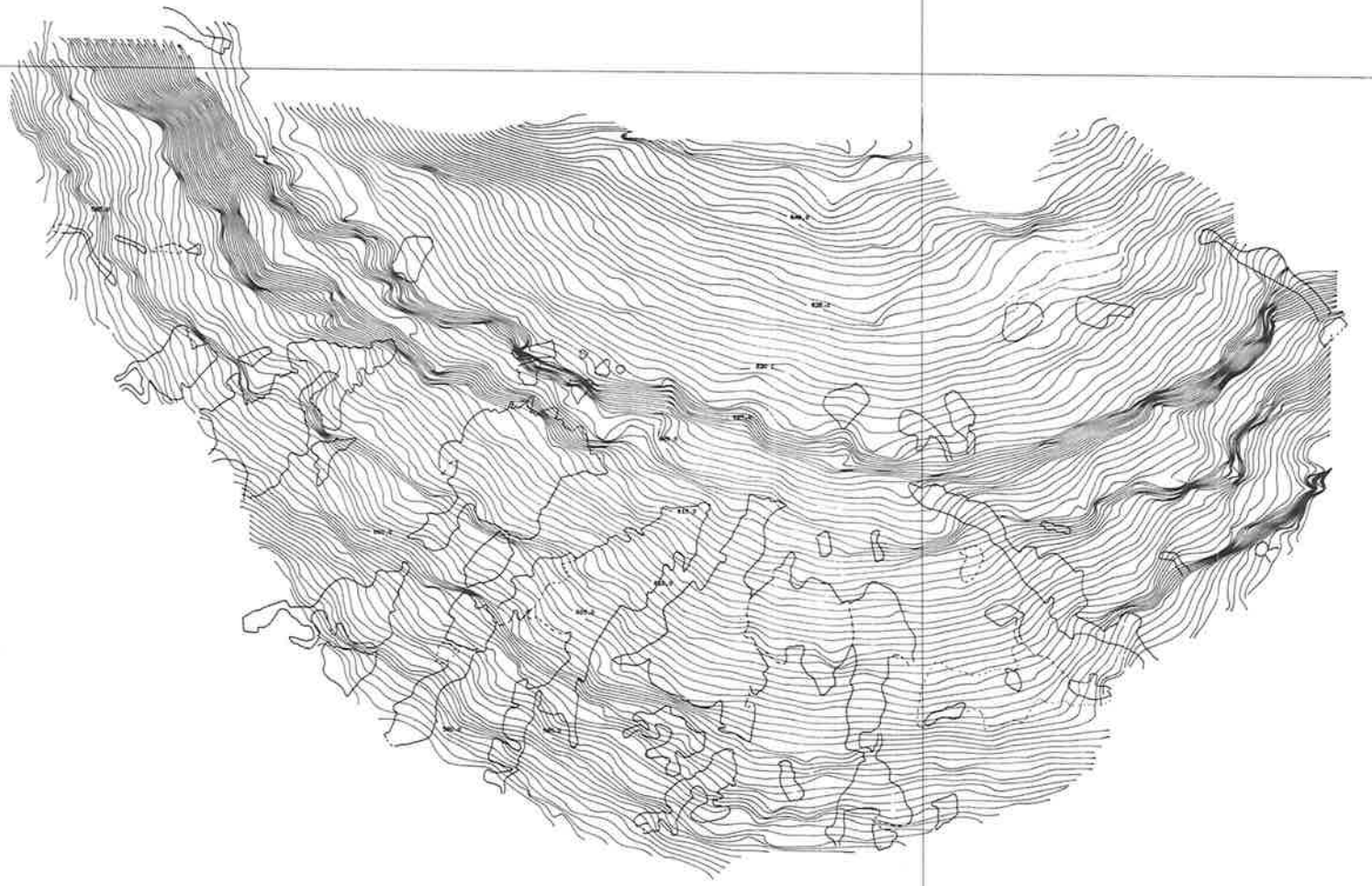
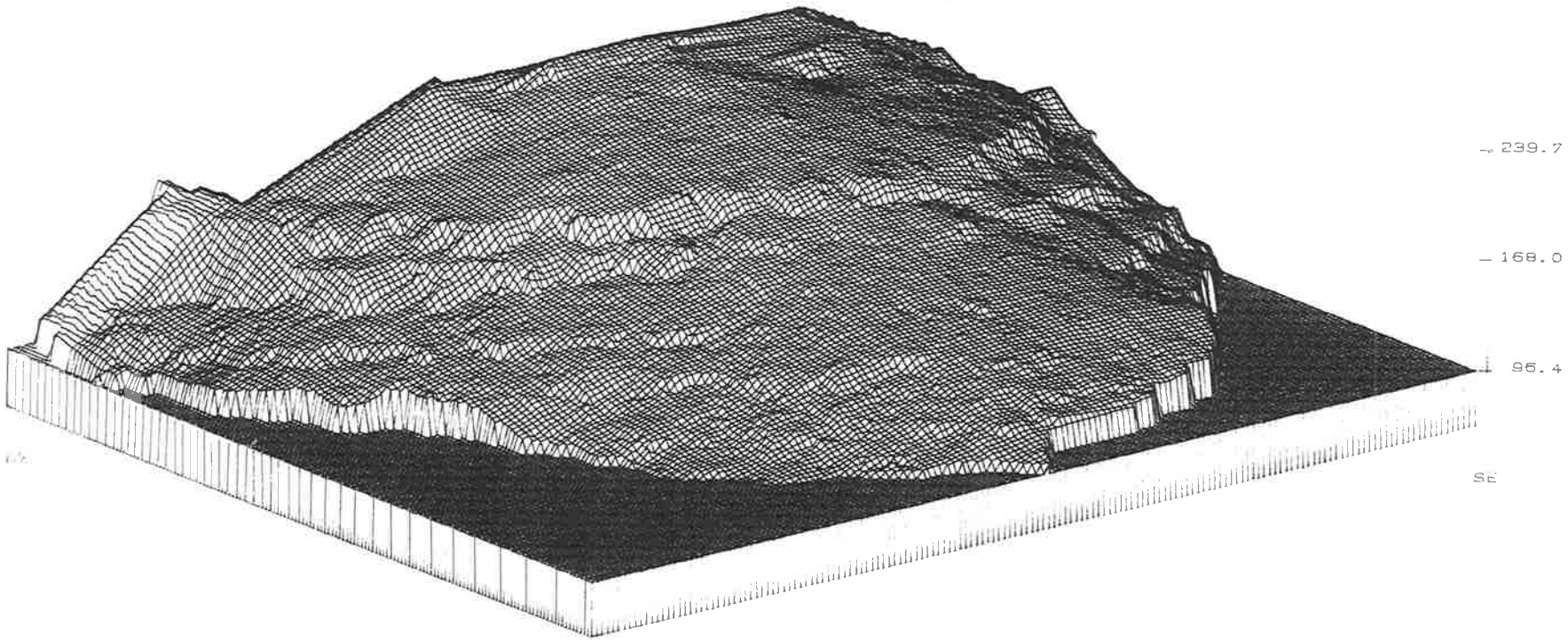
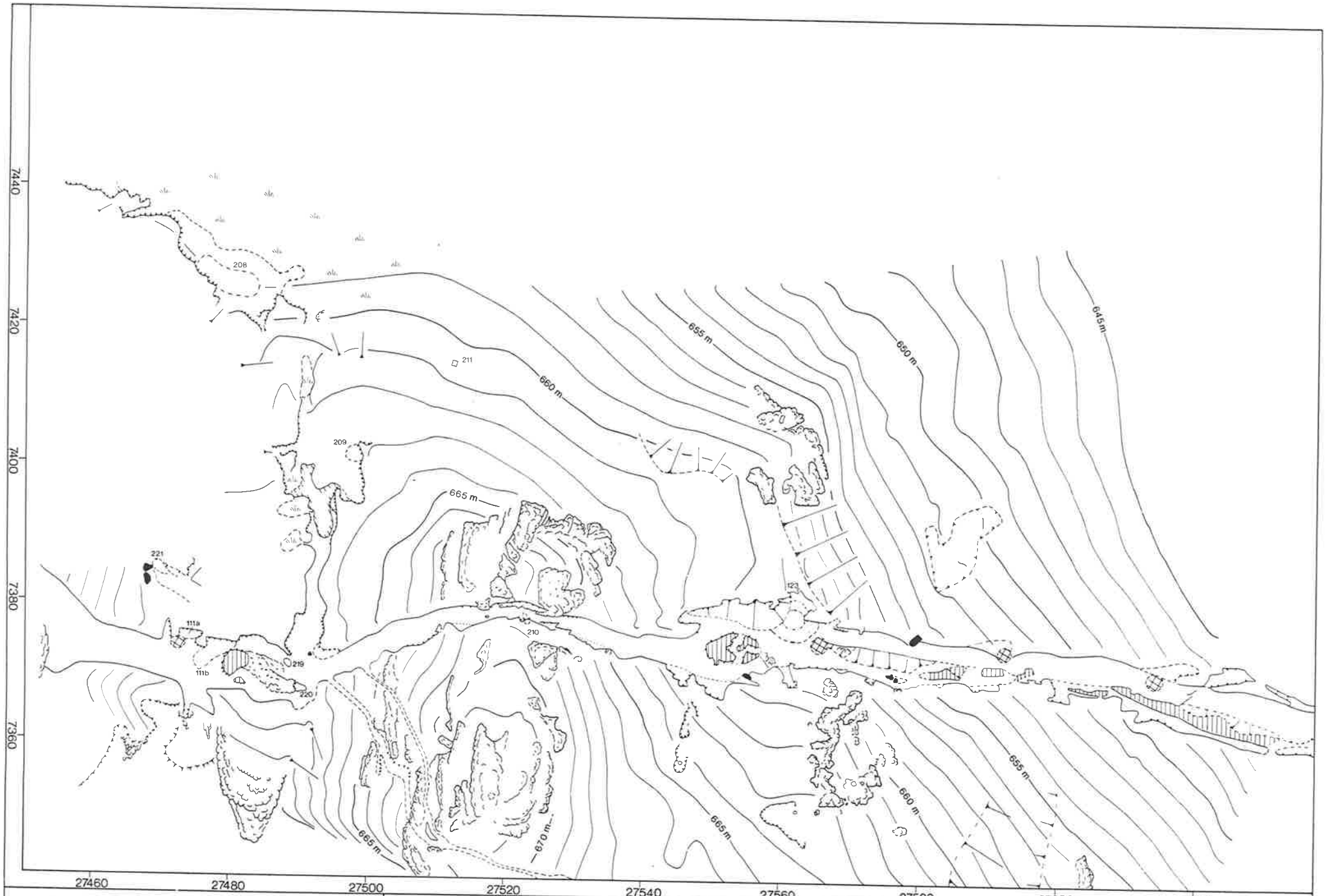


TOP BUTTRESS

Axe Factory Contour Survey 1:250



TOP BUTTRESS



LANGDALE AXE FACTORY

MANAGEMENT SURVEY

PLAN NAME
HARRISON COMBE

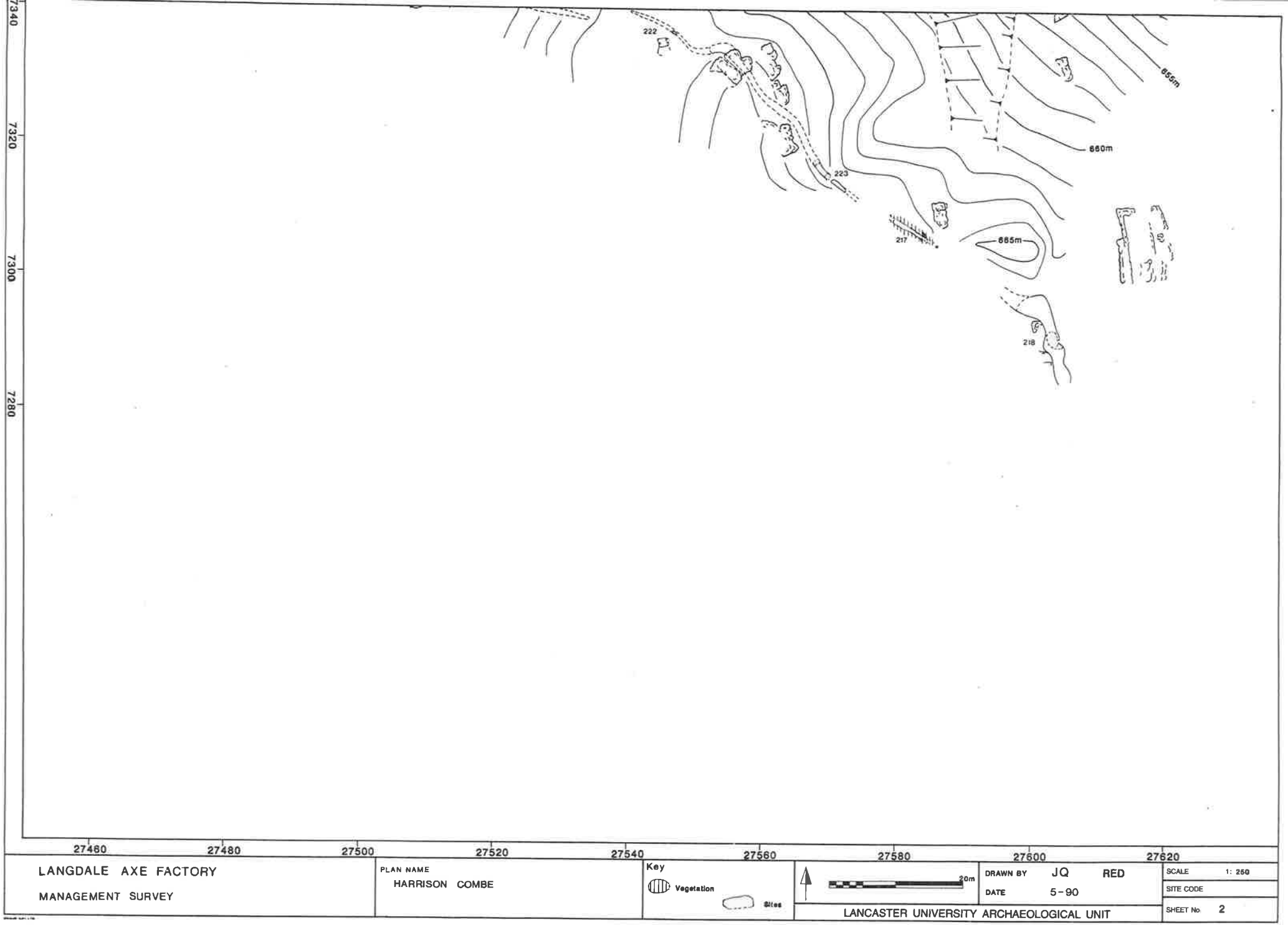
Key
Cairn
Vegetation
Sites

20m

DRAWN BY JQ RED
DATE 5-1990

LANCASTER UNIVERSITY ARCHAEOLOGICAL UNIT

SCALE 1: 250
SITE CODE
SHEET No. 1



LANGDALE AXE FACTORY

MANAGEMENT SURVEY

PLAN NAME
HARRISON COMBE

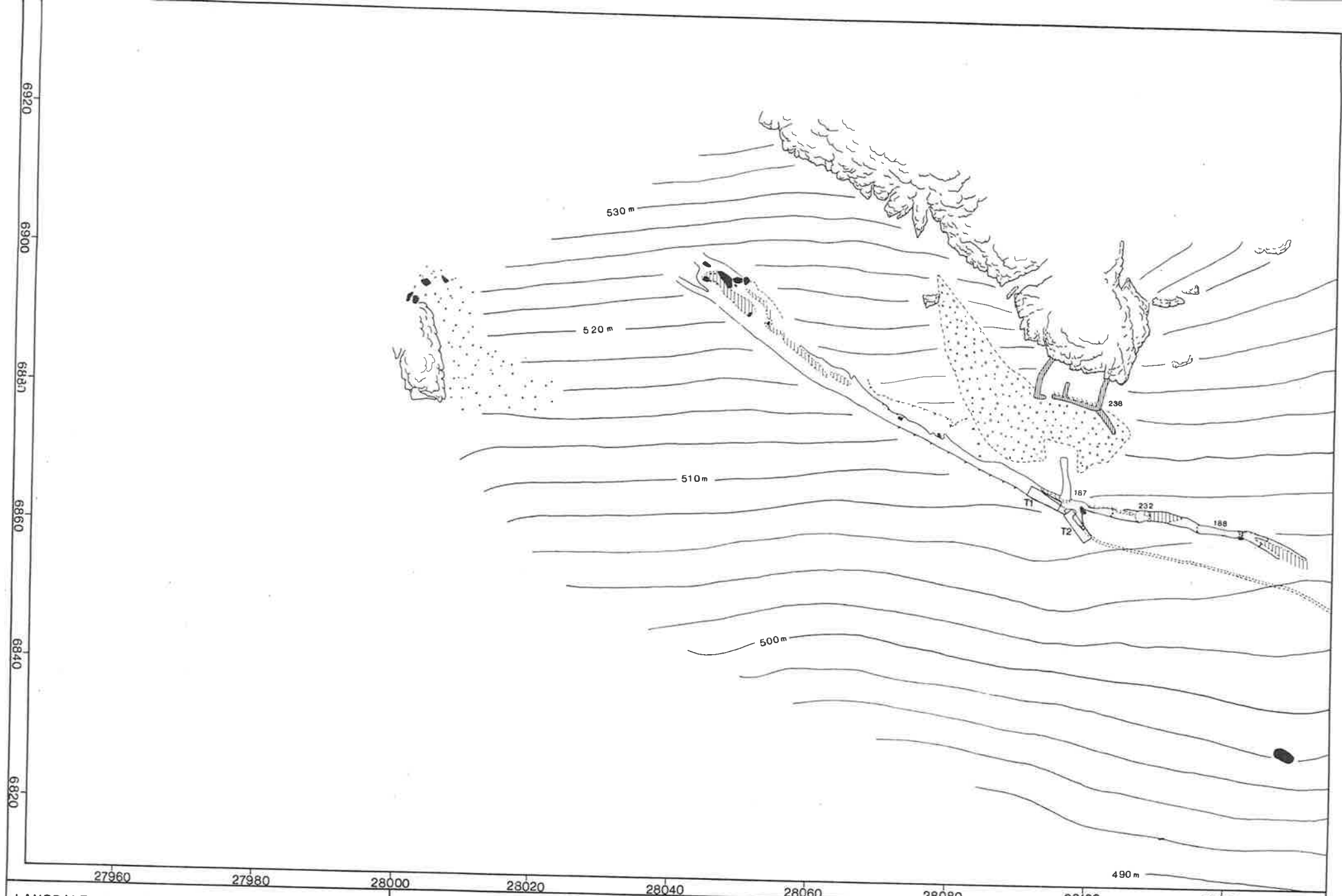
Key
Vegetation
Sites

20m

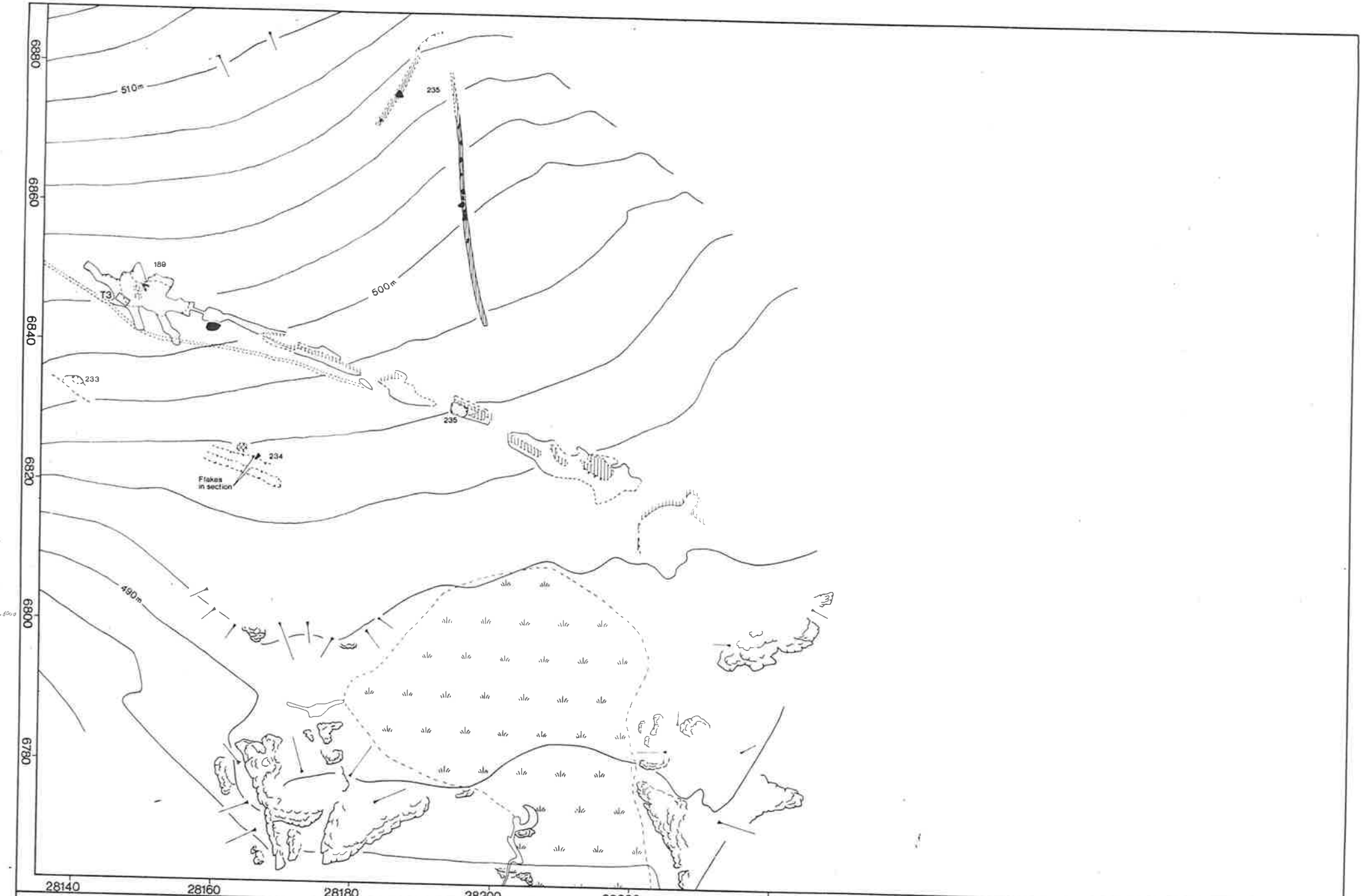
DRAWN BY JQ RED
DATE 5-90

LANCASTER UNIVERSITY ARCHAEOLOGICAL UNIT

SCALE 1: 250
SITE CODE
SHEET No. 2



LANGDALE AXE FACTORY MANAGEMENT SURVEY	PLAN NAME THORN CRAG	COMMENTS Key Sites Vegetation Cairn Coarse scree	20m	DRAWN BY JQ SQ DATE 4-1990 LANCASTER UNIVERSITY ARCHAEOLOGICAL UNIT
				SCALE 1: 250 SITE CODE SHEET No. 1



LANGDALE AXE FACTORY

MANAGEMENT SURVEY

PLAN NAME

THORN CRAG

COMMENTS

Key

Vegetation

Cairn

Sites

Coarse scree

20m

DRAWN BY JQ & SQ

DATE 4-1990

LANCASTER UNIVERSITY ARCHAEOLOGICAL UNIT

SCALE 1:250

SITE CODE

SHEET No. 2

LANGDALE AXE FACTORY

MANAGEMENT SURVEY

PLAN NAME

HARRISON PATH

COMMENTS

Key

Sites

Vegetation

Coarse scree

Cairn

20m

DRAWN BY JQ PT SQ

DATE 5-1990

LANCASTER UNIVERSITY ARCHAEOLOGICAL UNIT

SCALE 1:250

SITE CODE HP 90

SHEET No 1

No. 1

LANGDALE AXE FACTORY

MANAGEMENT SURVEY

PLAN NAME

HARRISON PATH

COMMENTS

Key

Sites

Vegetation

Cairn

Coarse scree

20m

DRAWN BY JQ PT SQ

DATE 5 - 1990

LANCASTER UNIVERSITY ARCHAEOLOGICAL UNIT

SCALE 1 250

SITE CODE HP 90

SHEET No. 2

No 2