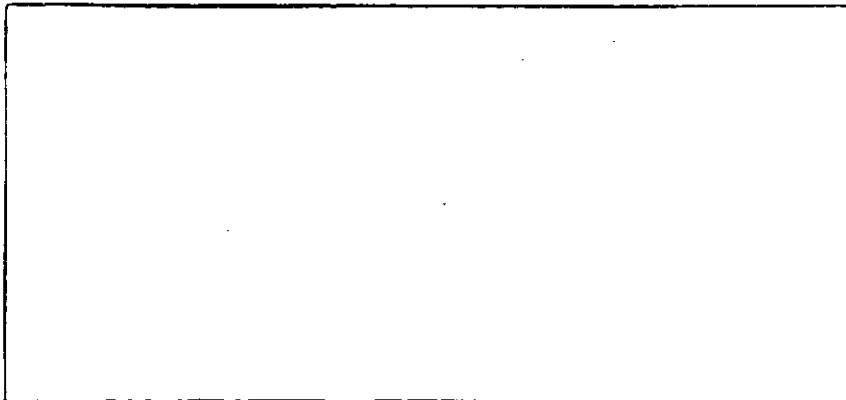


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THE WYE VALLEY REPORT

Report on the survey of Cave and Rock-shelter sites in the Wye Valley, Hereford and Worcester

Technical survey by the Royal Commission on the Historical Monuments of England (RCHME) was carried out in the Wye Valley at the request of Dr R.N.E. Barton (formerly of the University of Wales at Lampeter, now of Oxford Brookes University). The RCHME was asked to support Dr Barton's research into a number of cave sites and rock-shelters by providing accurate locational information. The sites, lie along an 12km long stretch of the valley of the River Wye, approximately 3km north of Monmouth in the administrative county of Hereford and Worcester. Prior to the RCHME survey, inaccuracies in the existing map cover of the steeply contoured and densely wooded valley made identification of the exact position of most sites impossible. Following RCHME survey it is now possible, for the first time, to locate accurately on the Ordnance Survey National Grid all sites investigated in the Oxford Brookes University Wye Valley Project.

Introduction

The RCHME survey was carried out at the request of the Oxford Brookes University 'Wye Valley Project'. The aim of the survey was to provide accurate locational detail for the sites included in the Oxford Brookes University Project. This necessitated fixing survey marks in the ground at each site, and tying-in each survey mark to the Ordnance Survey National Grid.

In addition, altitudinal information for each point relative to Ordnance Datum was required. The desirability of including cave entrances and rock outcrops associated with archaeological remains within the RCHME survey was recognised, but unfortunately this proved to be beyond the scope of available resources. The results presented below therefore pertain solely to the establishment of the geographical position of caves or rock shelters in the valley.

RCHME survey work was carried out in two phases in the winters of 1996 and 1997 respectively, and took a total of four weeks to complete.

Geology and Topography

The River Wye rises in the Cambrian Mountains close to the Powys - Dyfed county boundary and follows a sinuous course as it flows south to join the Bristol Channel at Chepstow. Along much of its length, where the underlying bedrock is limestone or sandstone the river has carved out a sharply incised and deep river valley. Along these stretches, steep-sided cliffs flank both sides of the river, and fluvial erosion combined with subsequent weathering have left well-formed spurs and isolated rock pinnacles jutting out into the river valley. In areas where down-cutting is most pronounced the narrow river valley, which is c. 100 - 200m wide at its base, rises dramatically to a height of c. 150m over a distance of just 100m.

The resultant steep valley sides are broken by lateral bands of sandstone and limestone, the first of which lies at a height of c.18-25m above Ordnance Datum, capped by a limestone plateau. Elsewhere, the valley slopes consist of rubble scree derived from the rock outcrops.

These geological formations are relatively unstable and are vulnerable to secondary working by a number of agencies, principally frost-fracturing and continuing fluvial erosion. As a result the rock faces are heavily indented by sharp recesses, caves and arching rock overhangs which have long proven to be suitable niches for human exploitation. In more recent times much of the rock face has been quarried for ferrous deposits. The valley sides are occasionally breached by the shallow re-entrants of dry valleys, which must originally have contained small streams. North of Symond's Yat, the river extends in a wide loop away from the sandstone escarpment of Huntsham Hill and encloses a lower-lying area. A contrasting range of locales can thus be found over a relatively constricted area. Some of the dry valleys, such as that at King Arthur's Cave (NMR No. SO 51 NW 7) provide easy access to, and from, the confines of the main Wye Valley, and must have been important thoroughfares in antiquity. Likewise, the aforementioned spurs and pinnacles are well suited for use as viewing platforms. In addition, those cave sites and rock shelters which were occupied may have been selected for habitation in preference to others because of the vistas afforded from their entrances.

Archaeological Research in the Wye Valley

Archaeological research in the Wye Valley prior to the Oxford Brookes University Project has been of limited extent, although the area has a high archaeological potential. Four well-known ancient monuments lie along the stretch of the River Wye covered by the project. The southernmost is the enclosed settlement at Biblins (NMR No. SO 51 SE 1), which is considered to be of Romano-British date. To the north lies the multi-vallate Iron age hillfort of Symond's Yat (NMR No. SO 51 NE 3) and the standing stone, known as 'The Queen Stone' (NMR No. SO 51 NE 6) which is of Neolithic or early Bronze Age date and stands in an isolated position on the valley floor near Huntsham Bridge. The bivallate hillfort on Little Doward (NMR No. SO 51 NW 6) is located on the western fringe of the survey area and occupies a very prominent peak which also hosts the King Arthur's Hall caves and overlooks those at King Arthur's Cave.

It is, however, the presence of cave sites containing stratified deposits which makes the Wye Valley particularly valuable in terms of its archaeological potential, as such sites are relatively rare in southern England. A number of cave and rock-shelter sites in the survey area have seen detailed archaeological investigation. Much of the earlier focus of attention concentrated on the deposits at King Arthur's Cave (NMR number SO 51 NW 7) on the western side of the survey area (Symonds 1871; Hewer 1925; ApSimon 1992; Barton 1995).

Excavation here has established that it is one of the richest and most clearly stratified cave sites in England, with a series of archaeological deposits ranging in date from Late Upper Palaeolithic through to the Medieval period (Barton, 1995, 263).

Building on the foundations laid by the excavations at King Arthur's Cave, the Oxford Brookes University project has more recently sought to broaden the scope of these investigations and look at a larger number of sites across a broader spectrum of topographical zones. The project forms part of a wider programme of research into changing patterns of

social behaviour and human use of the landscape both during and after the last Ice Age. The specific aims of Oxford Brookes University fieldwork were fourfold :

1. To investigate previously undocumented caves and rock-shelters in order to evaluate their potential for future research and excavation.
2. To obtain stratified samples of environmental and archaeological evidence relating to the Palaeolithic, Mesolithic, Neolithic and later prehistoric periods.
3. To collect survey data, firstly for analysis of the relationships between humans and the landscape using GIS, and in the longer term with the aim of quantifying the potential archaeological resource for future land management and conservation purposes.
4. To devise the most appropriate strategy of small-scale excavation and sampling in these locations to maximise knowledge whilst removing a minimum of deposit.

Work began in 1993 and initial finds have included material of Upper Palaeolithic, Mesolithic, Bronze age and Romano-British dates. In addition, field reconnaissance has discovered a large number of new cave and rock shelter sites. Work was ongoing at the time when the RCHME survey was carried out.

The RCHME Survey

The purpose of the RCHME survey was to provide precise locational details for a number of previously identified caves and rock shelters along the valley sides, including information on the plan position, elevation and aspect of the caves. Verification of identifiable features from Ordnance Survey 1:2500 mapping was hampered by the active land management initiatives by the landowners (the Forestry Commission), which had recently extended to the removal and renewal of fences and roads alike.

It was initially hoped that the survey would be able to use the Global Positioning System (GPS) to fix all locational detail using satellite data, obviating the need for ground-based survey through the wooded and precipitous valley. However, the steepness of the valley sides and the dense tree cover obscured signals from the satellites and precluded this approach.

As a result, a two-tier strategy was adopted which involved a modified GPS survey supplemented by theodolite survey. Primarily, overall ground control was established using Leica System 200 single frequency differential GPS equipment in areas free of tree cover at either end of the Wye Valley project area. Data processing and data transformation was carried out using SKI v1.9. For absolute accuracy it was necessary to occupy three local Ordnance Survey triangulation stations and this provided the basis of the transformation of data from the simple readings of latitude and longitude (WGS84) initially computed, to Ordnance Survey National Grid coordinate OSGB36 values. The three pillars used were:

Buckstone, Hangerberry Hill and Llanrwn, which provided good control for transformation in the survey area. A series of accurately fixed base stations were established by using GPS and one of these, at Biblins ref: 355363.920, 214474.386, was occupied throughout the survey. This was then used as a reference for all other survey stations. Although some difficulty was experienced with satellite reception, good results were achieved, with acceptably low residuals.

Following this, secondary control using the base stations established by the GPS was secured by a Wild Total Stations TC2000 EDM. All points of detail, such as caves and rock shelters, were recorded from this. A series of independent traverses, each tied into the GPS framework, visited each site included in the Oxford Brookes University Project and allowed their positions to be accurately established.

This data was then computed through Mathshop survey software and plotted on a Calcomp 3024 plotter. All other graphics were then processed using CorelDraw 5. The processed data was then mapped onto the most detailed available Ordnance Survey base map which is at a scale of 1:2500. This demonstrated major discrepancies between the location of cave sites recorded by the RCHME and rock outcrops depicted on the Ordnance Survey map, which were due to the inaccuracy of the Ordnance Survey map in the is extremely difficult survey terrain.

Results:

The RCHME survey highlighted the problems inherent in accurate survey in terrain such as that of the Wye Valley, even with modern technology, and explains the inaccuracies in the Ordnance Survey maps. Comparison of the RCHME Wye Valley survey with the most detailed Ordnance Survey maps clearly demonstrates the value of the RCHME survey, and it is evident that the locational information supplied by RCHME will provide an accurate framework from which to construct a more detailed analysis of the local contexts of each site recorded. In addition, it is anticipated that the provision by RCHME of accurate grid references for the Wye Valley sites will reduce the occurrence of duplication and other errors in locational description which have caused problems for users of the previous record.

Sites investigated by the RCHME:

1. *Merlin's Cave and a series of others, as yet unnamed.*
2. *Lady Park Wood.*
3. *King Arthur's Hall Cave.*
4. *Symond's Yat East and Wye Rapid's Cave.*
5. *Coldwell Rock's Caves.*

Appendices:

- i) The scanned Ordnance Survey map as background detail with a series of superimposed nodes showing the location of the survey stations as well as the positions of all relevant cave and rock shelter sites.
- ii) Hard copy print-out of data which includes National Grid coordinate points and height above Ordnance Datum of selected points.
- iii) Witness photographs of each site recorded.

Acknowledgements

The survey was carried out by Graham Brown, David Field, David McOmish and Bernard Thomason. The report was written by David McOmish and edited by Graham Brown and David Field. All drawings were produced by Deborah Cunliffe.

APPENDICES

HEREFORD CO CONST

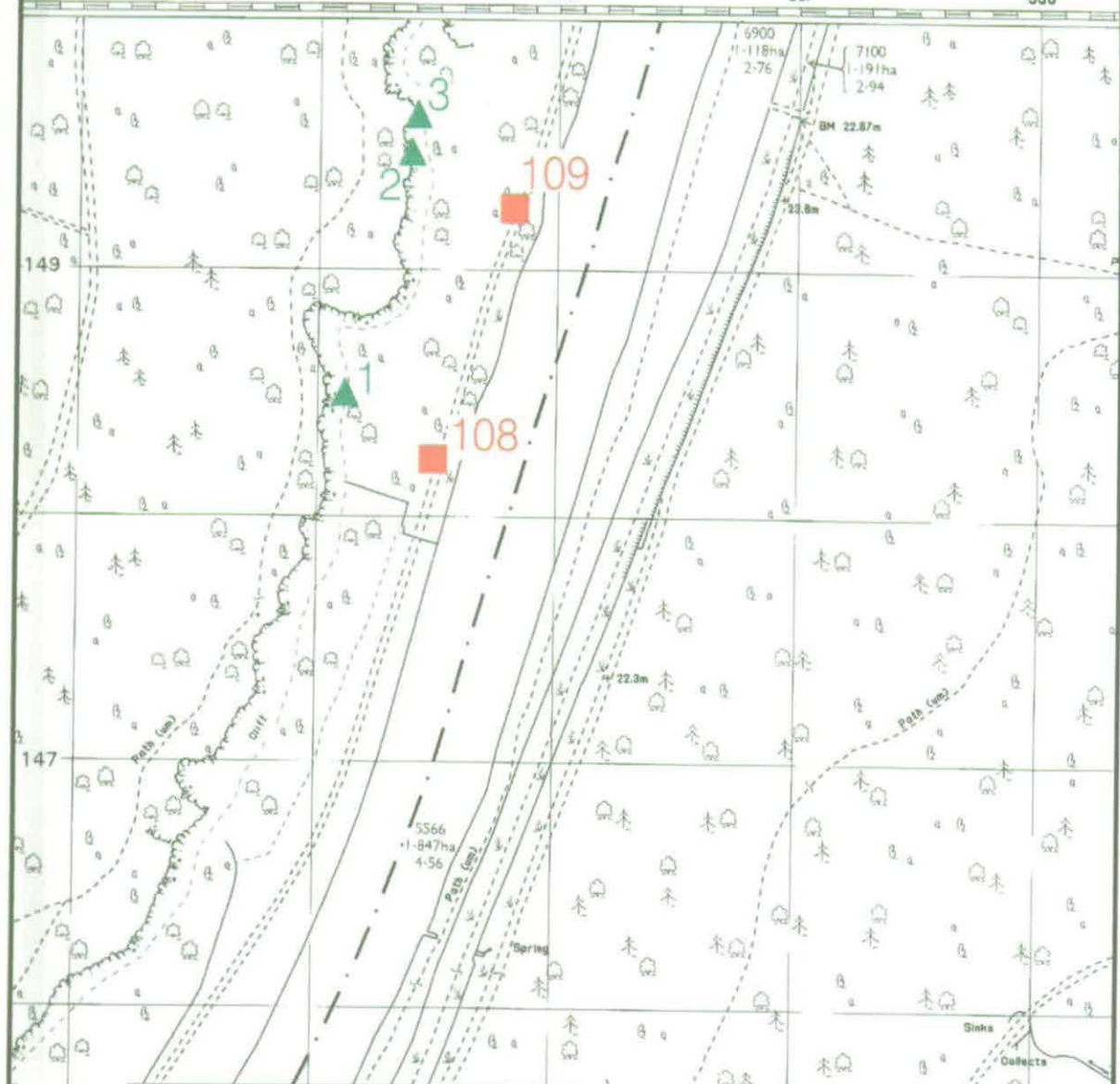
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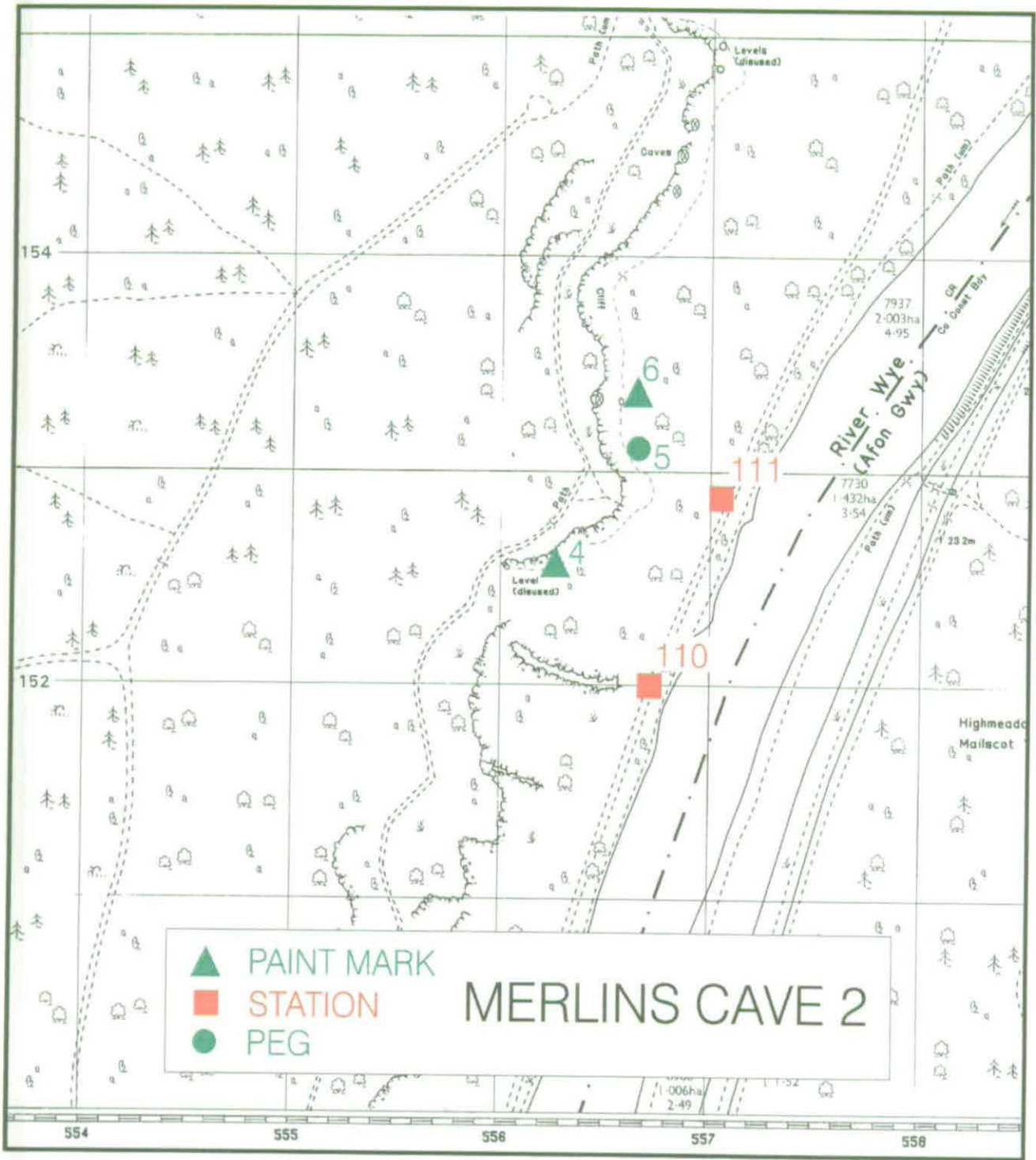
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	PAINT MARK	<h1>MERLINS CAVE 1</h1>
	STATION	



554 555 556 557 558

154

152

7937
2.003ha
4.95

7730
1.432ha
3.54

110

111

110

Highmead
Mailscot

006ha
2.49

1:52

TABLE 1

MERLIN'S CAVE 1 and 2

DESCRIPTION	EASTING	NORTHING	HEIGHT ABOVE OD
Station 108	355546.243	214823.932	20.223
Paint Mark (1)	355508.759	214848.372	44.861
Station 109	355579.751	214930.286	19.960
Paint Mark (2)	355540.326	214951.803	46.836
Paint Mark (3)	355542.914	214957.607	46.248
Station 110	355667.584	215200.548	21.448
Paint Mark (4)	355624.472	215258.059	60.830
Station 111	355704.843	215287.400	20.857
Wooden Peg (5)	355661.491	215318.106	52.311
Paint Mark (6)	355663.737	215336.241	57.977

MERLIN'S CAVE *Point 1*



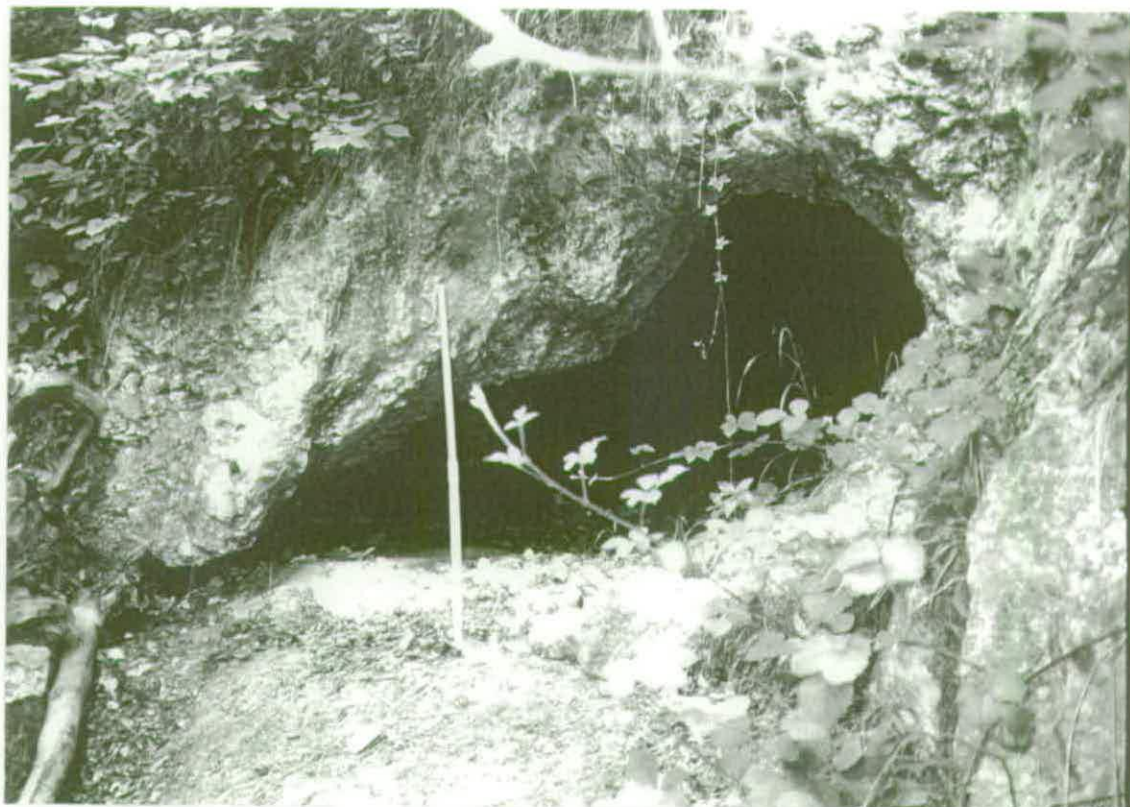
MERLIN'S CAVE *Point 2*



MERLIN'S CAVE *Point 3*



MERLIN'S CAVE *Point 4*



MERLIN'S CAVE *Point 6*



TABLE 2

LADY PARK WOOD

DESCRIPTION	EASTING	NORTHING	HEIGHT ABOVE OD
Station 100	354897.171	214553.459	27.824
Paint Mark (1)	354709.724	214412.935	79.100
Station 102	354901.105	214452.047	19.161
Paint Mark (2)	354944.655	214269.780	46.893

LADY PARK WOOD *Point 1*



LADY PARK WOOD *Point 2*



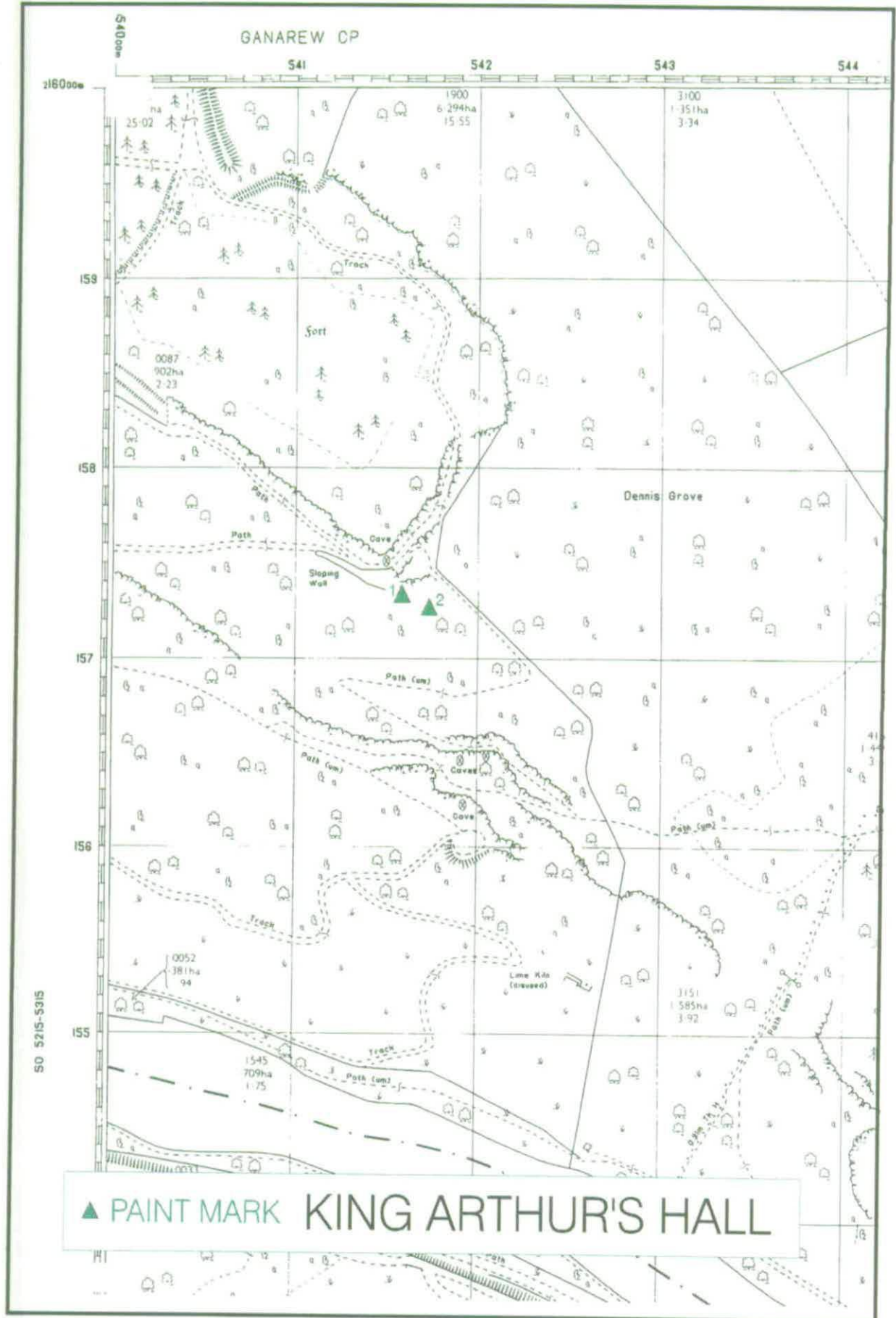


TABLE 3

KING ARTHUR'S HALL

<i>DESCRIPTION</i>	<i>EASTING</i>	<i>NORTHING</i>	<i>HEIGHT ABOVE OD</i>
<i>Station 124</i>	<i>354915.631</i>	<i>214585.568</i>	<i>32.041</i>
<i>Paint Mark (1)</i>	<i>354140.940</i>	<i>215752.186</i>	<i>152.354</i>
<i>Paint Mark (2)</i>	<i>354151.562</i>	<i>215746.268</i>	<i>157.638</i>

KING ARTHUR'S HALL CAVE *Point 1*



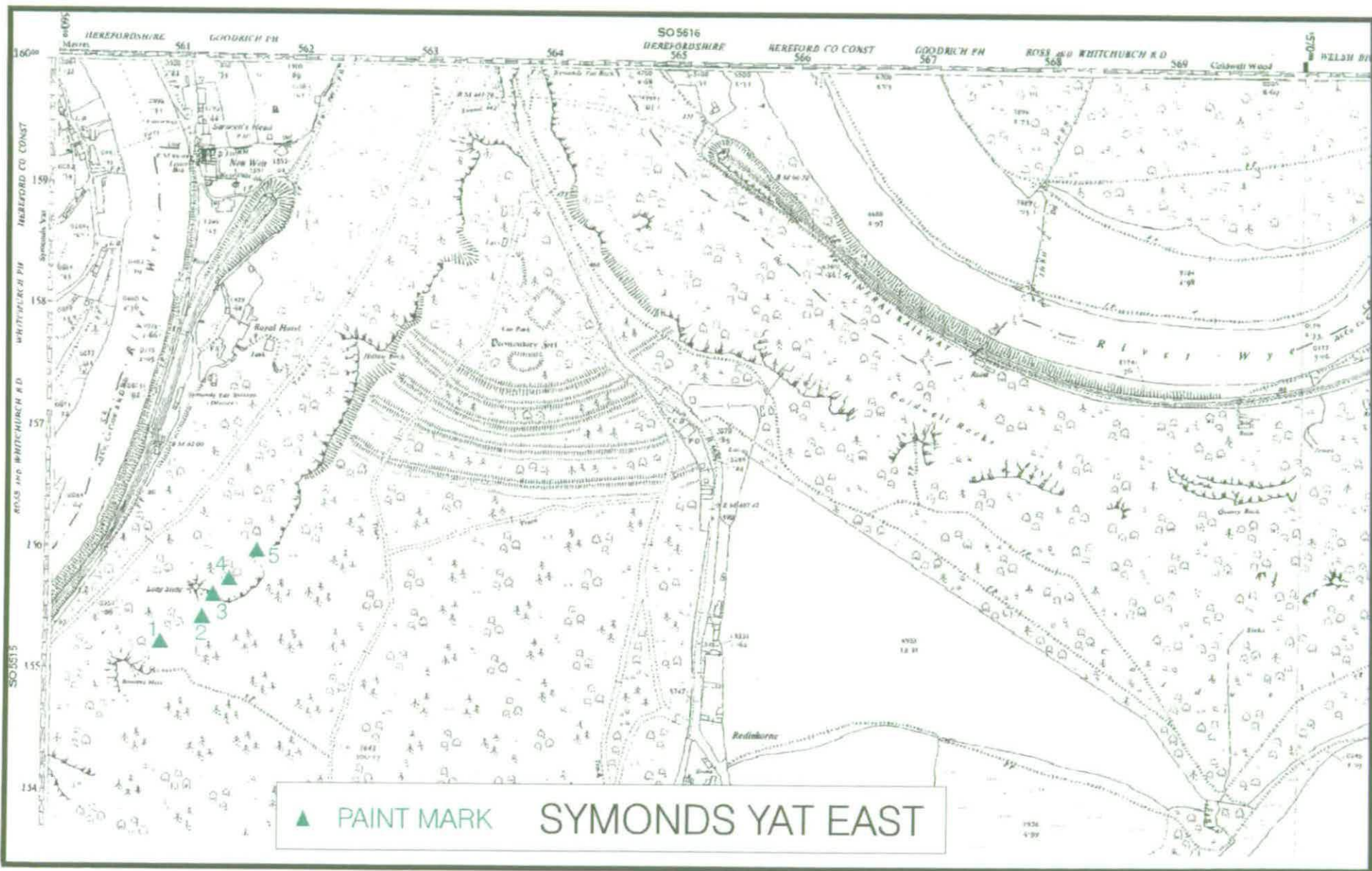


TABLE 4

SYMOND'S YAT EAST

<i>DESCRIPTION</i>	<i>EASTING</i>	<i>NORTHING</i>	<i>HEIGHT ABOVE OD</i>
<i>Station 300</i>	<i>355956.648</i>	<i>215837.867</i>	<i>43.382</i>
<i>Paint Mark (1)</i>	<i>356088.384</i>	<i>215521.389</i>	<i>87.364</i>
<i>Paint Mark (2)</i>	<i>356118.960</i>	<i>215542.596</i>	<i>94.275</i>
<i>Paint Mark (3)</i>	<i>356129.918</i>	<i>215561.949</i>	<i>96.636</i>
<i>Paint Mark (4)</i>	<i>356141.894</i>	<i>215570.101</i>	<i>94.391</i>
<i>Paint Mark (5)</i>	<i>356164.011</i>	<i>215594.807</i>	<i>100.963</i>

SYMOND'S YAT EAST *Point 1*



SYMOND'S YAT EAST *Point 2*

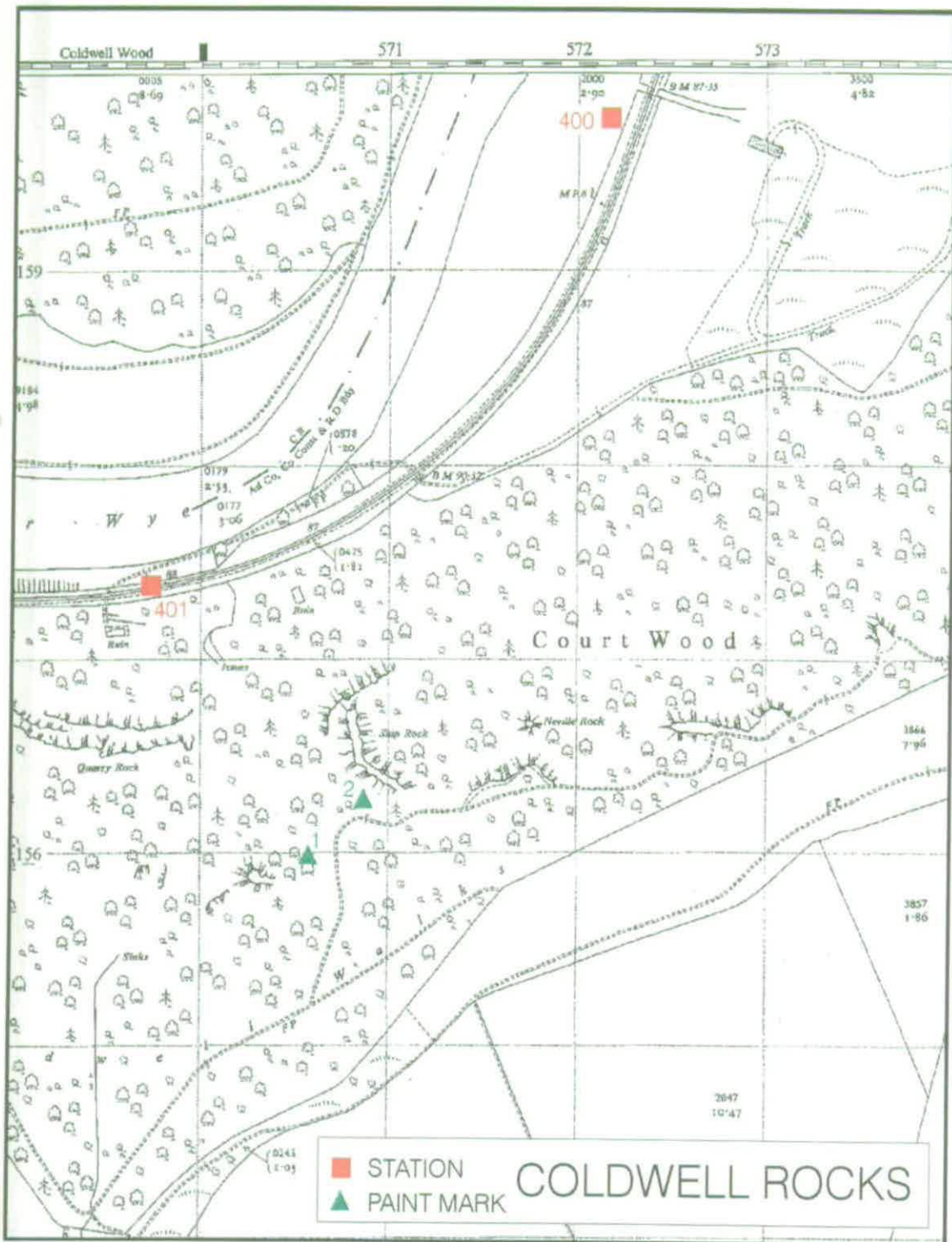


SYMOND'S YAT EAST *Point 3*



SYMOND'S YAT EAST *Point 5*





■ STATION
▲ PAINT MARK

COLDWELL ROCKS

TABLE 5

COLDWELL ROCKS

<i>DESCRIPTION</i>	<i>EASTING</i>	<i>NORTHING</i>	<i>HEIGHT ABOVE OD</i>
<i>Station 400</i>	<i>357113.387</i>	<i>215851.306</i>	<i>22.922</i>
<i>Station 401</i>	<i>356978.912</i>	<i>215739.632</i>	<i>26.993</i>
<i>Paint Mark (1)</i>	<i>357057.935</i>	<i>215599.990</i>	<i>99.904</i>
<i>Paint Mark (2)</i>	<i>357085.518</i>	<i>215627.492</i>	<i>108.728</i>

COLDWELL ROCKS *Point 1*



COLDWELL ROCKS *Point 2*



Bibliography

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