

The Seathwaite Connection:

SOME ASPECTS OF THE GRAPHITE MINE AND ITS OWNERS

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So often we look at a landscape view and see only what we expect to see. We all do it, because 'we see but we do not observe'. It is easy to accept an area of woodland on face value, without considering what may lie beneath it, obscured by vegetation and rubble. Humanity is everywhere, and seemingly empty landscapes today, were almost always peopled and worked at some time in the past. At Seathwaite in Cumbria, research and survey have shed new light on a pile of ruins below the trees, and through the skilful use of archives makes intriguing links with a quite different National Trust estate at Kingston Lacy, in Dorset.

Introduction

What links Kingston Lacy in Dorset; Seathwaite, in Borrowdale, Cumbria (the wettest inhabited place in England) and that most humble of writing implements, the pencil? The answer? Graphite – or wadd, black lead, black cauke or plumbago to use its older alternative names.

The link with the pencil is clear, graphite provides the 'lead' core within the wooden shaft of the instrument. The Seathwaite connection, simply that it is home to the purest graphite deposits to be found anywhere and the only graphite mine in the country. Known here probably from the medieval period, exploited from at least the later sixteenth century and mined until the end of the nineteenth century. The Kingston Lacy connection is perhaps more obscure but nonetheless revealing. The profits from a half share in the mines played a significant, if intermittent part in the income of the builders and owners of Kingston Lacy, the Bankes family, contributing particularly to the rebuilding of the house by Henry Bankes in the 1780's.

Our knowledge of both the mines and the use of profits from them has been expanded greatly in the last few years from a combination of archaeological survey on the ground and through the examination of new documentary evidence which has recently become accessible.

A view up to the mines from Seathwaite valley bottom.

Harrison's level lies immediately below the top wall.

The larger spoilheaps are visible and amongst them, highlighted by the snow, a series of parallel prospect trenches can be seen. These represent an attempt to locate the top of other pipes of graphite. NATIONAL TRUST/ROBERT MAXWELL



The Early History of the Mines

The graphite occurs in lumps within the matrix fill of vertical 'pipes' found in an extremely localised area in the volcanic rock of the region. Tradition has it that the graphite was discovered when an old ash tree growing in the top of the main pipe where it came to the surface was blown over in a storm. In its roots were found lumps of the mineral and so its exploitation began.

Furness Abbey owned the valley from the early thirteenth century until the Dissolution of the Monasteries and graphite was almost certainly known and used by them. Accounts of the monastery's income at the dissolution contain rents from a mine in Borrowdale producing 'calk stone' and 'sheep oodde' (wadd), this latter description referring to its early use in marking sheep.

Official interest in revenue from the mine is implied by a visit from Royal Commissioners in 1555 and the first extant lease of the mine, to one Ambrose Dormer of Oxfordshire dates to later that year. A series of lessees are known over the next fifty years or so until in 1607 the mines were taken on by two brothers, the Hechsetters, managers of the Company of Mines Royal, which had been based at Keswick since the 1550's. The Mines Royal had no Royal assent to mine graphite and so the Hechsetters' interest here must be seen as a purely private operation.

In 1625, following the brothers' deaths, their lease was sold to Sir John Bankes who had recently also acquired a half-share of ownership in the mine. So began the Bankes connection with Seathwaite graphite, although for the next 125 years or so only a relatively small, periodic profit seems to have been returned from their investment.

A near vertical view of the mines. The upper wadhole can be made out on the left side of the photograph. The latest adit and guardhouse, called Robson's level, now lie in the plantation block on the lower fellslope, to the right side of the photograph.

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The Bankes and Graphite

The Bankes family originated from near Keswick in Cumberland, hence Sir John's knowledge of the mine. He subsequently moved south to study and eventually practice law and between 1632 and 1635 he bought both Corfe Castle and the Kingston Lacy estate. Initially based at Corfe, it was Sir John's second son, Ralph, who on his succession built the first house at Kingston Lacy, in 1663, using the architect Sir Roger Pratt. The cost of construction and decoration seems to have been such that the family struggled financially for a considerable time afterwards. Indeed it was another hundred and twenty years or so before the funds were available to allow Henry (great grandson of Ralph) to undertake the first major remodelling and redecoration of the house in the 1780's. This work was to the designs of R.F.

Brettingham and included a new main entrance and main stairs, a new kitchen, dining room, library and saloon – these latter two rooms survive little altered. In addition Henry had the whole estate enclosed. The total sum of these new works was around £14,000, but how was it funded? It would seem likely that much, if not all, of the money came from the profits of the graphite mines at this period.

Henry's father (another Henry) had succeeded from his brother John very late in life. John had always been particularly ineffectual in both his private and public duties to the extent that Henry played an important organisational part in affairs from the middle of the century onwards. Perhaps his most influential changes were in the management of the graphite mines, and it was his efforts here which seem to have laid the foundations for his own son's financial stability.

Only towards the very end of the eighteenth century did graphite production catalyse the development of a thriving local pencil industry. Prior to this it had been sold elsewhere for 'crayon' production, but as a material it was much more valuable in its use as a lubricant for moulds for metal objects, especially for the production of munitions. Thus there was an eager market for the material, so much so that a large amount of graphite never passed through the company's books, but was pilfered straight from the mine and sold on the black market by the miners themselves. Local knowledge of the value of the resource culminated in an armed attack on the mine steward's house in 1749 with the explicit aim of stealing graphite. This attack left John Bankes seriously considering selling his share in the mine, purely to alleviate himself of the problem; it appears to have catalysed Henry Bankes into action. Henry must also have appreciated that the full potential of the mines was not being realised, and he put in train a range of changes – organisational, operational, financial and legislative – to help develop this.

In 1752 Henry organised an Act of Parliament which made theft of graphite a felony. Initially the graphite was sold through a wholesaler, but Henry moved the organisation of sales to London and began selling directly to customers. At the mine he developed the guardhouse system, helping secure access both during mining operations and during periods when the mines were closed. He seems to have instigated the strip searching of miners in an attempt to minimise pilfering. In Seathwaite he had a steward's house built which had good direct views up to the mines. This building, called Raingauge Cottage, still stands and came to the National Trust along with Corfe Castle and Kingston Lacy in 1982 in the will of H.J.R. Bankes. His interest in the mines was such that he also wrote an extensive "History of the Black Lead Mine" in 1771.

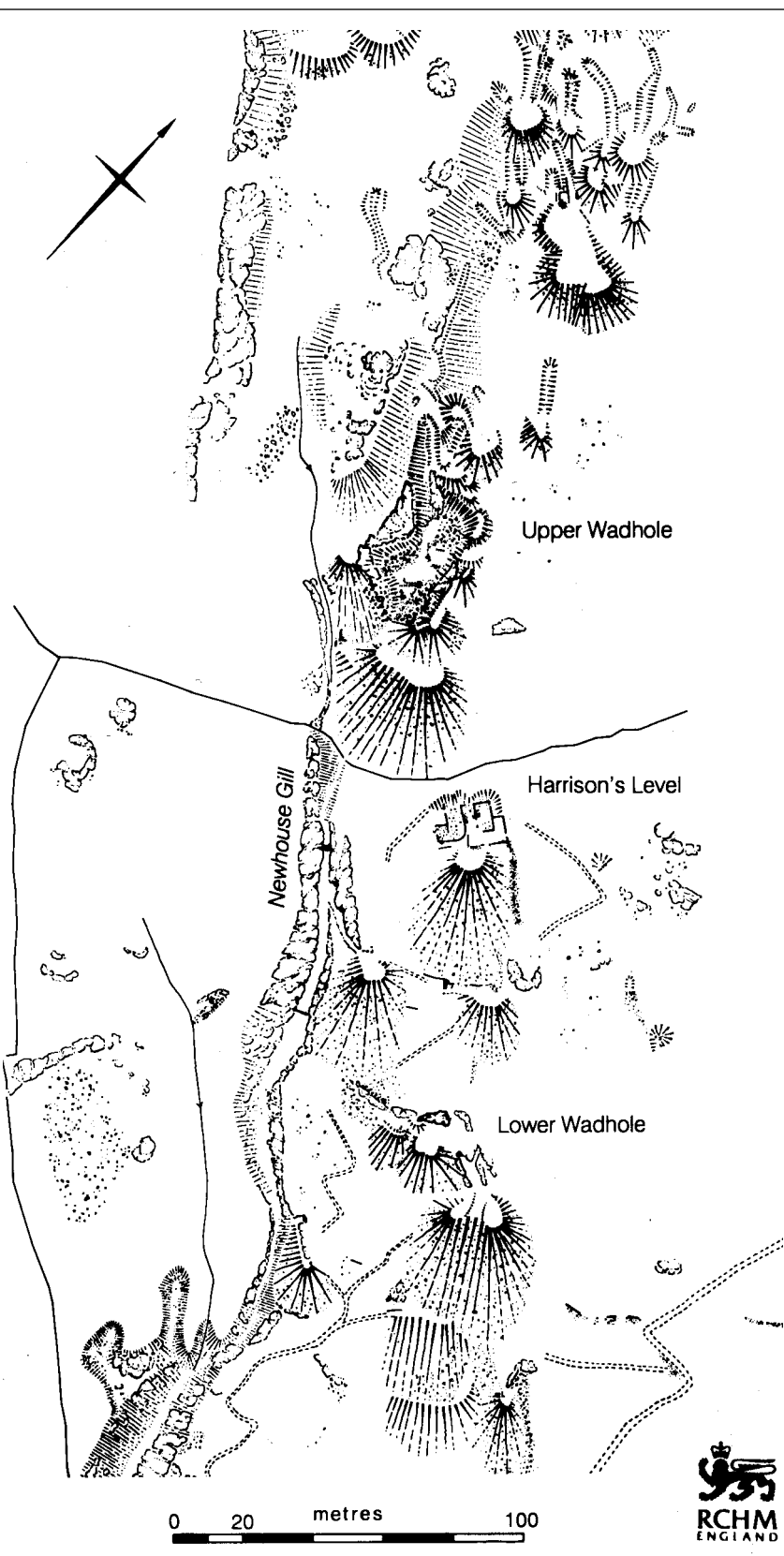
As a result of Henry's changes the profits from the mine increased substantially, despite the sometimes difficult job of locating good new deposits. One of the largest discoveries came in 1769 when a particularly rich deposit was discovered; this had a value of around £43,000!

The significance of the graphite mine is that it is the only one of its kind in the country, and thus unique to the archaeological record. The present factory uses imported graphite (and perhaps substitute materials). Technological advances allowed inferior graphite to be used in pencil production, and this affected the demand for high quality graphite from the local mine. It finally succumbed to pressure from foreign markets and closed down in the mid Nineteenth Century.



Kingston Lacy House, Dorset. South front.

NTPL



The Archaeological Remains by Amy Lax, English Heritage
Field Investigator

In 1995 RCHME undertook a detailed measured survey of the mines following a request from the National Trust. Fig 1 shows a portion of the survey plan.

The surface remains of the graphite mines form a narrow band stretching from the valley floor up onto the moorland plateau of Seatoller Common, a distance of some 800m. This linear distribution mirrors the deposits of graphite, which occur as long vertical pipes or as smaller pockets or 'sops' on either side of a dyke of diorite. There are two main pipes, the Upper Wadhole, which lies just above the crest of the valley, and the Lower Wadhole or 'Grand Pipe', 150m further down the hillside, which together became the foci of early surface workings. The Upper Wadhole was re-worked on many occasions and today its site is marked by a large crater, 40m long and 29m wide, adjoined by a large spoilheap on its south-eastern edge.

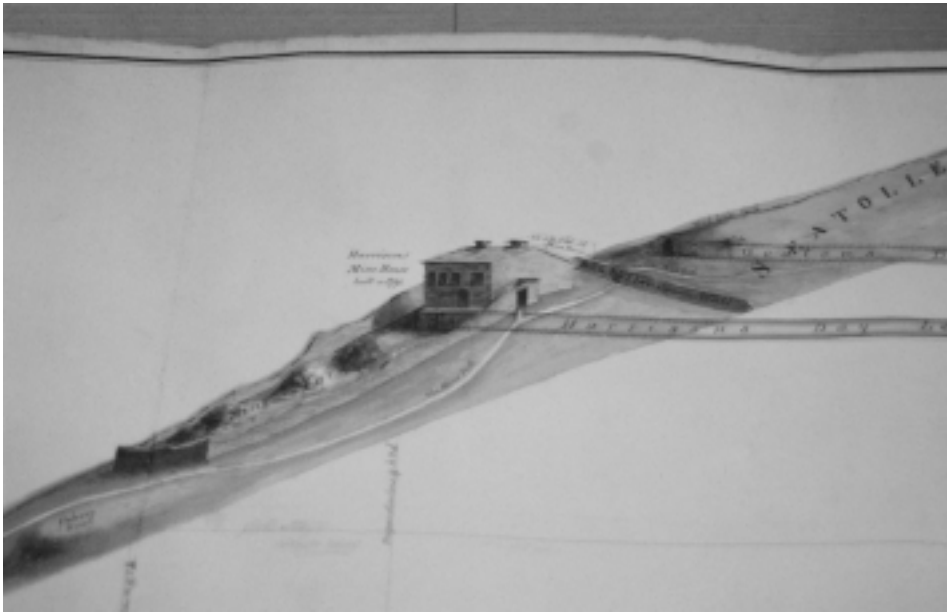
The deeper deposits in the main pipes were reached by a series of adits driven into the steep valley sides which are conspicuous by the large screes of spoil deposited outside each one. Trackways between the adits have formed a pattern of zig-zags up the hillside. The remains of the guardhouses built to secure the mine entrances can still be seen at three of the adits, Robson's level, Gilbert's stage and Harrison's level. At Harrison's level, driven in 1791, there is a rectangular stone-built room on either side of the adit, upstanding to a height of 0.8m. In front of the guardhouse is a terraced platform which may have provided a level working area for washing and sorting the graphite. A ruinous section of the yard wall that enclosed the waste material survives on the north-eastern side of the spoilheap, but elsewhere the progression of the spoil down the valley side appears to have destroyed its remains and covered the adit below.

Along the south-western perimeter of the site runs Newhouse Gill, in places its course flowing through a small rocky ravine. The miners took advantage of this natural cleft in the rock to drive a number of exploratory adits through the side of the gill and into the slope. The spoil from these explorations forms two spoilheaps on the edge of the ravine.

To the northwest of the Upper Wadhole, where the topography becomes less steep, the character of the mining changes slightly; the adits are far more numerous but the spoilheaps tend to be smaller. At least four of the adits were provided with a stone hut by the adit entrance but these do not appear to have been for security in the same way as the guardhouses on the lower adits. It is probable that much of the activity in this area dates to the nineteenth century when the main deposits of graphite were becoming exhausted and fresh sources were being sought.

In the mid-eighteenth century, as a warning to trespassers, five slate boundary stones were erected. Only three now survive, the finest example standing beside a trackway from Gilbert's Level, along the lower reaches of the mine. Carved into the slab is the name **John Banks Efquier** and the date, 1752, a monument to the Banks family's long association with the mines at Seathwaite, although probably there despite John rather than because of him.

Fig. 1 Part of the RCHME measured survey of the mines, showing the upper and lower wadholes and Harrison's level guardhouse as well as zig-zag access tracks and spoil heaps.



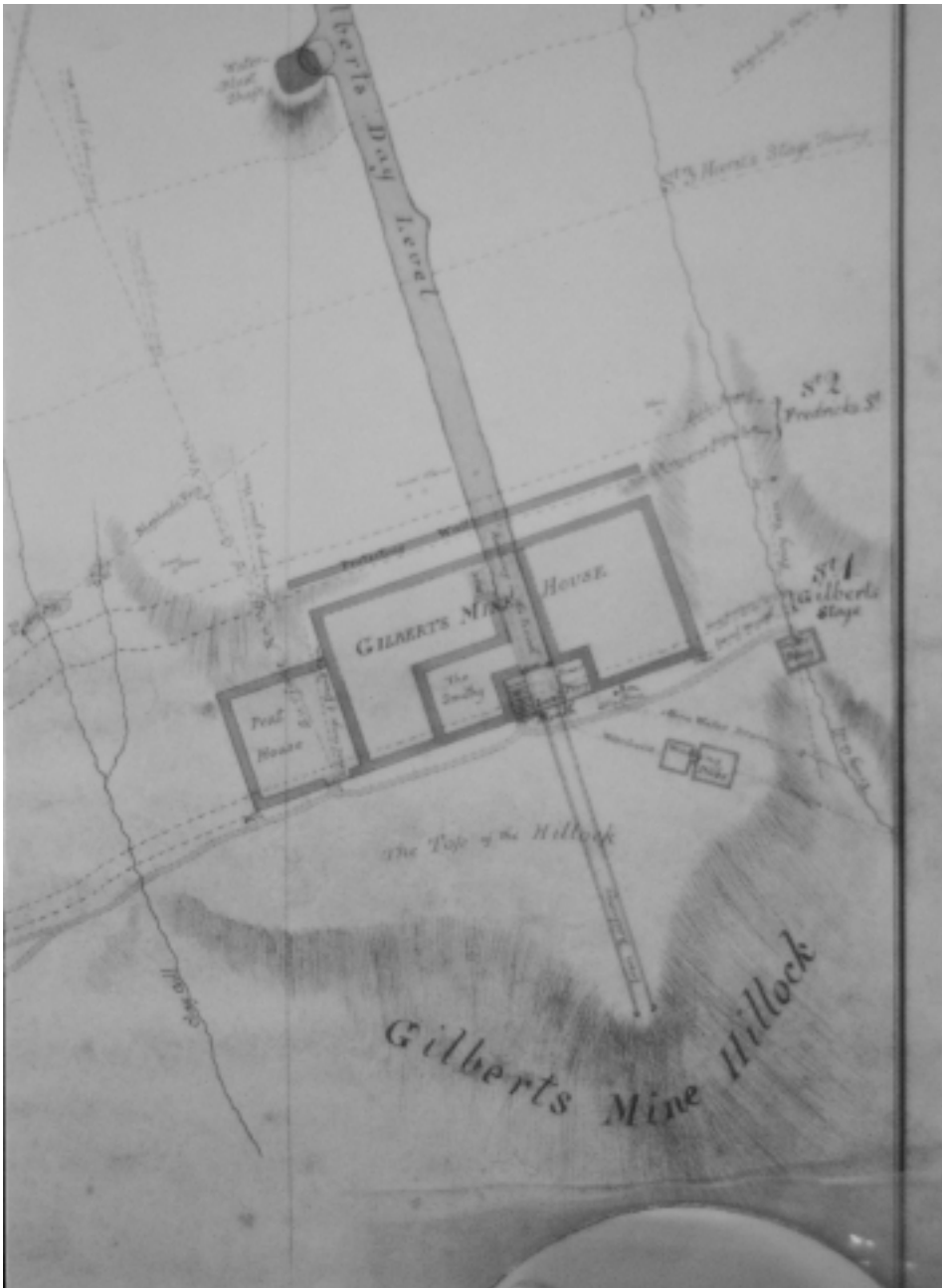
Detail of Harrison's level and guardhouse from the 1819 survey by John Farey.

DORSET RECORD OFFICE D/BKL WAD MINE SURVEY, FAREY J., 1819



Slate boundary stone beside the trackway at Gilbert's Level, bearing the inscription, 'John Bankes Esq' 1752'.

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A detailed plan view of Gilbert's level guardhouse from 1819 survey by John Farey. Wash dubs outside the building evidence the limited processing required between extraction and sale.

DORSET RECORD OFFICE D/BKL WAD MINE SURVEY,

FAREY J., 1819



Gilbert's level guardhouse survives to less than half its original wall height. The adit itself is blocked, but is marked by the birch in the centre of the photograph.

NATIONAL TRUST/ROBERT MAXWELL

Management of the remains

Currently no active conservation of the mining remains has taken place, although it is hoped that a variety of works necessary to ensure the longer-term survival of the site will be progressed in the near future.

The lowest adit, guardhouse and associated spoilheap lie within a mixed plantation established during the 1960's to 'hide' the mining remains! This block of woodland is now itself considered something of an eyesore as well as a visual barrier to viewing the mining remains. Thinning and eventual clear felling of the plantation are the medium to long term intention in this area. Ironically the plantation has also helped preserve this particular part of the monument, by creating a microclimate. Organic matter in the form of leaf litter has accumulated on the site, and having been fenced off from stock in its early years, a stable and protective turf cover has developed over the spoil heap. The higher spoilheaps are all actively eroding, in part because of their steep-sided forms, but exacerbated by grazing pressure and by stock traversing the exposed tips. Water draining from the levels also contributes to surface disturbance and plays a part in activating erosion on the slopes. These problems are more difficult to address, but some reduction in grazing may be possible in future.

Some level of structural consolidation is required on the surviving guardhouses. These survive up to 1-2m in height and are presently unstable and unconsolidated. In the case of Gilbert's Level Guardhouse, crumbling walls have exposed archaeological deposits within the structure. Recording and careful reconsolidation are necessary here.

Major problems have occurred recently through the activities of a small number of maverick mining history 'enthusiasts'. A number of adits on the high common, out of sight of the valley bottom, have been reopened. Mine entrances have been dug out and new drainage channels cut to drain the levels, all without permission and with no concern for the archaeological information likely to be lost in the process. These openings have now been resealed but increased vigilance and monitoring is required to ensure this doesn't recur. The area has been considered for Scheduling through MPP and designation as a SAM should provide an added disincentive for such activities.

Interpretation of the site remains a problem. Although part of a much larger open access area, the mines receive relatively little attention from the visiting public. They lie slightly away from the main public footpaths and routes up to them are not obvious. This is perhaps fortunate, since the guardhouse remains are fragile, the spoil tips unstable, not to mention the open shaft of the Grand Pipe itself. For these reasons there are currently no plans to increase public awareness of the physical remains themselves, although opportunities for off-site interpretation may be achievable and are being considered.

Acknowledgements

Thanks must go to Martin Papworth for bringing to our attention the "Seathwaite connection" with the Bankes family in the first instance and for helping with access to the records, and to George Clark for generously supplying the (unpublished) fruits of his researches into the Bankes family archive - much of 'The Bankes and Graphite' section is based on information supplied by him.

Further Reading

A number of articles and books give more detail on the mines themselves but two recent publications are perhaps the most comprehensive and provide full bibliographies:

Bridge, D. 1992 'Wad' in *Beneath the Lakeland Fells*.

Tyler, I. 1995 *Seathwaite Wad and the Miners of the Borrowdale Valley*.

A good introduction to the Bankes family at Kingston Lacy can be found in the National Trust guidebook for the property published in 1994.

Full details of the English Heritage (formerly RCMHE) survey are available from the National Monuments Record, Swindon.



'Trouble at t' mine!' A recent illicit reopening of one of the upper levels. Shovels, a wheelbarrow and a pump to help with drainage were found inside.

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Key to use of symbols

As an intended aid to indexing, the following letters and symbols have been used, giving broad categories of period and and topic for each entry:

PERIOD:

P	Prehistoric
R	Roman
A/S	Anglo Saxon
M	Medieval
Pm	Post-medieval
Mo	Modern
Mp	Multi-period

TOPIC:



Country houses, parks and gardens



Landscapes (including features relating to agriculture & settlement)



Industrial features



Vernacular buildings



Ecclesiastical buildings



Burials



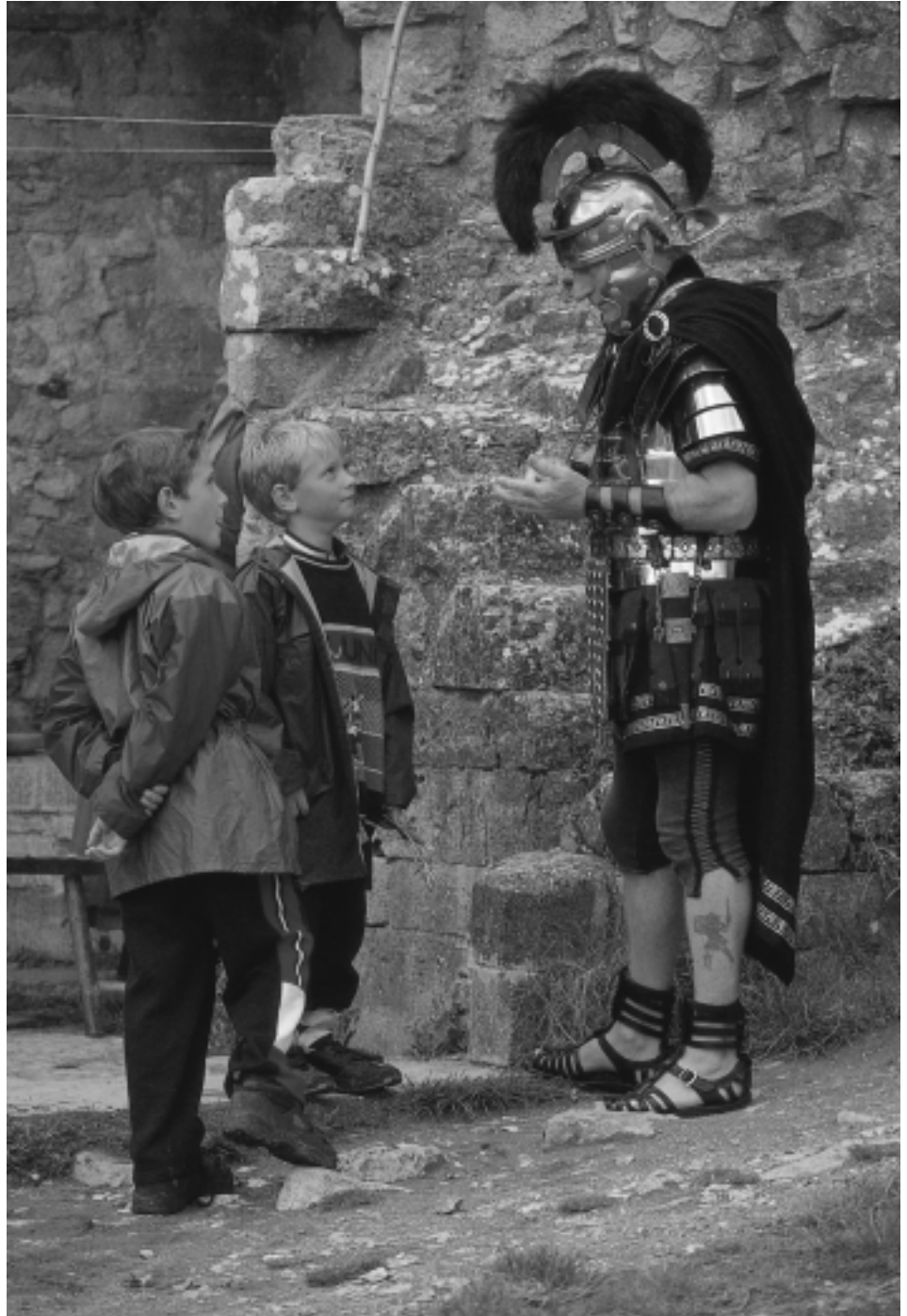
Defence



Communications



All types of site



Archaeology Fun Day at Corfe Castle Estate.

NTPL/DAVID LEVENSON