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REPORT ON THE ARCHAEOLOGICAL IMPLICATIONS OF THE PROPOSED SCRAPING AND RELINING OF THE WATERMAINS FROM PONTRHYDYGROES TO CWMYSTWYTH, CARDIGANSHIRE (CON9407)

PRN 29558

Client: Dwr Cymru

Project Officer: Neil Ludlow

Report by: Neil Ludlow

Dated: 2 September 1994

Dyfed Archaeological Trust
Shire Hall
Carmarthen Street
LLANDEILO
Dyfed SA19 6AF
Tel: 0558 823121

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REPORT ON THE ARCHAEOLOGICAL IMPLICATIONS OF THE PROPOSED SCRAPING AND RELINING OF THE WATERMAINS FROM PONTRHYDYGROES TO CWMYSTWYTH, CARDIGANSHIRE (CON9407)

1.0 RECOMMENDATIONS (prepared by Curatorial Section)

2.0 INTRODUCTION

- 2.1 Methodology; content and scope of archaeological assessment
- 2.2 List of sources consulted

3.0 ARCHAEOLOGY

- 3.1 Summary
- 3.2 Register of archaeological sites and areas of archaeological interest
- 3.3 Annotated engineer's plan reduced from 1:2500 scale indicating areas of archaeological interest (Drawing no. 4866)

4.0 APPENDIX

- 4.1 Copy of Kerkham, C., and Briggs, S., *A review of the archaeological potential of the Hafod landscape, Cardiganshire*, CBA Research Report No 78 Garden Archaeology, 1991, 160-174
- 4.2 *ibid.*, fig 13.9, with pipeline route indicated in red

1.0 RECOMMENDATIONS (prepared by the Curatorial Section)

1.1. The Report makes clear, without undue repetition of work already done, how important and sensitive the Hafod demesne is. However, we also recognise that there is likely to be a minimum of fresh disturbance along the route of the existing pipeline.

1.2. The Trust have advised the Hafod Advisory Committee and the Welsh Historic Gardens Trust of the scraping and relining scheme and have received comments and discussed the archaeological implications with them. They constitute the lead `curators' in this particular instance and the Dyfed Archaeological Trust therefore endorses their recommendations as follows:

1.3. It is **recommended** that an archaeological watching brief be maintained on the holes dug for the relining scheme, and that the Hafod Advisory Committee be contracted, with as much notice as possible, to provide this service for Dwr Cymru. The watching brief should be to same conditions as pertain to all other archaeological watching briefs undertaken by Dwr Cymru. Should it be necessary, Dyfed Archaeological Trust can provide the Specifications for the watching brief.

1.4. It is **recommended** that due note be taken of all the individual features noted in the vicinity of the pipeline and that especial care be taken in any movement of plant and the location of any temporary site offices or service facilities.

H. J. James, BA, FSA.
Principal Archaeological Officer (Curatorial).

2.0 INTRODUCTION

Details of the proposed scraping and relining of the watermain from Pontrhydygroes to Cwmystwyth, Cardiganshire, were forwarded by Teifion Rees of Dwr Cymru to Dyfed Archaeological Trust for comment on 27 May 1994.

Following an initial assessment of the scheme by the Curatorial Section of Dyfed Archaeological Trust, Dwr Cymru were advised of the need for a detailed archaeological desk-top assessment of the project to be prepared in order for detailed mitigatory measures to be drafted. Subsequently, in a letter dated 2 June 1994, Dwr Cymru confirmed that it wished the Trust to undertake the detailed assessment of the scheme.

This report, prepared by Dyfed Archaeological Trust's Field Section, is intended to provide Dwr Cymru with sufficient information to assess the likely impact of the proposed works upon the archaeological resource and to take this into account as a material consideration in the determination of appropriate mitigatory measures.

The Trust's Curatorial Section provided a standard brief for this report and will advise Dwr Cymru on its findings and recommend further action if deemed necessary.

2.1 Methodology; content and scope of archaeological assessment

The methodologies employed in the Pontrhydygroes to Cwmystwyth desk-top assessment differ somewhat from the standard procedure. The pipeline route runs almost entirely through the demesne of Hafod, one of Wales' most important country houses, now unfortunately demolished. The landscape of the demesne has been intensively studied and is under the curation of an advisory committee, established by the owners, the Forestry Commission. The Hafod Advisory Committee comprises archaeologists and historians.

In recognition of the work performed by the committee, a copy of the most recent description of the Hafod demesne and its landscape features is found in Appendix 4.1. This effectively provides much of the information that would normally be contained within Section 3.0 of this report.

The committee was likewise consulted for recommendations. Their comments, and those of the Welsh Historic Gardens Trust, are incorporated within the recommendations that form Section 1.0 of this report.

(The Hafod Advisory Committee, c/o Richard Suggett, RCAHMW, Crown Buildings, Plas Crug, Aberystwyth SY23 1NJ

The Welsh Historic Gardens Trust, c/o H C Norman, Plas Tyllwyd, Tanygroes, Cardigan SA43 2JD)

2.2 List of sources consulted

unpublished

Dyfed Archaeological Trust Sites and Monuments Record.

Kerkham, C., and Briggs, S., 1991, *A review of the archaeological potential of the Hafod landscape, Cardiganshire*, CBA Research Report No 78 Garden Archaeology.

3.0 ARCHAEOLOGY

3.1 Summary

The pipeline route begins just W of Pontrhydygroes bridge (17433) and for 500m runs along the flat valley floor on the S bank of the Afon Ystwyth. Crossing the river, the route enters the demesne of Hafod, the site of one of Wales' leading country houses, which the remainder of the route lies within in its entirety.

Physically the area crossed by the route is in general a gently rolling plateau between the Afon Ystwyth and uplands to the N. The whole has been landscaped to varying extents. The Forestry Commission are now the landowners and much of the area is planted.

The Hafod landscape has been intensively studied. A full account is provided by C. Kerkham and S. Briggs in *A review of the archaeological potential of the Hafod landscape, Cardiganshire,* CBA Research Report No 78 Garden Archaeology, 1991, 160-174. It was considered suitable for the purposes of this report to provide Dwr Cymru with a copy of this publication rather than repeat the information contained therein. It will be found as Appendix 4.1. Individual sites adjacent to the pipeline route are given their Dyfed Sites and Monuments Record Numbers in the text below and referenced back to this publication. A map is as usual provided in Section 3.3 of this report.

For a summary of the Hafod landscape see Kerkham and Briggs, 1991, 160.

3.2 Register of archaeological sites and areas of archaeological interest

The reference numbers in the following catalogue are those allocated in the Dyfed Sites and Monuments Record. These numbers are shown on the following annotated engineer's map.

17433. (SN7412 7274) Pontrhydygroes Bridge. Single span bridge over the Afon Ystwyth. A 19th century rebuild of an earlier single span bridge.

The remaining sites and monuments all lie within, and are components of, the Hafod demesne.

26530. (SN75607305) Kitchen Garden. The pipeline route skirts the N boundary of the kitchen garden. Begun c1790 it was finally abandoned in 1968, and neglected until purchased in 1988. Despite the collapse of part of the boundary wall the garden still contains traces of many of its internal features. Some restoration work has recently begun. See Appendix 4.1 Kerkham and Briggs, 1991, 166-168 No.3.

7199. (SN7590 7327) Hafod Mansion House. The pipeline route runs along the S boundary wall of the house enclosure (see Appendix 4.2). The house has gone but still surviving within the enclosure are the stables and stableyard, Grade II Listed Buildings. The enclosure stands on an artificial platform revetted by the wall which is now in disrepair. The pipeline route also crosses the former avenue leading to the house. It is advised in Recommendations 1.0 that the pits are spaced as to avoid the vicinity of this stretch of walling and the avenue. See Appendix 4.1 Kerkham and Briggs, 1991, 167, 168-9 No.6.

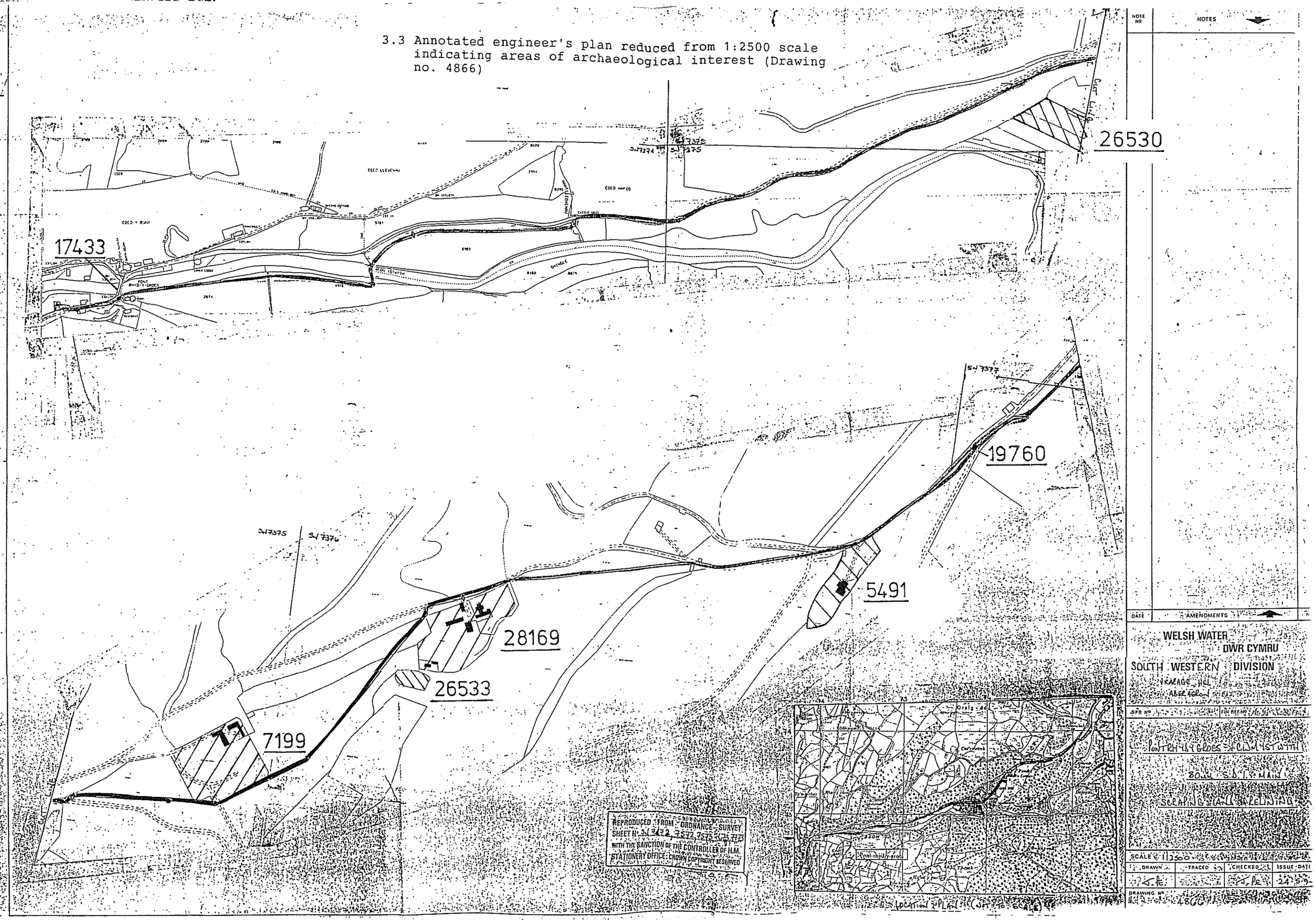
26533. (SN7622 7341) Fishpond. One of the mansion fishponds lies approx. 30m S of the pipeline route. Formerly an oval, 70m by 20m, it is now silted and overgrown. See Appendix 4.1 Kerkham and Briggs, 1991, 169 No.7.

28169. (SN7625 7350) Pendre Home Farm. The pipeline route passes by Pendre, the home farm of the Hafod demesne.

5491. (SN7685 7364). Eglwysnewydd. The church of the Hafod estate. A medieval chapel, Llantrisant, stood on the site being replaced by a church in 1620. This was rebuilt in 1803. The present structure is a further rebuild after the 19th century church was burnt down in 1932. The church is oriented NE-SW, as is the churchyard, the N end of which is skirted by the pipeline route.

19760. (SN7704 7397) Upper Lodge. The road, and the pipeline route, run alongside Upper Lodge, one of the 3 lodges of the Hafod demesne.

3.3 Annotated engineer's plan reduced from 1:2500 scale indicating areas of archaeological interest (Drawing no. 4866)



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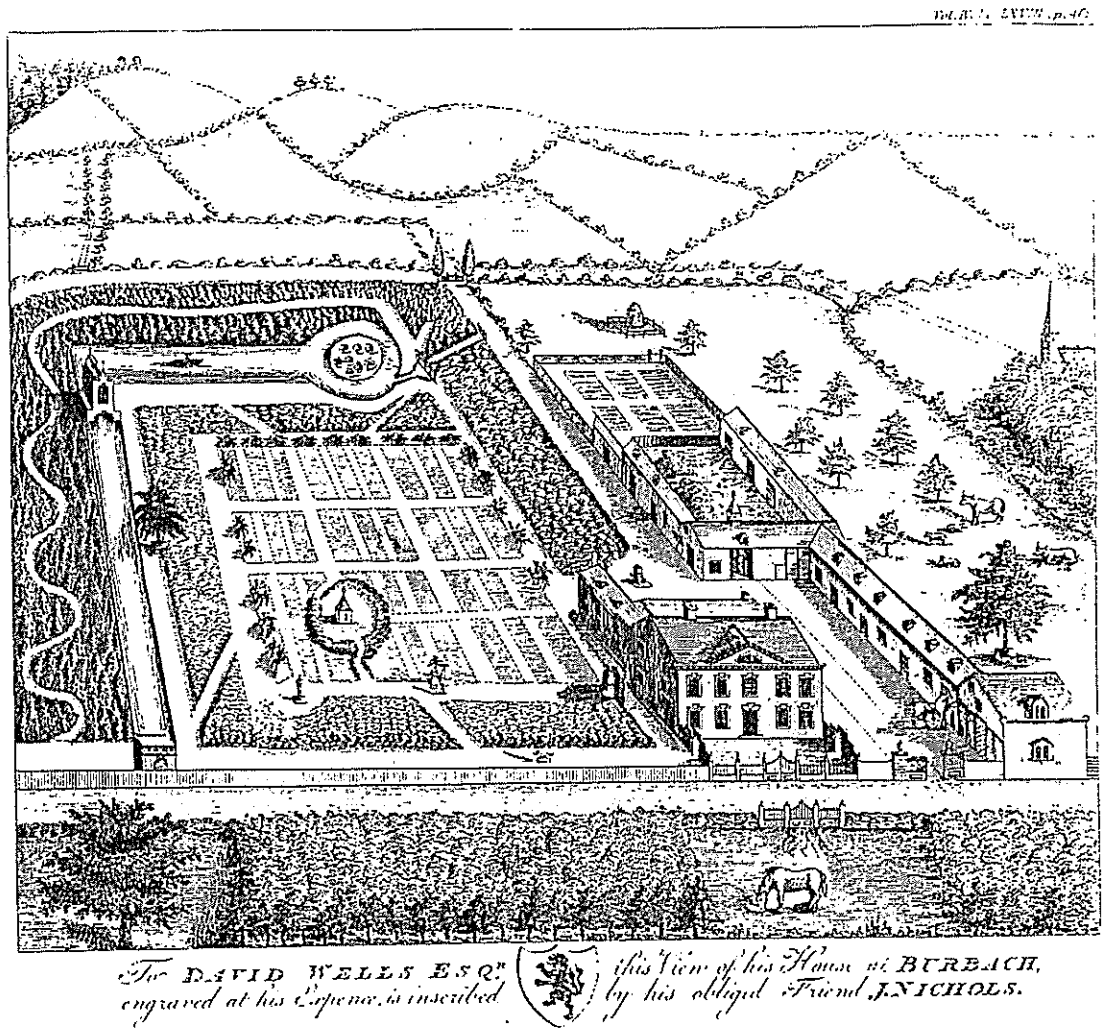
CBA RESEARCH REPORT

No 78

GARDEN ARCHAEOLOG

edited by
A E Brown



1991

13 A review of the archaeological potential of the Hafod landscape, Cardiganshire

Caroline Kerkham and Stephen Briggs

Introduction: a brief history of the Hafod landscape

Hafod Uchtryd Demesne occupies the ground between Pontrhydygroes and Cwm Ystwyth (Fig 13.1). It comprised an important 18th century house set in an estate formative and central to the development of Picturesque, naturalistic landscapes (Clarke and Perry 1982; Jacques 1983; Kerkham 1991). The estate was acquired by the Forestry Commission in 1950. Although extensive unfinished Victorian Italianate additions were partly demolished in the early 1950s, for about ten years serious attempts were made to find a use for the 18th century Gothick mansion by Baldwin. Sadly, having already been gutted, restoration proved impossible and demolition became necessary, mainly for reasons of safety.

The creation of this house and landscape wasuntil recently considered exclusively the work of Colonel Thomas Johnes (1748–1816). His grand scheme for the Ystwyth valley included laying out gravel walks, a bath house, excavation of a 'subterranean cavern', 'alpine' or rustic and stone bridges, an obelisk and other garden ornaments, and two small enclosed flower gardens. A Druid's Circle was envisaged but never undertaken (Brit Lib Add Ms 36,498, fo 67 [Johnes–Cumberland corresp, 1796]; Vaughan 1925, 203). The usual domestic features included an ice house and kitchen garden with conservatories and a tree nursery. Many if not most of these are depicted on William Blake's plan (Fig 13.2), drawn to accompany George Cumberland's *Attempt to describe Hafod* (Cumberland 1796). Johnes' life and landscape have been popularised in the well-known romantic biography *Peacocks in Paradise* (Inglis-Jones 1950) whilst among his other attainments, printing (Dearden 1973), silviculture (Linnard 1970), architecture (Thomas 1973; 1975), and agriculture (Colyer 1976) have attracted interest. A scholarly appreciation of Johnes' landscaping appeared in Welsh over 40 years ago (Jenkins 1948).

Despite this near-total attribution of the early Hafod landscape to Johnes, it is now becoming evident that his predecessor on the site, John Paynter, a man of far greater landscape sensibility than heretofor appreciated (see Meyrick 1808–10, 365), probably had up to 25 years' start on Johnes in taming the wilderness.

Between them, 19th century *Rhododendron ponticum* and post-War afforestation until recently covered most of Johnes' walks and the two early flower gardens.

1 Mrs Johnes' Flower Garden or the American Garden (SN 7665 7312; *c* 1786) (Fig 13.3; 13.5)

The earlier of the two ornamental gardens, now under a 30 year old softwood plantation, is situated within the landscaped wilderness squeezed onto the flat valley bottom and comprising just over an acre (0.5ha). Known locally as the 'Garden of Eden' or 'The Adam and Eve Garden', like Mariamne's Garden (see below) it originated from Johnes' interpretation of William Mason's *The English Garden*, Book IV, (4 vols, 1772–1781). Inspired by Rousseau's vision of nature, the late 18th century flower garden and its plants were an expression of the moral virtues of the simple life. The shape of the garden enclosure bears a striking resemblance to Mason's own garden at Aston, near Sheffield, South Yorkshire (Mark Laird, pers comm). Set well away from the house amidst trees alongside the River Ystwyth, Mrs Johnes' garden was a carefully constructed paradise within the wilderness.

The garden wall, a 'rude stone-fence' (Cumberland 1796, 14), possibly originated during 1793–4, when John Nash began work at Hafod. The earlier garden may have been a more open woodland/flower garden, this view being supported by a painting from the Hafod Derby Service (1787), illustrating the 'little temple' (Cumberland 1796, 31; Kerkham 1991). Throughout the early 1790s the garden was modified for exotica, mostly of American origin, although plants raised from New Holland Flora certainly found their way into the shrubbery. The main requisite for a plant's admission into an American Garden was a peaty soil, relative shade, and moisture. Whereas Mrs Johnes always referred to this retreat as her 'flower garden', it is clear from a reading of contemporary letters and diaries, that by 1799 the plant species were recognisably American. Although research is incomplete, there is a strong likelihood that this was the earliest American Garden in Wales. The garden influenced Johnes' friends and relatives, notably the 6th Duke of Bedford at Woburn and the Johneses of Dolaucothi.

The enclosure was originally approached from either west or east through portals set with

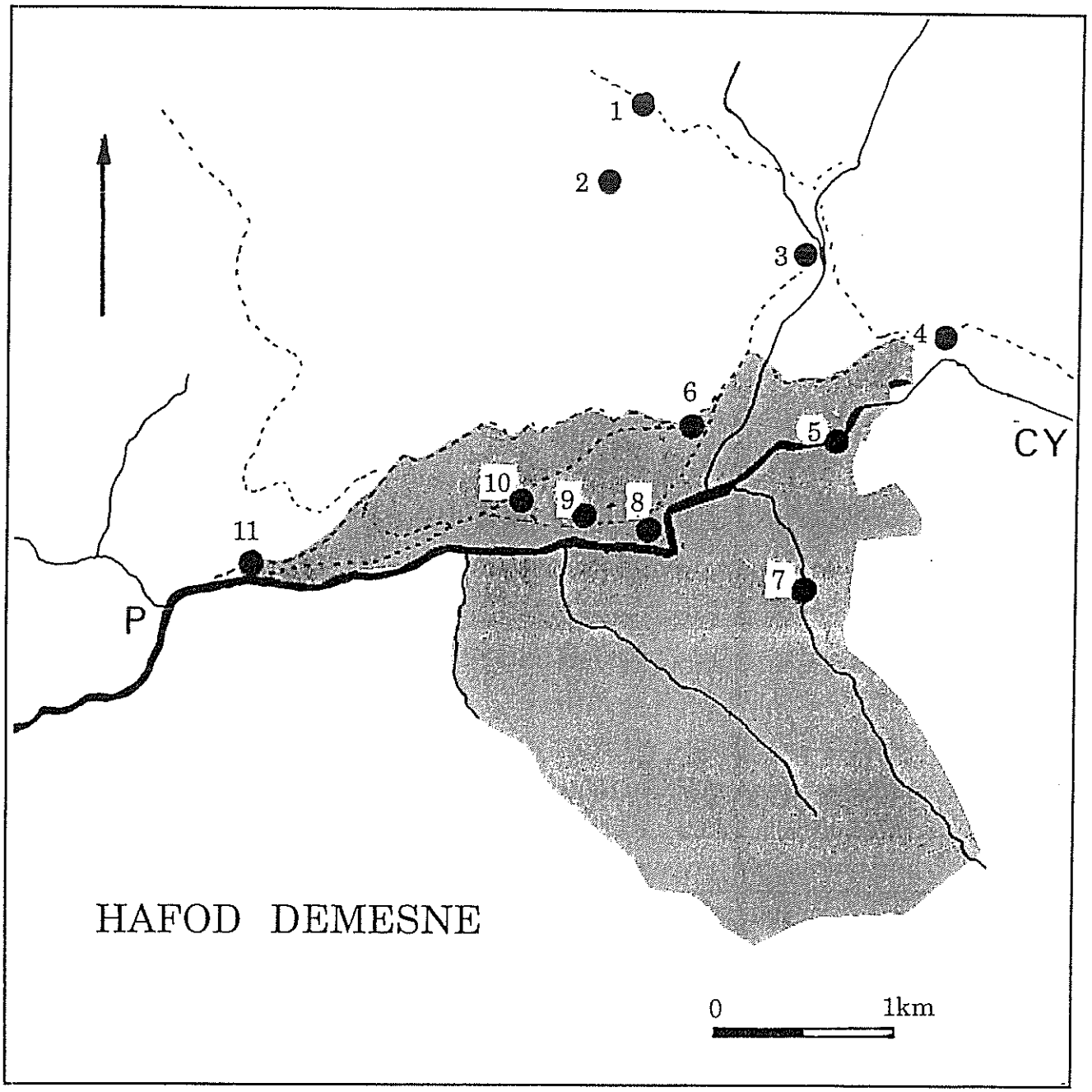


Figure 13.1 Hafod: location map. Shading shows areas of main afforestation and nucleus of original estate

Key:
P Pontrhydygroes
CY Cwm Ystwyth

1 Arch on Devil's Bridge Road (designed by Cumberland, 1806)
2 Site of lost Grange of Cwm Ystwyth
3 Pwllpeiran Experimental Husbandry Farm and early site of Hafod Press
4 Lodge (now restaurant)
5 Site of chain bridge (now inaccessible)
6 Eglwys Newydd and nearby Lodge (private residence)
7 Subterranean cavern (inaccessible)
8 Mrs Johnes' (the 'American') Flower Garden
9 Mariamne's Garden and Bedford Obelisk
10 Site of House
11 Lodge (private residence)

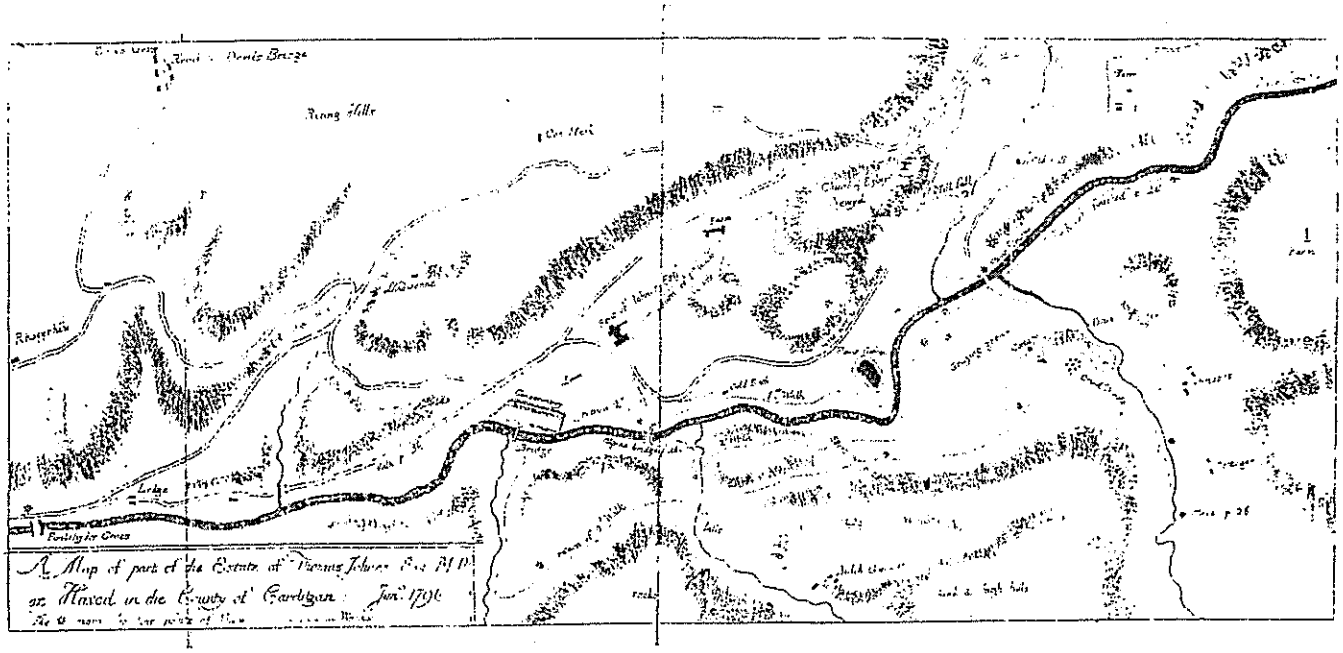


Figure 13.2 Hafod: William Blake's plan of estate walks in 1796, from George Cumberland's Attempt to describe Hafod

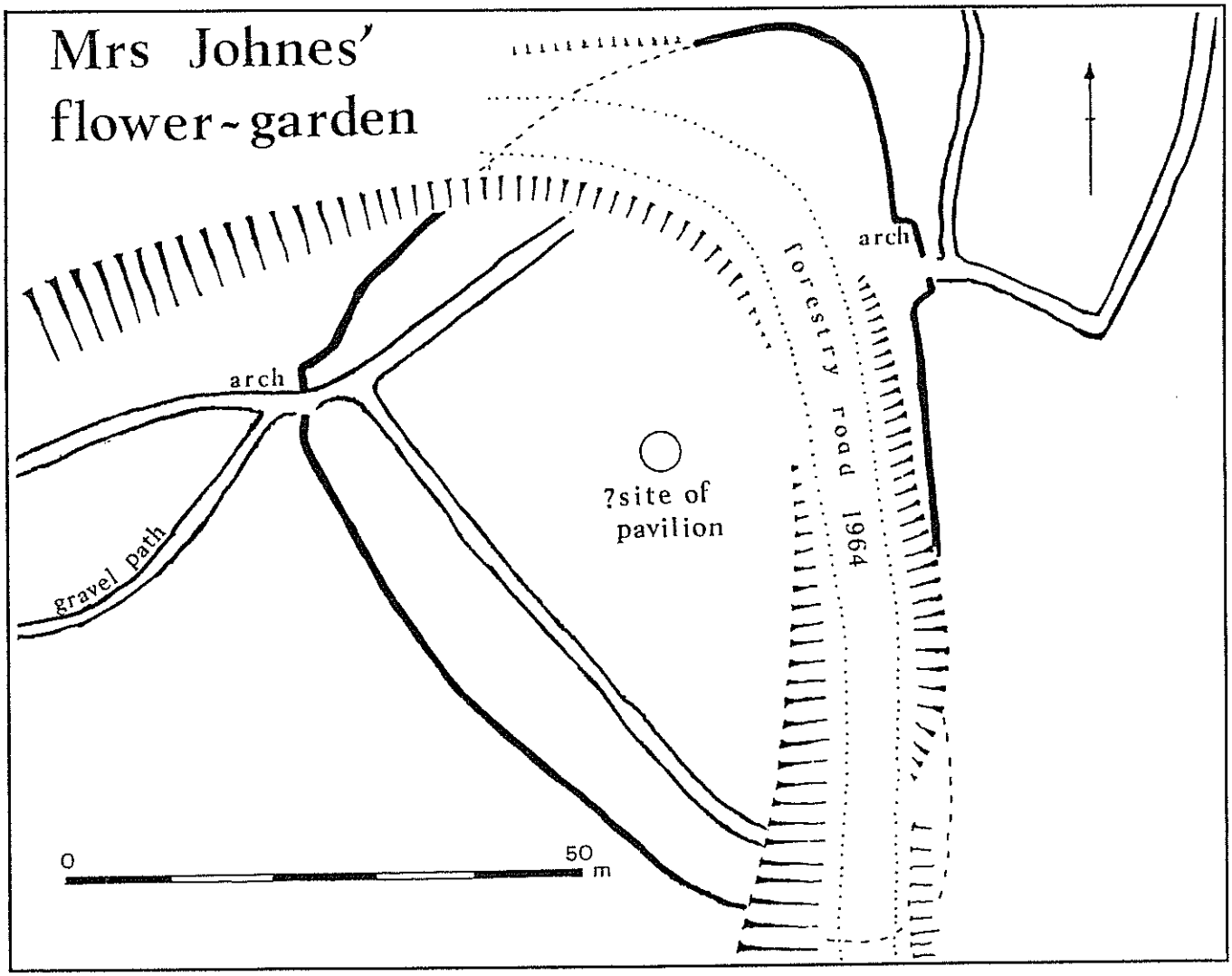


Figure 13.3 Hafod: Mrs Johnes' Flower Garden

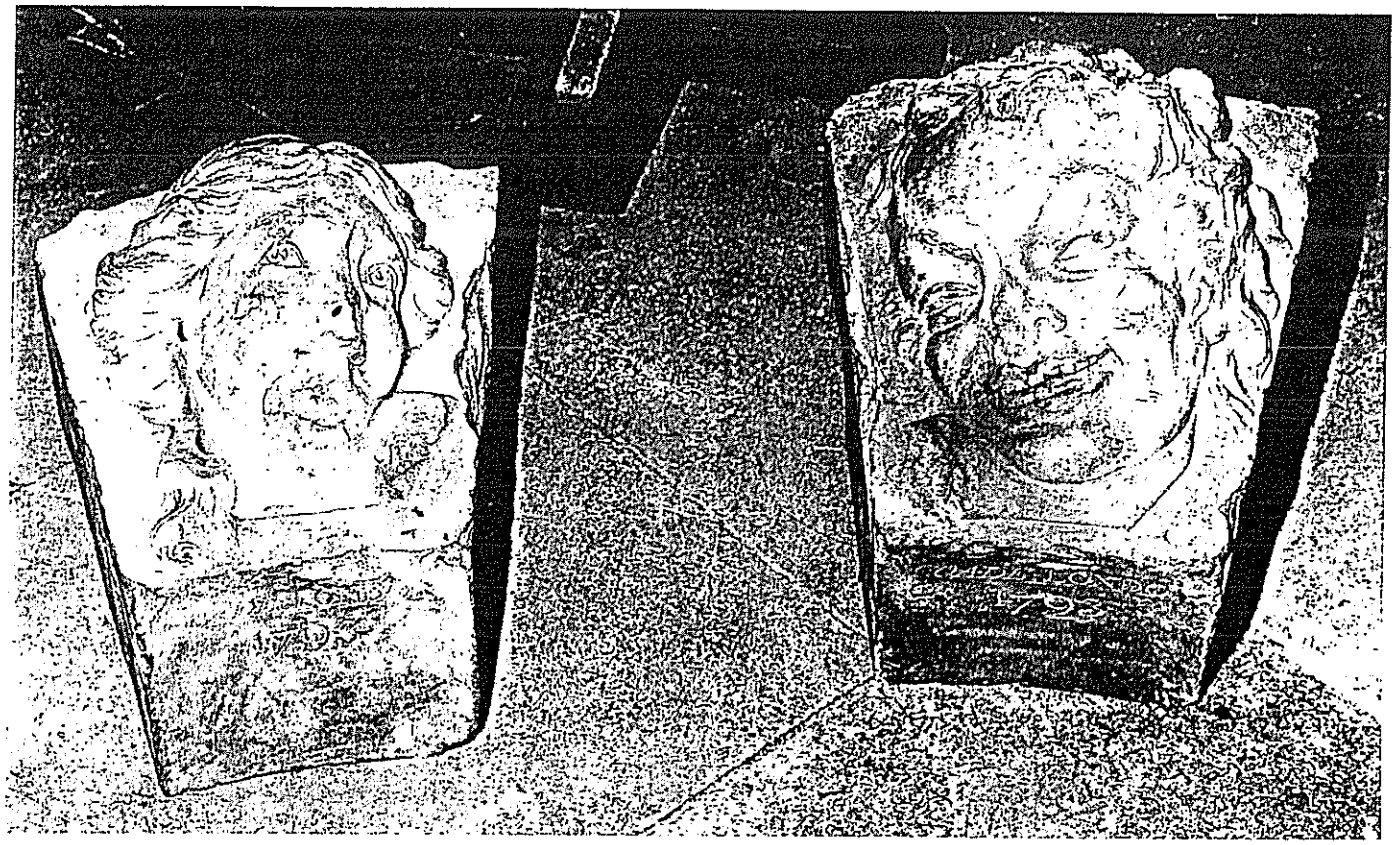


Figure 3.4 Hafod: Nymph and Satyr keystones from the arches into Mrs Johnes' Flower Garden. (Photo: Douglas Hague, reproduced by courtesy of Joan Hague)

rusticated Coade Stone voussoirs and blocks, decorative blocks, and impost block. The arch keystones, dated 1793, depict a satyr (west) and nymph (east) (Fig 13.4; cf Kelly 1990, 158). These symmetrical artificial stones were among Johnes' few concessions to the Classical Tradition in his wilderness.

In 1964 the garden was bisected by a forestry road, removing perhaps a third of the enclosing wall and the same proportion of the enclosed area. Of the two original arched portals, one had been completely demolished. This sadly advanced state of deterioration and the imminent collapse of the remaining arch during 1985–6 prompted the writers to approach the Forestry Commission with a view to initiating restoration. Help was forthcoming and the wall was restored under an MSC scheme, though neither to its original height nor to the original Cotswold section. Although the Coade Stone of the portals was at first thought to have been lost, a well-wisher had taken one complete set of voussoirs into safe-keeping during the late 'fifties and these he willingly returned. Copies for use in restoration indistinguishable from the originals were cast by Mr John Davies of Trapp Craft Workshop near Llandeilo. Redesigned keystones in keeping with the originals now adorn the arches, both of which John Davies entirely restored between September 1988 and April 1989 (Fig 13.5).

Long-term plans are in hand for eventual clear-felling of the garden area and replanting with appropriate shrubs. But there are practical

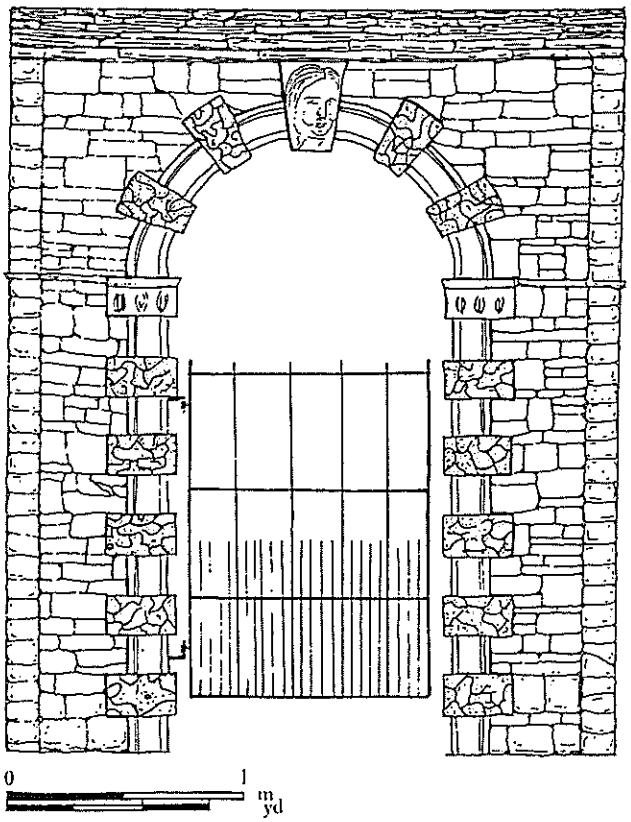


Figure 13.5 Hafod: ornamental arch into Mrs Johnes' Garden of c *1793*

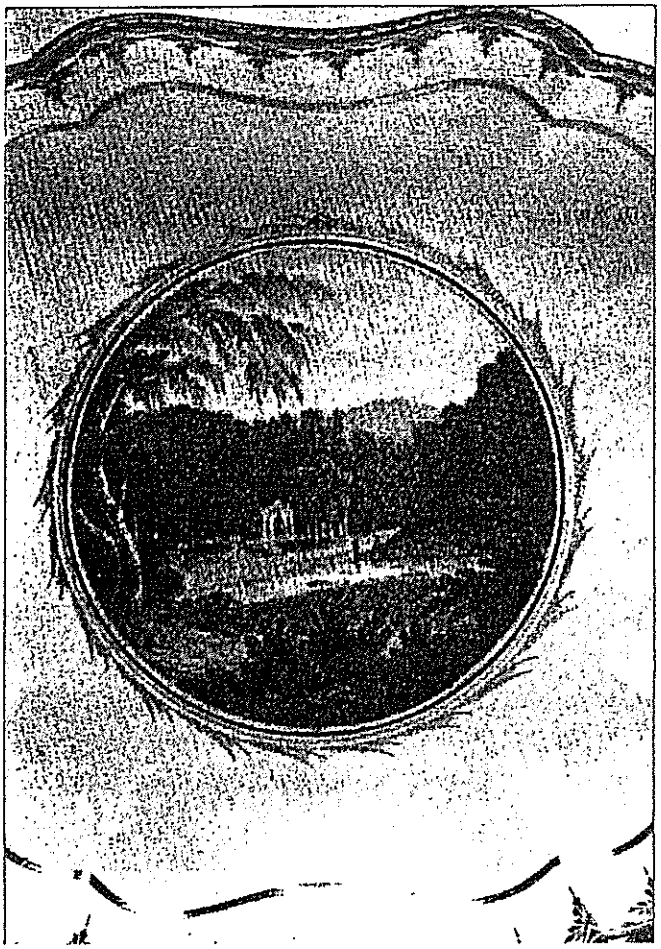


Figure 13.6 Hafod: summerhouse, from Hafod Derby Service. (Copyright National Library of Wales, illustrated by permission of John Twitchett, Curator, Crown Derby Museum)

difficulties to be overcome before this can be fully accomplished. First, for a site of such significance to the history of silviculture and horticulture (the first American garden in Wales surviving within its original enclosure), diversion of the forestry road would be desirable and must be seriously considered in the long term. Even were resources readily forthcoming for such a scheme, the topography of the site makes this technically difficult. Secondly, clear-felling discrete areas within forestry blocks may produce blow-outs. And thirdly, the garden is known to have contained a summerhouse. Possibly of Coade Stone, it was described as 'a sequester'd seat' in 1787 (Fenton 1790, 142; Thomas Lloyd, pers comm) and by Revd James Plumptre in 1799 as a 'chinese Temple' (Cambridge Univ Lib Add MSS 5816 (e), fo 163). Although Malkin referred to the garden in 1804 as 'still further to be ornamented by a Doric temple from a design in Stuart's *Athens* [1762]' (Malkin 1804, 348), it seems reasonable to conjecture that the delicate Gothic building illustrated on the Hafod Derby Service is in fact the 'chinese temple' (Twitchett 1980, 158, pl 174; Fig 13.6). Inaccurately described on the plate as 'Cold Bath Hafod', the painting clearly shows a Gothic-style garden pavilion with a dome possibly of wood and lead, having corner-clustered columns. The entablature is indistinct, but appears capped by a parapet and pinnacles, making it remarkably similar to surviving contemporary Coade Stone examples (cf Kelly 1988, 120–2).

Also of Coade Stone was the Triton (*teste* Plumptre, *ibid*), having been rescued in fragments from the garden site by Mrs Simpson of Pendre, it is now safely in Forestry Commission ownership. Recognisable pieces of Triton's thigh, dolphins, and conch shell base survive (cf Kelly 1988, 117, fig 5).

The original gravel path delimited flower beds and a central lawn. Although early 25–inch OS maps (1888 and 1904) do assist in giving some idea of the paths a century after the garden was established, the exact site of the pavilion has not been ascertained and no gravel paths have yet been located, although these can be conjectured from OS 25–inch plans. The nature of the flower beds can only be formulated from detail given in Jane Johnes' correspondence with Henrietta Liston of Millburn Tower near Edinburgh (*Liston Papers*, Nat Lib Scotland; Tait 1984; Kerkham 1991).

It is questionable as to whether or not sufficient pollen spectra could have survived in buried soils for useful recognition or quantitative identification. Nevertheless, today's pine canopy is shallow-rooted, and pedology may help establish some details of horticultural practice.

2 Mariamne's Garden (SN 7640 7320; 1795–6) (Fig 13.7)

Up the hill to the north of the American garden on the south-facing craggy slope of the river valley, was an overhanging, secret flower and shrub garden containing many alpine plants. It was first designed and planted during 1795–6 by Dr James Anderson (1739–1808), the noted Scottish Agriculturalist, for the express use of Johnes' daughter, Mariamne (1784–1811). A botanist in her own right, she certainly collected plants and presumably also tended them (*Smith Correspondence*, Linnean Soc, *passim*). The approach to the garden was from a steep zig-zag climb up stone steps. The shrubbery was surrounded by a semicircular wall locked at a postern to all but the most special visitors (Shepherd MS, Manchester College Oxford, vol 4, fos 43, 47).

Anderson divided the site into an *Upper* and *Lower* garden. The latter, possibly a heather garden, occupied the rocky platform below the south-western entrance (*ibid*, vol 14, fo 13). Thomas Johnes wrote to James Edward Smith in 1803 that Mariamne had 'five gardens... to look after. The Upper one... wonderfully pretty... lately

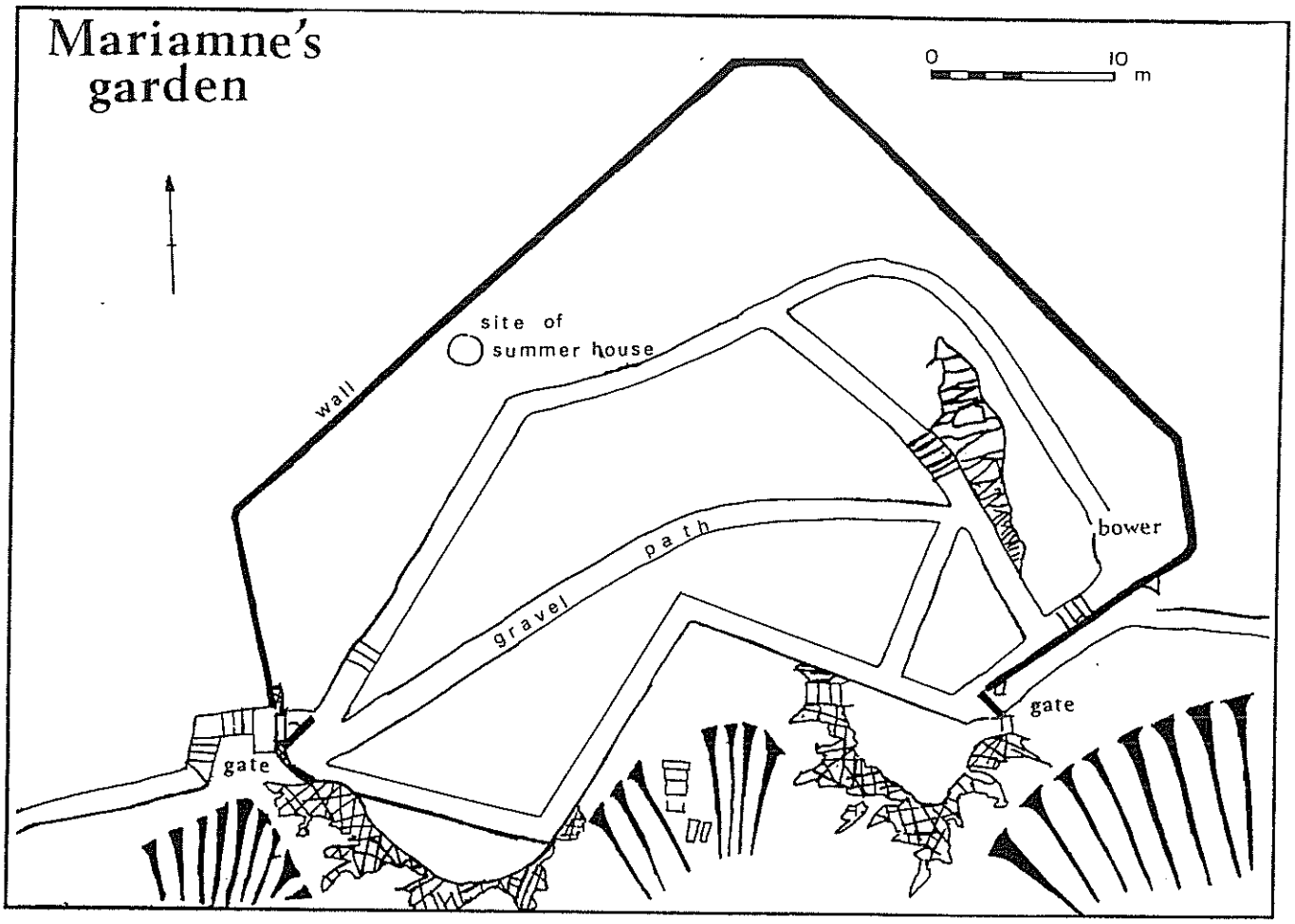


Figure 13.7 Hafod: plan of Mariamne's Garden

ornamented with a beautiful vase...' (*Smith Correspondence*, Linnean Soc, 16 xi 1803). The Upper Garden was probably subdivided to accommodate specific plant requirements. Its rocky nature was particularly well-suited to alpines and the steep southern overhang would have provided an attractive habitat for rare scree and moraine plants (*Smith Correspondence* Linnean Soc; M Johnes to J E Smith u d (1801)).

Whereas the paths were originally bordered by American rhododendons, possibly *R maximum* and *R catawbiense*, like much of the estate, this hillside has become naturalised by *R ponticum* (Smith 1810, 14). This has recently been cut back to be eventually replaced by less energetic varieties. Clearance of the garden is now almost complete, trees having been cut to leave roots in the ground so that potentially important man-made features might not be disturbed. Having been partially smashed by ancient fallen trees and eroded by nature, the outer retaining wall has been carefully relaid and has every appearance of an authentic restoration. Unfortunately, termination of the MSC scheme left messy cemented walls and steps at the more northerly entrance. Now that the public is to be invited into this area, to comply with safety regulations the Forestry Commission has surmounted the ascent with a tasteful black-painted steel safety rail. Eventually due consideration is to be given replanting the interior with authentic stock.

Within, paths of quartz fragments are still to be seen, though the surface of the much used central path is eroding downslope. Local amateur interest in the project is strong and has resulted in the uncovering of steps descending the steepest, south-eastern, part of the rock exposure here. Although this digging has resulted in useful discovery, there is very real danger that such activity will not only attract further exploration by the general public, but might also disturb the soil originally forming the discrete plant habitats of Mariamne's Alpine Garden. In fact, these steps descend to what was in all probability Mariamne's 'Fernery', a site demanding the closest of controls in any future scientific investigation. Problems of restoration and re-planting are similar here to those encountered in the American Garden. Our ignorance centres upon the nature and location of Mariamne's five distinct gardens at this site; the original 'moss-house' (Shepherd MS, *loc cit* 14, fos 11–16; Malkin 1804, 348); the nature of a ?19th

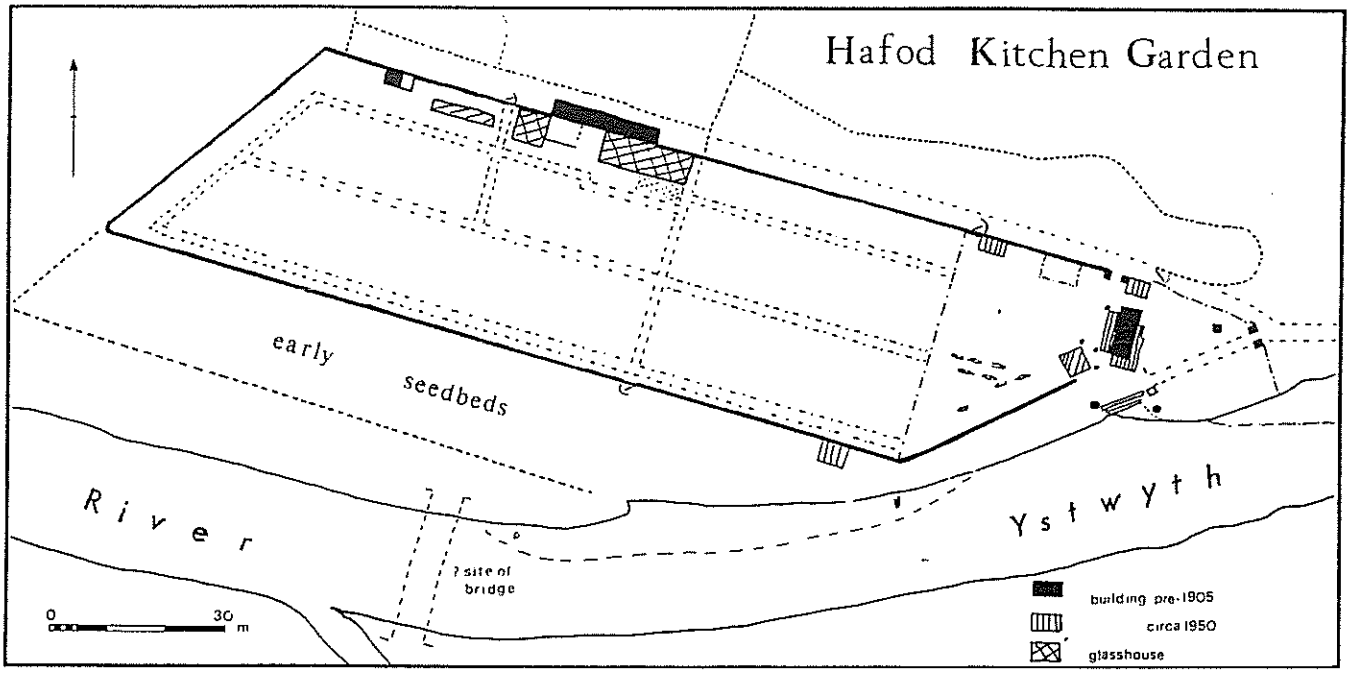


Figure 13.8 Hafod: plan of kitchen garden

century summerhouse marked upon the OS 1888 25–inch plan, and the original siting of a Carrara Marble Urn, one of the last works of Thomas Banks, now on display inside the National Library at Aberystwyth.

As already noted, conservation and restoration was carried out from 1986–88 at both gardens and upon several of Johnes's original gravel walks under an MSC/NACRO programme. Garden perimeter walls were partly or wholly rebuilt and steps and pathways made safe under the scheme. Clearance of undergrowth from paths and gardens was well advanced to facilitate public access to a limited part of the demesne designated as a forestry walk to be opened in 1991. Controlled scientific excavation is needed before any replanting, and at the time of writing there seems to be some danger that exploration by enthusiastic amateurs, as well as further restoration itself, could be visually and structurally damaging to important features if not properly monitored.

3 The kitchen garden (SN 7560 7305; begun *c* 1790) (Fig 13.8)

Johnes' kitchen garden was upkept by the estate until around 1940, then maintained as a market garden before being taken over as part of a small private house during the 1950s. In 1988 this became one of only two Listed Buildings upon the entire estate. It was completely abandoned between 1968 and 1988, but is now reoccupied by owners who intend to undertake limited restoration, having been bought privately in July 1988. Despite years of neglect, it is still possible to trace the boxwood hedges which delimited the seedbeds, at least since Victorian times. Many internal features probably of early date seem traceable. Until summer 1989, its wall remained basically sound, but ground shrinkage during the drought caused extensive collapse, and rebuilding without the appropriate resources might prove to be a major future handicap.

The kitchen garden comprises a 2⅓ acre (*c*1ha) plot surrounded by a trapezoidally laid wall [480 x 190 ft: 146.3 x 57.91 m] about 3m high. It lies on a flat terrace of the valley and is separated from the Ystwyth by another trapezoidal area of 1.5 acres (0.6ha). Whether or not this plot was intended for raising plant stock, or even had flower beds, will remain an open question until excavations bring to light acceptable evidence for these functions (cf Kerkham and Briggs 1990, 199). It is extremely important that future research and archaeology ascertain where seedling trees were husbanded in Johnes' silvicultural experiments (Linnard 1970).

The garden is still stocked with many decaying fruit and rogue deciduous trees, the latter mostly of post-War origin. Along the south-facing north wall and west wall remain sections of steel wires for fruit cultivation; the walls are also pegged with innumerable nails from tagging and nailing. One part of the western wall is entirely of brick in the English Garden Bond (*teste* James Barfoot), brick being considered to have superior thermal qualities in successful peach growth. Here, surviving zinc species plates record pear cultivation.

Set against the garden wall are two glasshouses, one quite massive, 7m x 20m, now under a tin or

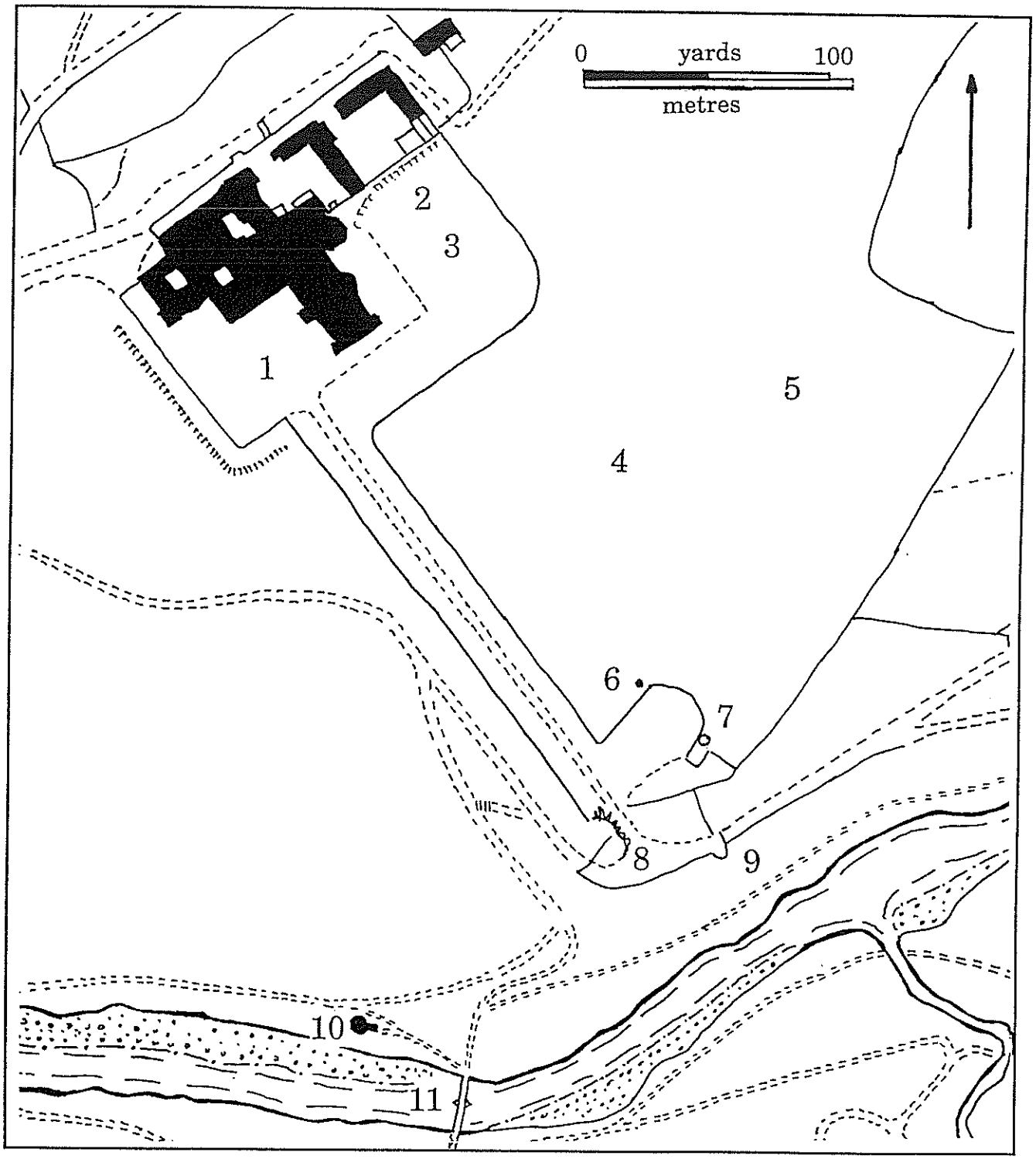


Figure 13.9 Hafod: plan of mansion from 1904 OS 25–inch map. Figures in brackets refer to text

Key:

1 Mansion (6)
2 Site of 1794–6 Conservatory (5)
3 Site of Victorian circular lawn and probably mason's yard to original Baldwin house
4 Site of Baldwin's Offices (4)
5 Site of Paynter's house (pre-1786)
6 Stone monolith (14)
7 Summerhouse base (13)
8 Rock-hewn carriage drive of 1786
9 Flanked viewing point on carriage drive
10 Icehouse (9)
11 Alpine Bridge (12)

asbestos roof. The smaller, still largely glazed, stands 13m x 7m (only 3m for half length). Both incorporate a certain amount of original Victorian or earlier mechanical window winding furniture. Only one is depicted on the OS 25–inch map of 1888. However, the original glasshouses are believed to have extended almost the full length of the north wall (Lipscomb 1802, 129). John Nash is known to have supplied glass for the Hafod glasshouses 1792–6 (Jones 1939, 94–5). In *Country residences* J C Loudon criticized Dr Anderson's design for heating hot-houses, outlining his own invention of an 'inner roofing' or curtain, which would 'not only save much fuel, but greatly lessen the risk of overheating or overcooling' ... In Wales these improvements could be seen at 'Havod, where ten large hot-houses are altering according to the author's mode' (Loudon 1806, vol I, 290). Loudon's improvements were presumably to the original structures.

Behind the greenhouses, on the north side of the garden wall is a block some 20m long and 3m wide, comprising the original boiler house and garden workshops. Lipscomb's observation probably included the 'Stove House' referred to by Mariamne in 1795. This was almost certainly one of the earliest of the garden's glasshouses (M Johnes to J E Smith, *Smith correspondence*, Linnean Soc). There are also coldframes partly built of engineering brick and seedbeds and a pigsty nearby. In 1988 gardening paraphernalia, such as broken earthenware forcing pots and the top of a lantern cloche, littered the beds. Surviving plants then observed included rhubarb, raspberry, peppermint, and cherry laurel; daffodils in spring grew immediately before the brick wall (west section).

The original garden cottage, lying at the east end is much altered, though conversion of both building and immediate environs have been done with some sensitivity. Immediately around it survive some remarkable architectural features taken from the mansion, presumbly after its demolition in 1958.

In 1796 George Cumberland described a precipitous descent leading down Cae Gwartheg on the south side of the Ystwyth, crossing by way of 'a very long flying bridge' in order to view 'the conservatory and fruit-walls' (Cumberland 1796, 34). Although a thorough search was made for this structure on both river banks in autumn 1987 (between OS SN 7550 7300 and 7581 7299), no indications of such a structure could be detected.

A small number of important ornamental trees remain here and throughout the demesne. These include a remarkable *Magnolia acuminata*, which, together with several cypresses, is now the subject of a tree preservation order.

Examples of *Cedrus Libani* (Cedar of Lebanon), *Sequoiadendron giganteum* (Wellingtonia), *Arucaria arucana* (Monkey puzzle) and the *Arbutus unedo* (Strawberry tree) are but a few of the surviving ornamentals close to the mansion site.

4 The site of Baldwin's Offices (SN 7600 7380; 1790–94) (Fig 13.9:4)

Before Johnes began building at Hafod, it had for some time been in the tenancy of John Paynter, Lord Powys's Mining Agent. The earlier building probably lay upon the flat piece east of the present ruins, where the otherwise smooth line of the hillside is rather truncated in the way that is common where small farm buildings have been quarried from rock faces in their immediate vicinities. A view from the Hafod Derby Service entitled 'Hafod West Front' (Gerald Pendred, pers comm) clearly illustrates a low, L–shaped building, possibly in the Cardiganshire vernacular, positioned on this site.

Watercolour drawings dating from 1790–92 show the site to have been later occupied by the domestic offices and stables of the Baldwin scheme. Clearly this is archaeologically a most sensitive area.

5 The conservatory (at Hafod Mansion) (*c* 1794–6) (Fig 13.9:2)

Running north-north-east from the ruin of the Rotunda there is still a conservatory garden wall with at least one flue at the base suggesting it might once have been a heated wall. Johnes is known to have had his Conservatory, originally 160ft (*c* 50m) long, on this line, and there is a strong possibility that, not having been later built upon, original foundations and bedding arrangements remain buried there.

Set within this wall are the remains of a marble fountain built into a slight recess and arched in engineering brick. Water was piped to it from domestic buildings behind, the spout being decorated by a masked head which spilled into a scalloped marble bowl (Nat Lib Wales MS 1340C, fo 137). This fountain, designed by Thomas Banks, was originally sited at 'the extremity of the conservatory' (Malkin 1804, 360). The conservatory is illustrated by Rees (1815, pl opposite 417) from a drawing by J P Neale.

6 The ruins (SN 7590 7325) (Fig 13.9:1)

Although having provided amply for decorative building and garden ornament, the mansion site itself remains a heap of stone and mortar, its massive quoins and slabs providing a potentially valuable source of Bath stone for architectural restoration. It is not known what were the original domestic drainage arrangements. However, beneath and around the site is an amazing labrynthine sewer arrangement lined in white ceramic tiles and capped by massive cast-iron man-hole covers which, having been re-designed in 1912 (Borron forthcoming, fn 67) probably incorporates some earlier features. To the north of the ruins the Forestry Commission has maintained Waddingham's stables and stableyard (rebuilt in

1882), giving the otherwise derelict site an important focus of survival.

7 The fishponds (?1788–90)

The existence of two working fishponds is first revealed in Jane Johnes' correspondence between 1788 and 1790 (Dolaucothi MSS Nat Lib Wales). Both appear on the first edition OS 25–inch map of 1888. The larger lies south of the home farm, Pendre (at SN 7622 7341). This figures in two illustrations from the Hafod Derby Service entitled 'From the Menagerie Hafod' (Hoyte 1990, 33; Roger Hallett, pers comm) and 'The Menagerie' (Thomas Lloyd, pers comm). Oval-shaped, it is about 220ft (*c* 70m), east–west, by 67ft (*c* 20m), north–south, and contains a small artificial stone island growing ?rogue shrubs. Heavily silted up, the pond itself now only supports pondweed, reeds and a few bullrushes. It originally took water from a stream running alongside the farm, channelled beneath a gravel track. More recently the flow has been diverted into a partially covered watercourse across the field parallel with Middle Hill. 'The Menagerie' (or pheasantry, in later parlance) appears as a small building beside the pond on a dish from the Hafod Derby Service, approximately on the site of the later, 19th century, Hawthorn Cottage.

The other pond lies some distance to the east (at SN 7706 7298), in a dense larch plantation on the south side of the river about 100m from the present forestry road which runs eastward to Dologau. On the OS 25–inch plan (1904) it appears segmentally shaped, the two straighter, embanked radii running approximately north-north-east and east-south-east. An east-west flowing stone-lined watercourse passes by and may originally have assisted drainage. Today, partially overgrown by broad-leaves, the surface water is roughly circular, about 17m in diameter. Two drainage cuttings now punctuate the western embankment. On the north-east side is a heap of imported stone suggestive of some collapsed and forgotten amenity, like a seat.

Other landscape features

8 Obelisk (SN 7637 7315)
Designed in 1803 (Colvin 1978, 649) by W F Pocock (1779–1849), this was erected in 1805 to Francis, 5th Duke of Bedford, who died in 1802. It is sited on a slight plateau immediately below the entrance to Mariamne's Garden, commanding a fine view of the Ystwyth Valley. Square in section and surmounted by an ornamental urn, it is of micaceous sandstone slabs. Owing to its dangerous condition, this was dismantled and restored by the Forestry Commission during Easter 1988.

Figure 13.10 'Cold Bath Hafod' from the Hafod Derby Service (Reproduced by courtesy of Nicholas Harris)

9 Icehouse (SN 7503 7299) (Fig 13.9, 10)
This is located due south of the mansion overlooking the River. Of stone with the entrance partly collapsed and generally in poor condition, this requires excavation and remedial conservation work.

10 Subterranean cavern (SN 7747 7273) (Fig 13.1, 7)
This remarkable grotto was effected by driving a mining adit through the hypotenuse of a triangle of which two sides comprise a river and its tributary and is situated below the cascade on the south side of the valley about 1.5km from the Mansion. Thrown across the stream below the cavern's rock-cut steps was an alpine bridge. This is well illustrated by watercolour drawings from Malkin (1804, 345) and James Edward Smith (1810, pl V). Whereas no trace remains of this or of other Johnes rustic bridges, useful descriptions of them are found in the tourist literature. Today access is dangerous and not suited to unguided visiting.

11 Bath House (SN 7626 7308 approx) (Fig 13.10)
The Bath House, which lay roughly south-west of Mariamne's garden, was relocated by Mrs L Hallett

early in 1989. Its approximate site is strewn with broken brick and roofing slate, and all indications seem to suggest that its fabric has been widely disseminated by deep ploughing or clearance at the time of tree-planting during the 1950s. Described in 1799 as a small stone-built structure (Lipscomb 1802, 132), these features are clearly illustrated on the Derby Service (Thomas Lloyd, pers comm). By 1805 it was covered in flowering shrubs and was then said to be sufficiently large to house a changing room and alcove (Smith 1810, 12). Its precise position and form could now only be properly determined through controlled excavation.

12 Bwlch Gwallter Bridge (SN 7507 7296) (Fig 13.9, 11; Fig 13.11)
At the time of writing the wooden superstructure has been removed in anticipation of future restoration and whilst the masonry appears structurally sound, the base of the central pier is undercut and some of the higher course-work is fragmenting. It is unknown when the river was first spanned at this point but it seems this 'Alpine Bridge' underwent two rebuilds. Two drawings from Thomas Jones of Pencerrig's sketchbook (1786–7; Friends of Hafod Archive TJ 38–9b) illustrate a relatively simple walkway supported centrally (described as a 'long Alpine bridge'; Cumberland 1796, 13). Comparable structures were built by Johnes' cousin Richard Payne Knight at Downton Castle, Herefordshire (Watkin 1982). In 1797, one tourist referred to a 'stone Bridge' building over the Ystwyth (Nat Lib Wales MS 16133C fo 33). In all probability, this refers to buttress alterations accommodating the bridge described as 'formed of two wooden arches springing from a central pier' (Wood 1813, 164–5; pl facing p166; cf Lipscomb 1802, 131; here Fig 13.11). It is probable that John Waddingham restored wooden bridges during the 1870s and '80s, returning Bwlch Gwallter to simpler wooden trestles by raising the central pier some 1.5m.

13 Summerhouse base (SN 7606 7314) (Fig 13.9, 7)
In 1987 Mr Don Parker located, deep in the undergrowth close to the mansion, an octangular brick base. Artefacts associated with the site include coloured glass (cobalt and watery blues, green and grey-green, plum, rose, and transparent bricks, and roofing slates. A comparable colour scheme is recorded from a summerhouse at Dunkeld in 1768 (Hajos 1989, 44). While its origins are obscure, there is a possibility that this was originally constructed by John Paynter. It lies within a small hill-top garden terrace and requires excavation before restoration or consolidation.

Paynter is known to have constructed a summerhouse at Hafod, where the following inscription (in Latin) was copied by a visitor in 1768:

> he [Paynter] designed this small garden and small house [or temple] in like manner, built in the same place, for the amusement of his friends and so that he might in some measure wash away the more oppressive cares of life (Bodleian Lib MS TOP Wales (e) 1, fo 41; kindly translated by Dr Janet Marx).

In September and October 1786 Thomas Jones made drawings of a small castellated building on this site (Friends of Hafod Archive TJ 12, 39, 39a, and 40). Passing this way in 1799, George Lipscomb observed 'a small turret ... happily placed on [craggy rocks] ... which is executed with so much taste and propriety, that it can scarcely be thought artificial' (LIpscomb 1802, 126; also mentioned 131–2).

There is, however, the possibility that a second summerhouse was erected on the site in the mid–late 19th century, a possibility which must be borne in mind during any future investigation here.

14 Square ashlar obelisk (SN 7600 7112) (Fig 13.9, 6)
This sandstone monolith stands over 2m in height and lies in undergrowth near the house. Its date and original purpose are unknown, though there is a local belief that it records the spot from which Mrs Johnes and Mariamne watched the house burn in 1807.

Alternatively, the modest nature of the monument might suggest a Waddingham connection, possibly commemorating Margaret Waddingham's marriage to F R V Witts in 1876, or that of her brother James to Sarah Davies in December 1883.

15 Pont Newydd: alpine stone bridge with wooden trestles (SN 7704 7362; 1814)
Situated on the former eastern carriage drive, immediately above Pwllpeiran Waterfall, like Bwlch Gwallter Bridge, this was probably restored by John Waddingham. Archdeacon Henry Thomas Payne recorded (July 1815) a 'two-arched Bridge over the stream' here, which suggests some possible similarity in design with the second phase of that same structure (Nat Lib Wales MS Cwrt Mawr 101c, fo 8).Unused for some time now, the decaying superstructure was severely damaged between 1987 and 1988 by private forestry contractors, leaving the trestles in imminent danger of total collapse. At present the old road surface remains visible and in need of careful record, if not of full excavation.

16 Summerhouse (SN 7739 7359; 1805)
Sited upon the New Walk, the only known drawing of this structure before collapse is by Piper of about 1939. Archdeacon Payne wrote of passing 'under a rude arch of stone' before crossing 'a curious chain Bridge' (Payne, *loc cit*, fo 7). Two of an original four

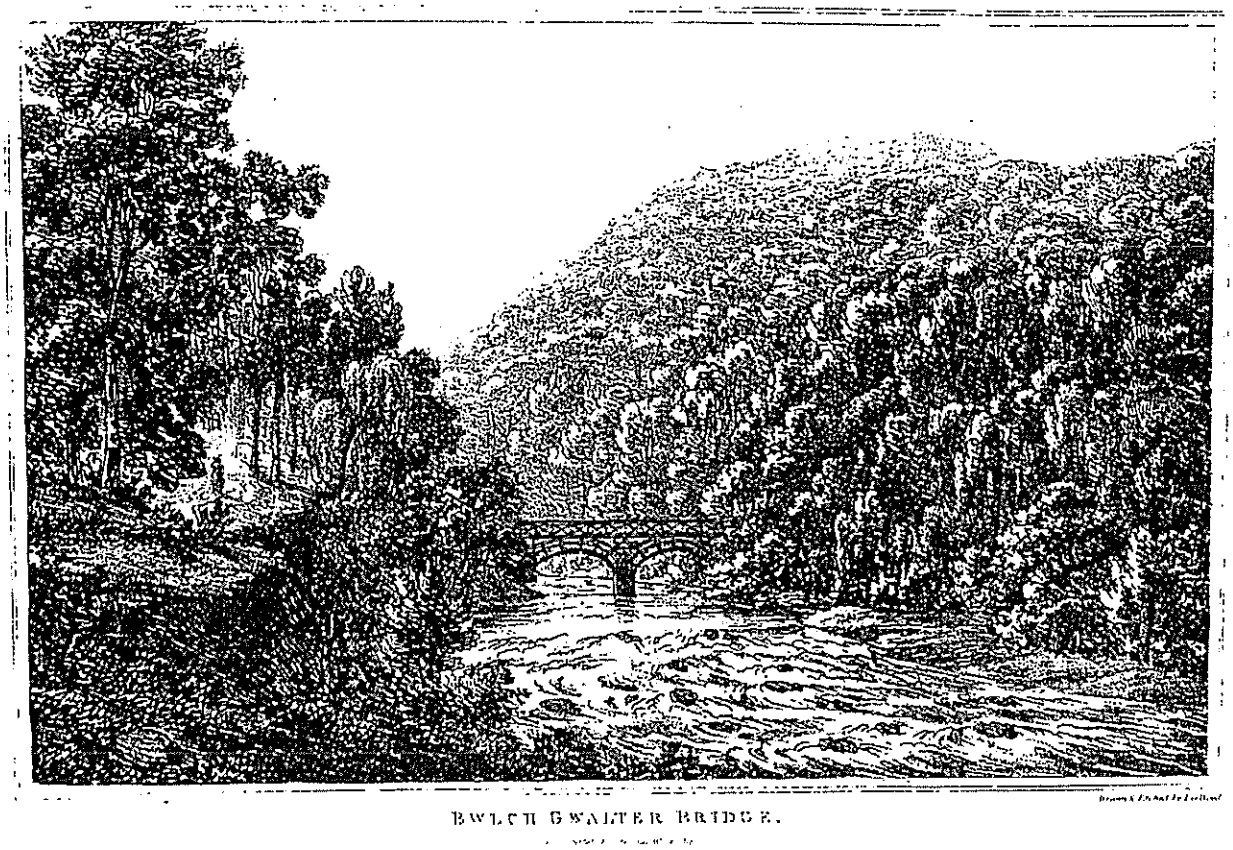


Figure 13.11 Hafod: Bwlch Gwallter Bridge, from J G Wood The principal rivers of Wales illustrated *(Wood 1813, pl facing p 166).*

pillars remain, overlooking a 15–20m deep chasm of the River Ystwyth. The site requires careful excavation before reconstruction.

17 Posts for chain bridge (SN 7745 7336; Fig 13.1, 5; 1805; Rees 1815, 428)
Along the same walk as the above summerhouse, situated some 60m from it, are the two remaining pairs of cast iron suspension posts for a chain or cable bridge over a rather more shallow river chasm. Two outer pairs of pillars carrying a wire restraining fence to the bridge, of slighter build, also survive. The pillar bases require to be dug out so that their design and load-bearing capacity can be fully appreciated. Wood described it as 'a bridge formed of chains, with planks laid across, hanging over a rocky chasm, the river roaring beneath' (Wood 1813, 164). It would be interesting to know who cast its pillars. The ornamental parapets at the Devil's Bridge were commissioned by Johnes from Aberdare Ironworks in 1814 (Chater 1978, 333). It is possible, however, that he had used the firm 'Winward & Co' for earlier work, since we find him recommending them to George Cumberland in 1813 as 'good casters' (Brit Lib Add MSS 36,504, fos 3–4 [Johnes–Cumberland corresp]).

18 Dologau (originally Tyloge) bridge over the Ystwyth (SN 7707 7334; pre-1796)
This is a single-arched stone bridge the road surface of which was damaged 1987–8 through use by private forestry contractors' vehicles. That the structure is illustrated upon a plate from the Hafod Service suggests a construction date pre-1787 (Judith Anderson, Keeper of Art, City of Derby Museums and Art Gallery, pers comm).

19 Nant Peiran stone bridge (SN 7694 7345; pre-1796)
Another single-arched stone bridge, this was similarly damaged to the above.

20 Minor ornamental features in Hafod Wood
(between SN 7575 7325 and 7595 7345)
Among the few remaining man-made parkland features are a number of small bridges sited over the streams flowing south through Hafod Wood. It has recently been suggested that these originally formed part of a Japanese Garden (Macve 1989, 68) which at one time framed the house to the north. Although there is good photographic evidence showing this hillside carefully planted with ornamentals by the Waddinghams, certainly before 1900, neither written nor reliable verbal evidence survives to support the view that it was ever

specifically Japanese in concept. Close identification of the tree and shrub species surviving in this area may shed more light on the problem.

21 Gazebo (SN 7696 7350 approx; pre-1796)
This gazebo was found on the gravel path north from Peiran bridge to Pwllpeiran Falls. A favourite resting point for visitors contemplating the cascades, it was much appreciated during the early 1800s (Kerkham 1978, 269). The structure was entered from the south through a small arch leading into a square building, there having been a seating arrangement inside, to the right, giving the visitor a view of the falls (Plumptre *loc cit* fo 163). A wooden bridge adjoined the gazebo. Probably constructed of two large tree trunks, with a rough wooden handrail similar to other rustic bridges described and illustrated on the walks, it was thrown across the Peiran at this point and led a gravel path through oak woods down to Tyloge Bridge (Cumberland 1796, 16; Smith 1810, 12, pl V; Malkin 1804, 345).

22 Abandoned or depopulated farms
Efforts begun by the authors to locate the sites of cottage groups and two farms known to have disappeared since 1796 (Briggs and Kerkham 1988, 78), are now being prosecuted by the Friends of Hafod. The remains of one cottage which survived until between 1888 and 1905 is located south of Dologau at 7714 7315; another, unmarked on any map post-1796, lies in dense woodland south of Nant-y-Cae at 7757 7285. One farm site, possibly depopulated by Johnes in order to improve the view from the other river bank is now completely ploughed out, and lay in a field to the south of the Cwm Ystwyth road at SN 7740 7375. Another was situated upon Cnwc-y-Fedw around 7757 7315.

23 Medieval mill (SN 7718 7373 approx)
Strata Florida Abbey's Grange of Cwm Ystwyth possessed a mill at Pyran. It has been tentatively suggested that this was located at SN 775 746, the present-day Pwllpeiran Experimental Farm (Williams 1990, 69). The site of an 'old mill' is, however, marked on Cumberland's 1796 plan in Nant Peiran, not far above the falls (Fig 13.2), and though no vestiges were recognised during an intensive search in that locality in summer 1988, it seems reasonable to forward this as a more likely site for the lost monastic mill.

Johnes' walks east of Pontrhydygroes remain to be explored, remapped, and compared to early tourists' descriptions (Cumberland 1796, 35–43; Smith 1810, 17–20); also, the walks running south-east between Allt Dinanog and Cae Gwartheg from Bwlch Gwallter Bridge (Cumberland 1796, 32–4; Smith 1810, 12).

Besides these parkland and garden features, the demesne includes mine adits, the site of a large sawmill, several cottages, a home farm, and three lodges, all of which demand detailed investigation. In addition, Johnes is believed to have built at least 13 miles of drystone agricultural enclosure wall upon the demesne, much of which remains overgrown with moss and hidden in softwood plantations. In the absence of reliable estate records and of incomplete depiction upon the OS 25–inch plans, all traces of remaining walls ought to be surveyed and recorded.

A number of architectural details taken from the grounds over the past half century are believed to remain in private hands. The establishment of a local display would probably attract them back to the site and assist an understanding of the demolished features.

Retrospect and prospect

The local and national importance of Hafod is not in doubt. Johnes' landscape concepts were widely admired if not copied. While the two distinctive flower gardens bear a strong relationship to the late 18th century Paradise Garden, both anticipate early 19th century developments towards smaller more manageable garden types.

In 1990 the Forestry Commission established a Hafod Garden Panel, comprising (besides Commission staff) a botanist, an archaeologist from the Royal Commission on Ancient and Historical Monuments (Wales) (RCAHM(W)), an historian from the University College of Wales, and a representative of the Friends of Hafod. The Panel's objectives are through far-reaching consultation to present a conservation strategy ostensibly to protect the few remaining though unique features. This may be used as the basis for limited restorations of some features from Johnes' landscape. During 1991 the Forestry Commission will open a car park above Hafod Church (OS SN 768 737) and waymarked paths will facilitate access to a walk based upon features central to the understanding of the conceptual Paradise Garden. Prior to completion of this scheme and to any further restorations, detailed surveys and careful attention must be paid to the condition of the icehouse, of the original paths, the pavilion, summerhouse bases, and flower beds. Most importantly, before the public is allowed entry to the two shrub gardens, detailed specialist recording and geophysical surveys, together with proper scientific excavation such as would obtain in mainstream archaeology, must be commissioned and undertaken. Without this there is imminent danger that the documentation remaining to be squeezed from fragile soil profiles and apparently inconsequential stone settings will be irreparably and irredeemably damaged under visitor pressure.

Although there is still scope for documentary research, it is now clear that the key to an understanding of this 'garden' and its potential preservation or conservation can best come through thorough fieldwork, survey, and excavation.

Already, the recognition or discovery of important man-made components of Johnes' Hafod landscape highlights more universal difficulties of garden protection, investigation and restoration in Wales, and more generally, in Britain. Aware of these difficulties, local Forestry Commission staff in the Ystwyth Forest were led, before his retirement in 1989, by Forestry District Manager, John Davenport. He, his staff (particularly John Roe), and successor, Trefor Owen, have offered every encouragement and assistance to overcome them. However, the absence of statutory protection, rather than indifference or lack of concern, meant that a qualified archaeologist was not required to help supervise the MSC/NACRO employment scheme.

What must be sought is access to the scarce resources likely to be required to fulfill the heavy demands of archaeology, restoration, and access. Officers of the recently established (1989) Welsh Historic Gardens Trust have expressed concern and interest in helping to secure such resources. However, effective, long-term remedies to the requirements of landscape conservation must ultimately be sought through national initiatives. Nowhere better than at Hafod can we see the need for a government directive at full survey of historic parkland and garden landscapes, followed by selective statutory protection and long-term excavation programmes prior to restoration or restocking. To neglect this need is effectively to condemn to oblivion a landscape, unique alike to local and national aesthetic values.

Acknowledgements

The above is an extended version of an article which appeared under the same title in *Ceredigion* (see Kerkham and Briggs 1990). Some dates, historical data, and opinions expressed therein are superseded here. The writers gratefully acknowledge the full cooperation and encouragement of Mr John Davenport and Mr Trefor Owen, respectively past and present Forestry District Managers, Ceredigion Forest District, together with Mr John Roe, their assistant, in these investigations; Ms Judith Anderson, Mr James Barfoot, Mr Arthur Chater FLS, District Councillor Evan Evans, Ponterwyd, Mr Peter Goodchild, Mr and Mrs R Hallett and Mrs J Macve (Friends of Hafod), Mr and Mrs T J Hayfield, Mr Mark Laird, Mr Thomas Lloyd, Dr Janet Marx, Mr Don Parker, Group-Captain Gerald Pendred, Messrs J Raw-Rees and Co, and Dr Clare Taylor. Also the staff of the National Libraries of Scotland and Wales, and of the Linnean Society of London. Mrs Barbara Smith, formerly of the Library at Manchester College, Oxford, and colleagues at the National Monuments Record (Wales). Ms Gill Ogden kindly translated from Welsh Dafydd Jenkins' important neglected study (1948) and Mr John Borron generously made available his forthcoming article on the Waddinghams in advance of its publication. Fieldwork was largely a weekend and holiday pursuit, though much encouragement and help was forthcoming from Mr A J Parkinson at RCAHM(W). Research upon the manuscript letters greatly benefitted from a generous grant awarded by the Cambrian Archaeological Association. Topographical research upon both printed and manuscript tours was undertaken by one of us (CRK) whilst supported by a State Studentship in the History Department at University College of Wales, Aberystwyth.

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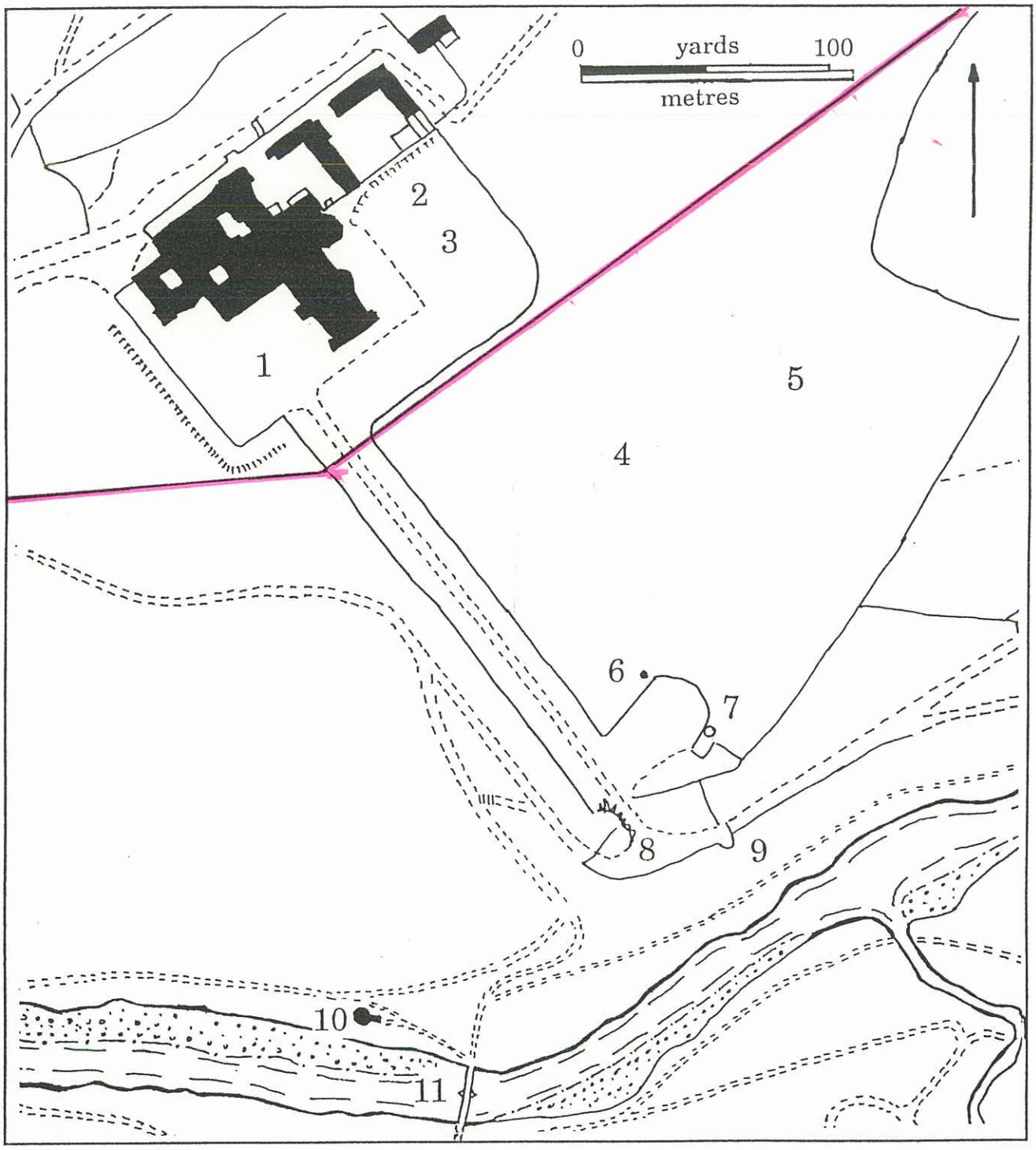

Figure 13.9 Hafod: plan of mansion from 1904 OS 25–inch map. Figures in brackets refer to text

Key: pipeline route indicated in red

1 Mansion (6)
2 Site of 1794–6 Conservatory (5)
3 Site of Victorian circular lawn and probably mason's yard to original Baldwin house
4 Site of Baldwin's Offices (4)
5 Site of Paynter's house (pre-1786)
6 Stone monolith (14)
7 Summerhouse base (13)
8 Rock-hewn carriage drive of 1786
9 Flanked viewing point on carriage drive
10 Icehouse (9)
11 Alpine Bridge (12)