

THE CLWYD-POWYS ARCHAEOLOGICAL TRUST

Holywell to Carmel Grange Overhead Powerline
Replacement
ARCHAEOLOGICAL ASSESSMENT

CPAT Report No 529

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Replacement
ARCHAEOLOGICAL ASSESSMENT**

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March 2003

Report for Power Systems Ltd

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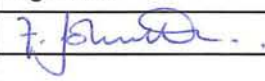
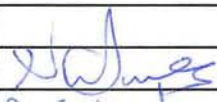
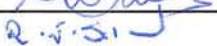
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CPAT Report Record

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Fig. 1 Holywell to Carmel Grange Overhead Powerline Replacement: archaeological sites

1 INTRODUCTION

- 1.1 The Clwyd-Powys Archaeological Trust (CPAT) was instructed by John Wilson of Power Systems Ltd, to investigate the archaeological potential of the route corridor relating to a proposed overhead powerline replacement between Holywell and Carmel Grange, Flintshire. No curatorial design brief had been prepared for the proposals, although following discussions with Mr M. Walters, Curatorial Section, Clwyd-Powys Archaeological Trust, it was agreed that the specification of works provided by the CPAT Contracts Section would provide sufficient assurance that the works would be undertaken to the desired standard.
- 1.2 An initial search of the Regional Sites and Monuments Record, undertaken by Power Systems Ltd, had revealed 39 archaeological sites within 100m of either side of the proposed route, including Offa's Dyke, and several areas of post-medieval mining activity.

2 LOCATION AND TOPOGRAPHY

- 2.1 The proposed powerline replacement route runs for a distance of 4.8km from south-west of Gorsedd, to Grange and Holway in the east, passing between Carmel and Pantasaph.
- 2.2 Topographically, the route occupies undulating agricultural land between the Clwydian Range to the south-west and the River Dee estuary in the north-east. At its eastern end, the route crosses the lower slopes of Holywell Common and Halkyn Mountain, which rise to the south-east.

3 DESK-BASED STUDY

- 3.1 Stage one of the assessment consisted of a desk-based study involving the examination of the Ordnance Survey 1st and 2nd edition 1:2,500 maps, together with the Tithe survey and any other readily available cartographic sources. Repositories consulted included the following: the County SMR, CPAT, Welshpool; the National Monuments Record, RCAHMW, Aberystwyth; and the National Library of Wales, Aberystwyth.
- 3.2 As noted above 39 sites were recorded in the Regional SMR within 100m of either side of the powerline route. Of these 23 were deemed to be potentially affected by the project. In addition the desk-based study identified a further 10 sites.

Prehistory

- 3.3 Bronze Age burial sites are known at Gorsedd (PRN 80122) and at Yr Orsedd Farm (PRN 102506), which imply the potential for further prehistoric activity within the powerline route.

Roman

- 3.4 Although no Roman sites have been identified within the direct route of the powerline, the presence of a Roman road at SJ14007620, and recognised Roman lead mining at Halkyn Mountain confirm Roman activity within the general area, and indicate the potential for further, as yet unrecorded, sites within the area.

Medieval

- 3.5 Offa's Dyke, the 8th-century earthwork marking the western boundary of the Kingdom of Mercia, lies directly across the proposed route. Although no visible trace of the Dyke survives at this point, significant archaeological deposits are likely to survive below ground and the area consequently has high archaeological potential. Holywell Grange, the former grange of Basingwerk Abbey, (PRN 35912) is sited within the Grange farmyard, at the eastern end of the route.

Post-medieval

- 3.6 The majority of sites identified within the proposed powerline route belong to the 18th and 19th century, and are related to mineral exploitation in the form of lead mining, the quarrying of limestone, and the production of lime. In addition, a post-medieval building of unknown function was identified at SJ1485076174.

4 FIELD SURVEY

- 4.1 The second stage of the archaeological assessment involved a field survey of the route corridor. This was undertaken on 21 March 2003 in the company of Mr H. Williams of Power Systems Ltd, and involved a walkover of the entire route. The function of the field survey was to record the condition and significance of all known sites and to prospect for previously unrecorded sites which might be impacted upon by the proposals. As a result of the field survey a further two sites were identified. Additionally, those sites thought to be at risk from the proposals were identified to Mr Williams and marked out, to ensure their avoidance during construction work.

5 ARCHAEOLOGICAL SUMMARY

- 5.1 Each site of archaeological interest, identified during the desktop and field surveys, has been classified according to its perceived significance. The categories are those given in the Cadw: Welsh Historic Monuments draft *Archaeology and the Trunk Road Programme in Wales: a Manual of Best Practice*.

Category A sites of national importance. It is presumed that sites in this category will be preserved and protected *in situ*.

Category B sites of regional or county importance which are of particular importance within the region. Preservation *in situ* is the preferred option for these sites, but if loss or damage is unavoidable, appropriate detailed recording should be undertaken.

Category C sites of local importance which are not of sufficient importance to justify preservation if threatened, but which merit adequate recording in advance of loss or damage.

Category D minor and damaged sites which do not merit inclusion in a higher category, and for which rapid recording should be sufficient.

Category E sites whose importance could not be fully determined as a result of the assessment and may warrant further evaluation.

The location of each archaeological site is shown in Figure 1.

Category A sites

Site No	Name	Type	Period	Condition	NGR
80122	Gorsedd round barrow cemetery	Round barrows	Bronze Age	Damaged	SJ148765
106720	Offa's Dyke	Linear earthwork	Early Medieval	Damaged	SJ14727564

Category B sites

Site No	Name	Type	Period	Condition	NGR
35912	Holywell Grange	Grange	Medieval	Damaged	SJ17317621

Category C sites

Site No	Name	Type	Period	Condition	NGR
18106	Hopewell Mine	Mine	19th century	Intact	SJ16207630
18156	Pantyne North/South Mine	Mine	19th century	Intact	SJ17407620
18220	Wacco/Bryn-y-Gaseg Mine	Mine	19th century	Intact	SJ15207620
18239	Portaway Mine	Mine	18th century	Intact	SJ17007620
77299	Holywell Common Mine Shaft	Mine shaft	Post Medieval	Unknown	SJ1729676533
77300	Holywell Common Mine Shaft	Mine shaft	Post Medieval	Unknown	SJ1740176513
77301	Holywell Common Mine Shaft	Mine shaft	Post Medieval	Unknown	SJ1737376479
77302	Holywell Common Mine Shaft	Mine Shaft	Post Medieval	Unknown	SJ1742776543
77307	Holywell Common Mine Shaft	Mine Shaft	Post Medieval	Unknown	SJ1736976324

77308	Holywell Common Mine Shaft	Mine Shaft	Post Medieval	Unknown	SJ1742976303
77309	Holywell Common Mine Shaft	Mine Shaft	Post Medieval	Unknown	SJ1740476231
77311	Holywell Common Mine Shaft	Mine Shaft	Post Medieval	Unknown	SJ1704076251
77312	Holywell Common Mine Shaft	Mine Shaft	Post Medieval	Unknown	SJ1706176208
77324	Holywell Common Mine Shaft	Mine Shaft	Post Medieval	Unknown	SJ1707676162
77672	Holywell Common Mine Shaft	Mine Shaft	Post Medieval	Damaged	SJ1616176347
77681	Holywell Common Mine Shaft	Mine Shaft	Post Medieval	Unknown	SJ1693576158
77682	Holywell Common Mine Shaft	Mine Shaft	Post Medieval	Near destroyed	SJ1658476243
85200	Wacco Mine Shaft	Mine Shaft	19th century	Near intact	SJ1483776286
85201	Wacco Mine Shaft	Mine Shaft	19th century	Near intact	SJ1493276235
85202	Wacco Mine Shaft	Mine Shaft	19th century	Near intact	SJ1505476197
85203	Pantasaph Mine Shaft	Mine Shaft	19th century	Damaged	SJ1547676234
85204	Pantasaph Mine Shaft	Mine Shaft	19th century	Damaged	SJ1550076224
85205	Pen-y-Ball Mine Shaft	Mine Shaft	Post Medieval	Near intact	SJ1678576334
85206	Pen-y-Ball Mine Shaft	Mine Shaft	Post Medieval	Damaged	SJ1679876307
85207	Pen-y-Ball Mine Shaft	Mine Shaft	Post Medieval	Near intact	SJ1683376216
85208	Pen-y-Ball Mine Shaft	Mine Shaft	Post Medieval	Near intact	SJ1685076151
85210	Pantasaph Mine Shaft	Mine Shaft	19th century	Damaged	SJ1535076170

Category D sites

Site No	Name	Type	Period	Condition	NGR
85211	Grange Farm	Mine?	Post Medieval	Damaged	SJ1737076270

Category E sites

Site No	Name	Type	Period	Condition	NGR
19106	Grange Farm Cave	Cave	Prehistoric	Unknown	SJ173763
85209	Wacco building	Building	Post-medieval	Destroyed	SJ1485076174
102506	Yr Orsedd Farm Tumulus	Round barrow?	Bronze Age	Unknown	SJ151763
103450	Grange Cavern Limekilns	Lime kiln	Post Medieval	Destroyed	SJ17277633

- 5.2 Of the 35 sites identified, six will be potentially affected by the proposals. Many of the replacement pole locations will reutilise existing pole sites, although where the new route deviates from the old, potentially affected sites were identified to Power Systems Ltd and highlighted to be avoided. The potentially affected sites are as follows:
- 5.2.1 Field survey allowed the condition of the Whitford section of Offa's Dyke (PRN 106720) to be reassessed. Although the dyke has been completely ploughed-out in several of the fields through which it runs, it is still visible as a raised area within the hedge banks. In addition, in the field immediately to the west of the farm buildings it may be identified as a low linear bank, approximately 0.10m high.
- 5.2.2 Although no structural remains of the Wacco building (PRN 85209) could be observed, its location was identified on a level area adjacent to a deviation in the field boundary. Sherds of post-medieval pottery in the vicinity may have originated from occupation of the building. Splinting of the original powerline poles has already taken place in this area, causing some ground disturbance.
- 5.2.3 The original powerline poles are located in the spoil mounds associated with the Pantasaph mine shafts (PRNs 85210 and 85204). These are due to be removed and the new poles located away from these sites.
- 5.2.4 A new pole is to be erected immediately adjacent to the spoil debris associated with the Pen-y-Bal mine shaft (PRN 85207). The extent of the debris was highlighted and the location of the new pole identified to avoid it.
- 5.2.5 The mound of spoil at Grange Farm (PRN 85211) has been repeatedly utilised in the past for the mounting of powerline poles and the associated back-stays. The new line intends to reuse this same site for the siting of the replacement poles.

6 MITIGATION

- 6.1 The significance of the known archaeological sites has been considered above and appropriate mitigation measures are outlined below.

Terminology

- 6.2 The following standard archaeological terms are used below as recommended mitigation measures

Evaluation: where insufficient information exists regarding a site for a decision to be made regarding its future management a programme of investigative work may be proposed. Such investigation may include geophysical survey, topographical survey and/or trial excavation.

Preservation by record: where proposals will inevitably lead to the loss of a site sufficient recording should be undertaken to provide a full, accurate and permanent record of its nature, form, significance and dating. Preservation by record can take a number of forms, depending on the nature of the site in question, and may be achieved with or without excavation and could include any or all of the following: written record; drawn record; photographic record; artefactual record; survey; and environmental sampling.

Preservation in situ: where a site is considered to be of sufficient significance it may be considered appropriate to preserve the site in its present form, condition and location.

Watching brief: a watching brief may be recommended to include archaeological monitoring of all relevant groundworks, including topsoiling, in order to identify and record any previously unknown archaeological remains which may be revealed. Sufficient time must be allowed for adequate recording of any remains that are encountered.

Site-specific Mitigation

- 6.3 The assessment has identified potential impacts on the following recorded sites and mitigation measures are proposed for each. Other sites identified during the survey are assumed to be unaffected by the works and therefore require no mitigation other than avoidance.

PRN	Name	Type	Period	Condition	Mitigation
10672	Offa's Dyke (Whitford Dyke)	Linear earthwork	Saxon	Near destroyed	Preserve in situ
85209	Wacco Building	Building	Post medieval	Destroyed	Preserve in situ

Offa's Dyke PRN 10672

The location of the Dyke was highlighted to the Power Systems Ltd representative, and the position for the new powerline pole identified to fall beyond the protected zone around the monument. The line of the dyke should be avoided during all construction work, including the movement of plant on to site.

Wacco Building PRN 85209

The building platform should not be disturbed during construction works. The replacement pole is to be sited within the field boundary and should not cause any further damage to any subsurface remains.

7 ACKNOWLEDGEMENTS

- 7.1 The writer would like to thank the following for their assistance and co-operation: Nigel Jones, CPAT; Henry Williams & David Grady, Power Systems Ltd; Medwyn Parry, RCAHMW, Aberystwyth; Jeff Spencer, SMR Officer, CPAT; the staff of both the County Record Office Hawarden and National Library of Wales, Aberystwyth.

8 REFERENCES

8.1 Documentary Sources

Frost, P, 1994. *Clwyd Mine Survey*, CPAT Report No. 88

8.2 Cartographic Sources

1841 Tithe map of Holywell parish (Apportionment dated 1841)

1849 Tithe map of Ysceifiog parish (Apportionment dated 1846)

1849 Tithe map of Whitford parish

1st edition Ordnance Survey 1:2500 map Flintshire 5, surveyed 1869-70, published 1878

1st edition Ordnance Survey 1:2500 map Flintshire 6, surveyed 1871, published 1878

second edition Ordnance Survey 1:2500 map, Flintshire 5 SE, revised 1898, published 1900

second edition Ordnance Survey 1:2500 map, Flintshire 6 SW, revised 1898, published 1900

APPENDIX 1
HOLYWELL-CARMEL GRANGE POWER LINE REPLACEMENT, FLINTSHIRE
SPECIFICATION FOR AN ARCHAEOLOGICAL ASSESSMENT
BY THE CLWYD-POWYS ARCHAEOLOGICAL TRUST

1 Introduction

- 1.1 Sp Power Systems Ltd are proposing to rebuild the overhead powerline between Holywell and Carmel Grange, Flintshire, a distance of approximately 4.8km. The Contracts Section of the Clwyd-Powys Archaeological Trust have been approached to develop a strategy for assessing the potential impact on the archaeological resource and implement appropriate mitigation measures. No curatorial design brief has been prepared for the proposals, although following discussions with Mr Mark Walters, Curatorial Section, Clwyd-Powys Archaeological Trust, it has been agreed that, subject to his approval, the following specification of works will provide sufficient assurance that the works undertaken to the required standard.
- 1.2 An initial search of the Regional Sites and Monuments record has already been undertaken by Sp Power Systems Ltd, which has revealed 39 archaeological sites within 100m of the proposed route, including upstanding sections of Offa's Dyke, which will be crossed by the route towards its western end.

2 Objectives

- 2.1 The objectives of the archaeological assessment are:
 - 2.1.1 to reveal by means of a combination of desk based study and field survey, the nature, condition, significance and, where possible, the chronology of the archaeology within the area of the proposed development in so far as these aims are possible;
 - 2.1.2 to record any archaeological sites identified during the field evaluation;
 - 2.1.3 to identify those known archaeological sites which may be impacted upon by the proposals and develop a mitigation strategy for their future management regarding the proposals;
 - 2.1.4 to prepare a report outlining the results of the assessment, incorporating sufficient information on the archaeological resource for a reasonable planning decision to be taken regarding the future management of the archaeology;
 - 2.1.5 to undertake a watching brief, if required following consultation with the curator, to record the nature, condition, significance and, where possible, the chronology of any archaeological deposits and/or features revealed during any specific groundworks which may be considered to have a likely and unavoidable impact on the archaeological resource, in so far as these aims are possible.

3 Methods

- 3.1 Stage one of the assessment will comprise a desk-based study involving the examination of the Ordnance Survey 1st and 2nd edition 1:2,500 maps, together with the tithe survey and any other readily available cartographic sources. Repositories consulted will include the following: County SMR, CPAT, Welshpool; the National Monuments Record, RCAHMW, Aberystwyth; the National Library of Wales, Aberystwyth.
- 3.2 On completion of the desk-based study the route will be walked in the company of a representative of Sp Power Systems Ltd in order to check those sites already identified, record any new sites revealed, and mark-out any sites thought to be at risk from the proposals to ensure their avoidance during construction works. The presumption will be for preservation of the archaeological resource *in situ*

wherever possible, and in mitigation avoidance will be recommended, reinforced by the above marking-out of sites.

- 3.3 An illustrated and bound report will be prepared summarising the results of the assessment. This will be in A4 format and contain conventional sections on: Site location, Topography and Geology; Historic Background; Catalogue of sites identified with notes on their condition and significance, Conclusions and Recommendations and References, together with appropriate appendices on archives.
- 3.4 Provision has been included for undertaking a watching brief during the construction work, should this be required by the curator following the submission of the assessment report. Any watching brief is likely to be limited to specific locations where the archaeological resource is considered to be under an unavoidable threat.
- 3.5 Any watching brief will comprise a photographic record in 35mm black and white and colour print, and colour slide, together with a written, and where appropriate, a drawn record.
- 3.6 Should any significant archaeological deposits be revealed sufficient opportunity must be allowed for adequate recording and excavation as appropriate. All contexts will be recorded on standard individual context forms and drawn in section and/or plan as appropriate. All features will be tied-in to the Ordnance Survey as accurately as possible.
- 3.7 The site archive will be prepared to specifications laid out in Appendix 3 in the *Management of Archaeological Projects* (English Heritage, 1991).
- 3.8 An agreement will be reached with the client regarding the deposition of any artefacts.

4 Resources and Programming

- 4.1 The watching brief will be undertaken by a skilled and experienced archaeologist. Overall supervision will be by Mr R J Silvester, a senior member of CPAT's staff who is also a member of the Institute of Field Archaeologists.
- 4.2 All report preparation will be completed by or with the assistance of the same field archaeologist who conducted the assessment and potential watching brief.
- 4.3 The duration of any watching brief will be entirely dependant on the client's/contractor's programme of work and that the subsequent report will be prepared immediately thereafter. The cost of archive preparation, reporting and deposition is included within the given costings.
- 4.4 Requirements relating to Health and Safety regulations will be adhered to by CPAT and its staff.
- 4.5 CPAT is covered by appropriate Public and Employer's Liability insurance.

N.W. Jones
14th February 2003

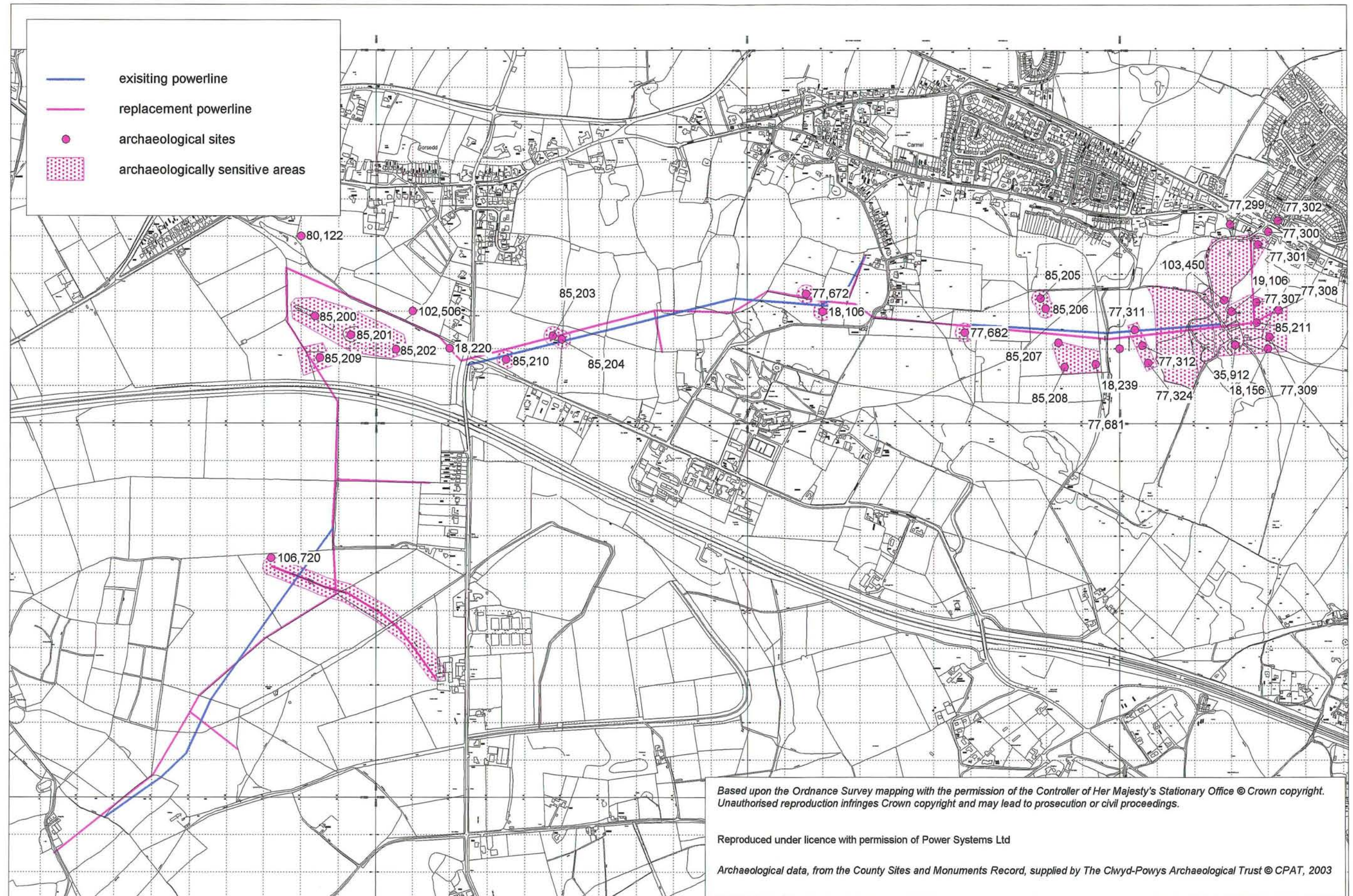


Fig. 1 Holywell to Carmel Grange Overhead Powerline replacement: archaeological sites, scale 1:10,000