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**Written Scheme of Investigation  
for an Archaeological Excavation & Watching Brief at  
at Strata Florida, Pontrhydfendigaid  
Ceredigion**

**Prepared for:  
Kevin Jones & Western Power Distribution (SW)**

Project No: 2170

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## NON TECHNICAL SUMMARY

*This Written Scheme of Investigations details a proposal for the archaeological excavation of a cable trench and electricity pole stand, and an archaeological watching brief on the remaining stands, on at land near Strata Florida Abbey, Pontrhydfendigaid, Ceredigion. It has been prepared by Archaeology Wales Limited for Kevin Jones and Western Power Distribution (SW).*

### 1. Introduction

The proposed development is to connect a recently constructed hydro-electric scheme at Glasffrwd Brook to the main grid via a 11kv overhead line, along a route that runs to the west of Strata Florida Abbey, Pontrhydfendigaid, Ceredigion, SN 74563 65675 (Henceforth – the site). A planning application has been submitted and approved for the development. The groundworks will comprise the installation of six new upright poles (Figure 2), for which holes will be dug measuring at most 1m by 0.3m, and 1.8m deep (labelled C – I on Figure 2). Similar sized holes will also be dug for stays on two poles (labelled C & E on Figure 2). A 16m long trench, 0.6m wide, will be excavated to extend an underground earth wire (from point J to C on figure 2).

Dyfed Archaeological Trust – Planning Services (Henceforth DAT-PS), in its capacity as archaeological planning advisor to Ceredigion County Council (Henceforth – CCC), have recommended an archaeological watching brief is undertaken at the site, with groundworks in an archaeologically sensitive area archaeologically excavated (labelled C & J on Figure 2).

The purpose of the proposed work is to provide CCC with the information they are likely to request in respect of the development, the requirements for which are set out in Planning Policy WALES, March 2002, Section 6.5, and Welsh Office Circular 60/96. The work is to record any remains of potential archaeological interest to ensure that they are fully investigated and recorded if they are disturbed or revealed as a result of any activities associated with the development.

This Written Scheme of Investigations (WSI) has been prepared by Philip Poucher, Project Manager, Archaeology Wales Ltd (Henceforth - AW) at the request of Western Power Distribution & Kevin Jones. It provides information on the methodology which will be employed by AW during the proposed work.

All work will be undertaken by suitably qualified staff and in accordance with the standards and guidelines of the Chartered Institute for Archaeologists (2014).

### 2 Previous Results

A variety of work has already been undertaken in association with the area developed as part of the hydro-scheme within Glasffrwd Brook. Prior to the development of the Hydro-scheme (planning application no. A130773) an archaeological desk-based assessment was undertaken (Smith 2013) along with a detailed archaeological survey of the route (Poucher 2014). During the course of the groundworks associated with the development an archaeological watching brief was maintained by Archaeology Wales Ltd. A report on the results of this watching brief has not yet been produced, it is proposed that the results of the current scheme of works be combined within a single comprehensive report.

This work has served to highlight the general archaeological potential of the development area, which is largely associated with Strata Florida Abbey, a major medieval monastic centre. The main visible abbey complex lies a short distance to the east of the line of this development, although many associated features have been recorded as both earthworks and buried features within the surrounding landscape. The line of the development will pass through the medieval Abbey precinct.

### **3 Proposed archaeological work**

The primary objective is to allow the investigation and recording of any archaeological features that are to be uncovered or disturbed during the groundworks associated with the development. This work will include the following elements:

- The archaeological excavation of groundworks associated with points C and J, as marked on Figure 2. This will comprise the archaeological excavation of a trench 0.6m wide and 16m long from an existing pole to the location of a new pole, and the archaeological excavation of the holes for both the new pole (point C) and its stay, both of which will measure 1m by 0.3m.
- An archaeological watching brief during groundworks associated with the development, adequate time will be allowed to provide the supervising archaeologist time to clean and identify the extent and nature of any archaeological features and for excavation and recording to take place.
- The production of an illustrated report incorporating the results of previous watching brief work on the hydro-scheme and the deposition of the site archive. This previous work has already been undertaken in accordance with an approved Written Scheme of Investigation.

### **4 Archaeological Excavation Methodology**

The objectives of the archaeological excavation are to establish the presence or absence of archaeological features and deposits within the designated area (Points C to J on Figure 2) and to fully investigate and record any such features and deposits prior to their potential removal during the development works to provide preservation through record. Should significant archaeological features be uncovered further consultation between the AW, the developer and DAT-PS will be undertaken to assess the need for further potential mitigation strategies.

The work will include an assessment of the regional context within which the archaeological evidence rests and will aim to highlight any relevant research issues within national and regional research frameworks.

The work will result in a fully illustrated report that will include a fully representative description of the information gained from the excavation and watching brief

The excavation will comprise the excavation and recording of the line of a cable trench between an existing pole (point J) and the location of a new pole (point C). This trench will measure 0.6m wide and 16m long. It will also include the excavation and recording of both the location of the new pole (point C) and its stay, both of which will measure 1m by 0.3m.

#### **Preliminary work**

The archaeological project manager in charge of the work will satisfy him/herself that all

constraints to ground works have been identified, including the siting of live services.

### Excavation

All area to be excavated will initially be excavated to the top of the archaeological horizon by machine under close archaeological supervision. All mechanical excavation will be undertaken using a toothless bucket. All areas will be hand cleaned using hoes and/or pointing trowels to prove the presence, or absence, of archaeological features and to determine their significance. In each area the excavation of all archaeological features will be undertaken, to elucidate the character, distribution, extent and importance of the archaeological remains. If significant archaeological features are uncovered further consultation will be undertaken with DAT-PS, the developer and if required, specialists, prior to further development works in that area.

In each area sufficient excavation will be undertaken to ensure that the natural horizons are reached and proven. If safety reasons preclude manual excavation to natural, hand augering may be used to try to assess the total depth of stratification within each area. The depth of the excavation will conform to current safety requirements. If excavation is required below 1.2m the options of using shoring or stepped trenching will be discussed with DAT-PS.

Plans and sections will be drawn to a scale of 1:50, 1:20 and 1:10 as applicable, and these will be related to Ordnance Survey datum and published boundaries where appropriate.

Recording will be carried out using Archaeology Wales recording systems (pro-forma context sheets etc), using a continuous number sequence for all contexts in accordance with the AW technical manual – Procedures for Excavation and Site Recording 2011.

Written, drawn and photographic records of an appropriate level of detail will be maintained throughout the course of the project. Photographs will be taken in digital \*RAW format, using a 14MP camera. These will be converted to Tiff format for archiving. Should significant remains be identified that require excavation, photographs will also be taken in black and white and colour slide (35mm film).

All features identified will be tied in to the OS survey grid and fixed to local topographical boundaries and related to the developer's site plan. The location of all features will also be recorded using a Topcon GTS725 total station or similar surveying equipment.

## **5 Watching Brief Methodology**

### General

The archaeological watching brief will be undertaken by AW staff using current best practice.

All work will be carried out by a suitably qualified archaeologist with relevant level membership of the Chartered Institute for Archaeologists (CIfA) and will follow the CIfA Standard and Guidance for an archaeological watching brief (2014).

### Detailed

The Watching Brief will be carried out by a suitably qualified archaeologist during any groundworks associated with the development, this will comprise the excavation of areas for the installation of the poles and any stays (typically in holes 1m by 0.3m, and

up to 1.8m deep), where the sub-soil is likely to be exposed or cut into. The mechanical excavation will be undertaken by a machine using a toothless ditching bucket unless ground condition render this impossible.

If archaeological features, finds or deposits are uncovered, work will be stopped in the area of the exposed feature in order that the supervising archaeologist can clean and identify the extent, nature and significance of the feature and for recording to take place.

All archaeological deposits that are identified will be mapped (as outlined in 'Recording' below), cleaned, recorded and fully excavated. The developer will provide a safe working area and sufficient time to record and excavate all features to the satisfaction of AW and DAT-PS. Full excavation of identified features will not be compromised by the construction programme.

### Contingency Arrangements

In the event of significant archaeological features being discovered all activities in this area of the site can be temporarily suspended. This will allow a period of consultation with DAT-PS and if required the opinion of specialists.

Following such consultation, recommendations will be presented to the Developer and the Local Planning Authority.

### Recording

Recording will be carried out using AW recording systems (pro-forma context sheets etc), using a continuous number sequence for all contexts.

Plans and sections will be drawn to a scale of 1:50, 1:20 and 1:10 as required and related to Ordnance Survey datum and published boundaries where appropriate.

All features identified will be tied in to the OS survey grid and fixed to local topographical boundaries. This can be achieved through measured triangulation from various points within the site boundary due to the proximity of field boundaries and agricultural buildings and their known locations. If required this could be further supplemented using a Topcon GTS725 total station.

Photographs will be taken in digital format with an appropriate scale, using a 14MP camera with photographs stored in Tiff format.

The archaeologist undertaking the watching brief will have access to the AW metal detector and be trained in its use.

## **6 General Methodology**

### Monitoring

DAT-PS will be contacted prior to the commencement of ground works, and subsequently once the work is underway.

DAT-PS will be provided with notice of the start date, a projected timetable and a copy of the Health and Safety Risk Assessment if required.

Any changes to the specification that the contractor may wish to make after approval will be communicated to DAT-PS for approval on behalf of the Planning Authority.

If it is felt necessary to expand on the excavation area – i.e. divert the route of the cable

trench or relocate pole locations, this will be undertaken after discussion with DAT-PS and the client.

Representatives of DAT-PS will be given access to the site so that they may monitor the progress of the excavation and watching brief. DAT-PS will be kept regularly informed about developments, both during the site works and subsequently during post-excavation.

### Artefacts

Archaeological artefacts recovered during the course of the excavation will be cleaned and labelled using an accession number which will be obtained from the local museum. A single number sequence will be allocated to all finds. The artefacts will be stored appropriately until they are deposited with the museum.

All artefacts recovered during the project will be retained and related to the contexts from which they were derived. All typologically distinct and closely datable finds will be recorded three-dimensionally.

The excavation will carefully consider any artefactual or economic information and provide an assessment of the viability, for further study, of such information.

Any finds which are considered to be in need of immediate conservation will be referred to a UKIC qualified conservator (Phil Parkes of Cardiff Conservation Services).

A catalogue by context of all artefactual material found, quantified by number, weight, or both, and containing sketches of significant artefacts will be compiled.

Pottery will be analysed to the standards outlined in "Guidelines for the Preparation of Pottery Archives" as prepared by the Study Group for Roman Pottery in consultation with the IFA. All other material will be analysed following the advice given in the Institute of Field Archaeologists: Guidelines for Finds Work.

The requirements for the conservation of artefacts will be unpredictable until after the completion of the fieldwork. The archaeological contractor will ensure, however, that at least minimum acceptable standards are achieved (the UK Institute of Conservation's Guidelines for the Treatment of Finds from Archaeological Site should be used as guidance).

All finds of gold and silver will be removed to a safe place and DAT-PS, the client and the local coroner informed, within the guidelines of the Treasure Act 1996.

### Environmental and technological samples

Samples will be taken where necessary when significant deposits are located. Minimum sample size will be 10 litres (where possible). Where the minimum sample size is not achievable, then 100% of the deposit will be sampled.

Samples will be retained for processing. The level of post-excavation processing will be dependent on the results of the fieldwork and following discussion with an environmental specialist and DAT-PS.

Any features containing deposits of environmental or technological significance will be sampled. If required, the project manager should arrange, through a suitably qualified expert the assessment of the environmental potential of the site through examination of suitable deposits. The assessment of potential should consider the guidelines set out in the English Heritage publication 'Guidelines for Environmental Archaeology' March 2002.

The requirements for the conservation of samples will be unpredictable until after the

completion of the fieldwork. The archaeological contractor will ensure, however, that at least minimum acceptable standards are achieved (the UK Institute of Conservation's Guidelines for the Treatment of Finds from Archaeological Site should be used as guidance).

### Human remains

Human remains will be left in situ, covered and protected when discovered. No further investigation should normally be permitted and DAT-PS and the local Coroner must be informed immediately. After discussion, it may be appropriate to take bone samples for C14 dating. If removal is essential it can only take place under the appropriate Ministry of Justice and Environmental Health regulations.

### Specialists

In the event of certain finds/features etc. being discovered, the site archaeologist may have to seek specialist opinion for assistance. Such specialists will be accessed either internally within AW itself or from an external source should any such analysis be deemed necessary. A list of specialists is given in the table below. Specialist reports will be added to the finished report as an addendum.

Type	Name	Tel No.
Flint	Amelia Pannett	02920 899509
Animal bone	Jen Kitch	07739 093712
CBM, heat affected clay, Daub etc.	Rachael Hall	01305 259751
Clay pipe	Hilary Major	01376 329316
Glass	Andy Richmond	01234 888800
Cremated and non-cremated human bone	Malin Holst	01759 368483
Metalwork	Kevin Leahy	01652 658261
Neo/BA pottery	Dr Alex Gibson	Bradford University
IA/Roman pottery	Jane Timby	01453 882851
Post Roman pottery	Mr Paul Blinkhorn	
Charcoal (wood ID)	John Carrot	01388 772167
Waterlogged wood	Nigel Nayling	University of Wales (Lampeter)
Molluscs and pollen	Dr James Rackham	01992 552256
Charred and waterlogged plant remains	Wendy Carruthers	01443 233466
Palaeoenvironmental sampling and analysis	Dr Martin Bates	University of Wales (Lampeter)

## **7 Method statement for the production of an illustrated report and the deposition of the site archive**

### Report preparation

The report will contain the following:

- A fully representative description of the information gained from the excavation and watching brief, even if there should be negative evidence. This will also include the information obtained from the archaeological watching brief undertaken on the groundworks associated with the hydro-scheme within Glasffrwd Brook.
- A concise non-technical summary of the project results.
- At least one plan showing the sites location in respect to the local topography, as well as the position of all excavated areas.
- Plans indicating all archaeological features. All plans and sections should be related to Ordnance Datum.
- Written descriptions of all features and deposits excavated and their considered interpretation.
- A summary report on the artefactual and ecofactual assemblage and an assessment of its potential for further study, prepared by suitably qualified individuals or specialists.
- A statement of the local and regional context of the archaeological remains identified.

Copies of the report will be sent to the client, DAT-PS, and for inclusion in the HER. Digital copies will be provided in pdf format if required.

A summary report of the work will be submitted for publication to a national journal (e.g. *Archaeology in Wales*) no later than one year after the completion of the post-excavation work.

### The site archive

A project archive will be prepared in accordance with the National Monuments Record (Wales) agreed structure and be deposited within an appropriate local museum on completion of site analysis and report production. It will also conform to the guidelines set out in MoRPHE (English Heritage, 2006).

Arrangements will be made with the local museum before work starts. Wherever the archive is deposited, this information will be relayed to the HER.

Although there may be a period during which client confidentiality will need to be maintained, the report and the archive will be deposited not later than six months after the completion of the work.

Other significant digital data generated by the survey (i.e. AP plots, EDM surveys, CAD drawings, GIS maps, etc.) will be presented as part of the report on a CD/DVD. The format of this presented data will be agreed with the curator in advance of its preparation.



## **8 Resources and timetable**

### Standards

All stages of the project will be undertaken by AW staff using current best practice. All work will be undertaken to the standards and guidelines of the IfA.

All work will be undertaken in accordance with the AW technical manual – Procedures for Excavation and Site Recording 2011.

### Staff

The project will be undertaken by suitably qualified AW staff. Overall management of the project will be undertaken by Philip Poucher.

The site will be supervised by Andrew Shobbrook. Site assistants are likely to be Hywel Keen and Jerry Bond.

### Equipment

The project will use existing Archaeology Wales equipment.

### Timetable of archaeological works

The work is provisionally scheduled to start on Thursday 22<sup>nd</sup> October, although excavation works may be brought forward to Friday 16<sup>th</sup> October, and is expected to last two to three days.

The site report will follow within three months of completion of the fieldwork.

### Insurance

Archaeology Wales is an affiliated member of the CBA, and holds Insurance through the CBA insurance service.

### Arbitration

In the event of any dispute arising out of this Agreement (including those considered as such by only one of the parties) either party may forthwith give to the other notice in writing of such a dispute or difference and the same shall be and is hereby referred for decision in accordance with the Rules of the Chartered Institute of Arbitrators' Arbitration scheme for the Institute for Archaeologists applying at the date of this Agreement.

### Health and safety

All members of staff will adhere to the requirements of the Health & Safety at Work Act, 1974, and the Health and Safety Policy Statement of Archaeology Wales.

AW will produce a detailed Risk Assessment before any work is undertaken.

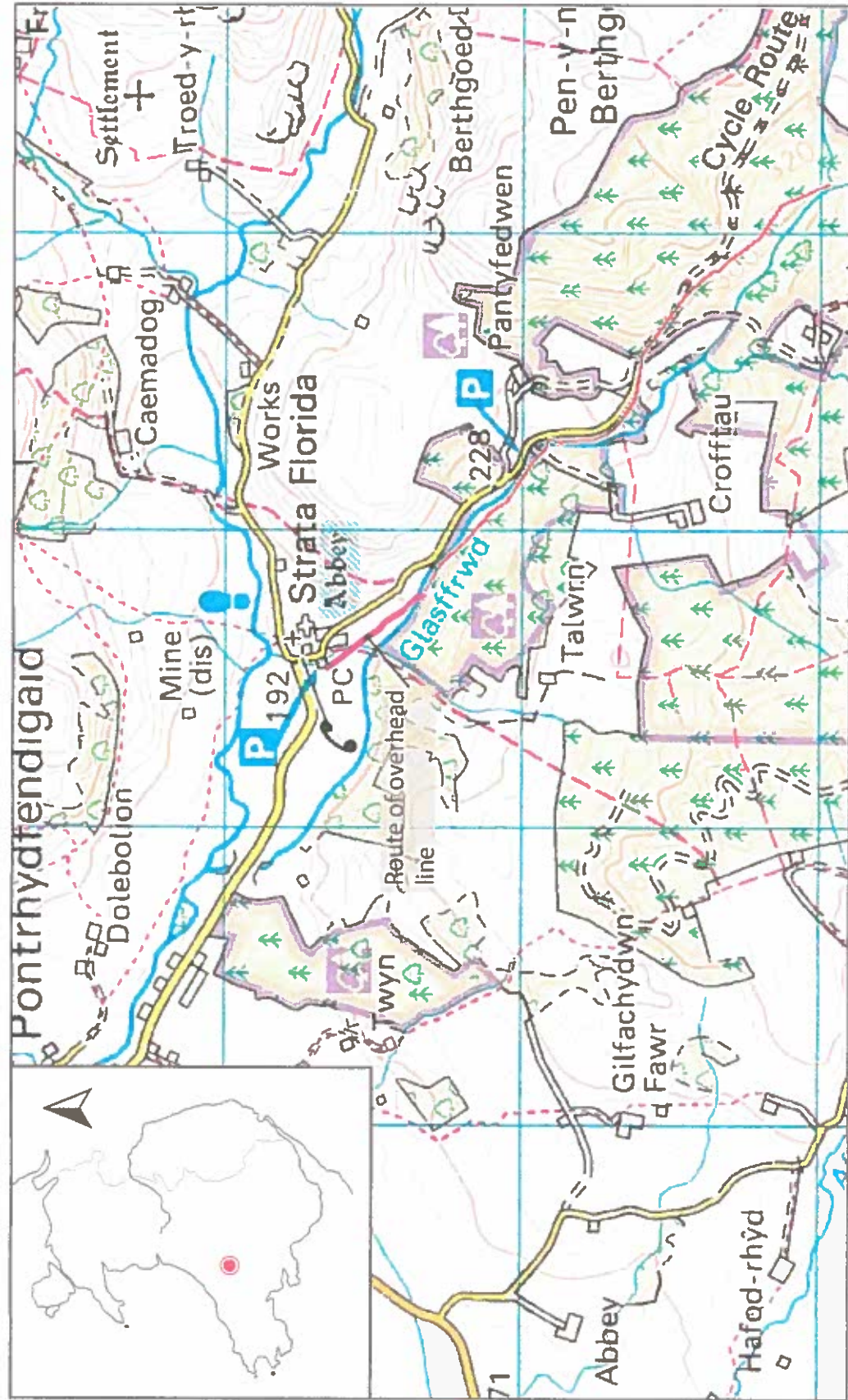
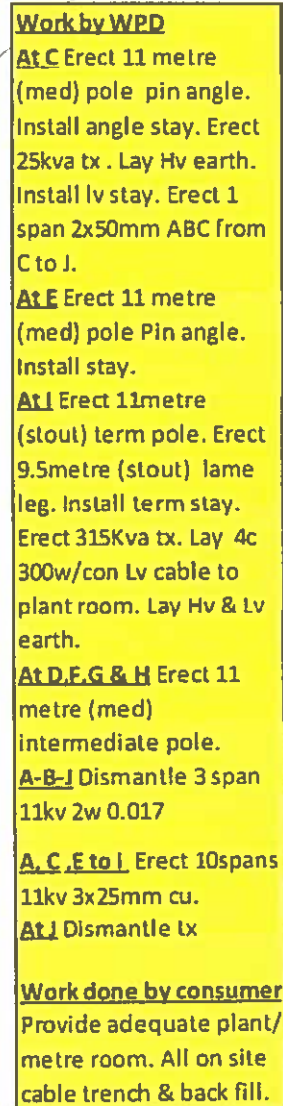


Fig 1: Map showing location of assessment area

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TO BE EXECUTED IN ITS VICINITY. If in doubt, contact your local WPD office.



REV.	DATE	SCHEME PROGRESS BLOCK	DRN	CMD
-	14/4/15	- Scheme Drawing	- JME	-
-	-	-	-	-
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<b>UNDERGROUND CABLES</b> <div> <div>132KV</div> <div>L.V.</div> <div>HV EARTH</div> </div> <div> <div>33KV</div> <div>SERVICE</div> <div>LV EARTH</div> </div> <div> <div>11KV</div> <div>STREET LTG.</div> <div>EARTH ELECTRODE</div> </div>	<b>OVERHEAD LINES</b> <div> <div>132KV</div> <div>11KV</div> <div>SERVICE</div> </div> <div> <div>33KV</div> <div>L.V.</div> <div>STREET LTG.</div> </div>
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SERVICES CABLE SIZES AS SHOWN

DUCT & ALUMINUM TUBE

SURF TELECONS



HOUSE METER POSITIONS - EXTERNAL INTERNAL

PILOT CABLES P——P

PROPOSALS  ALTERATIONS  DISMANTLED

TRAFFIC SENSITIVE AREA YES/NO

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O.S. MAP. SH7465			
SCALE 1:2500		@ A3	
PARISH. Ystrad Fflur			
1:1K V. DIAG.			
L.V. DIAG.			
PLAN No. JME2040983			
Eng No. 2040983		1 of 1	