

**Ecological Appraisal of woodlands and grasslands, Brynwilach and  
Abergelli Farms, Felindre.**

**GR SN649007 .**

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## **1.0 Survey background**

- 1.1 Hugh Wheeldon & Co has been engaged by Edward Perkins Chartered Surveyors to undertake an ecological appraisal of two small blocks of native woodland and pasture land bordering the proposed Abergelli Gas fired power station at Felindre. The work has been commissioned by Mr Watkins of Brynwilach Farm and Mr Edwards of Abergelli Farm, the adjacent landowners.
- 1.2 There are two options for the location of a new access road to this proposed development currently under discussion and one of the proposed routes would result in a loss of agricultural grassland to the south of the existing National Grid site.
- 1.3 The purpose of this report is to provide an ecological appraisal of the grassland and woodland habitats within and adjacent to the proposed route under the ownership of the two farms. The survey is based on a single site visit and walkover survey but does not include specific surveys of fauna such as bats and reptiles although reference is made to habitat suitability for protected species where appropriate. The sites were surveyed on 25/05/18. Length of time spent in Woodland A was curtailed by use of the woodland for a pre-organised paintballing activity.

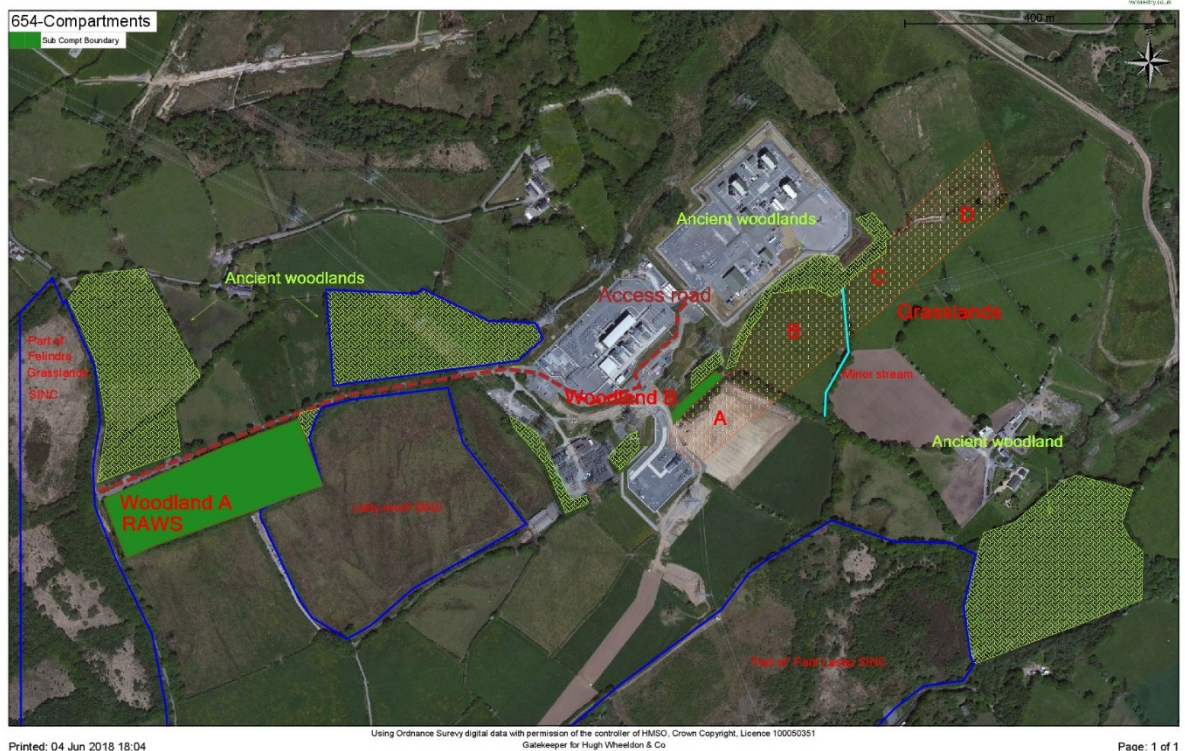
## 2.0 Survey methods and results

The survey included two small broadleaved woodlands (woodlands A & B) as shown on the map below (shaded green). Both woodlands border the proposed new access route to the power station. The proposed route would pass through open grazed pasture comprising four fields along the south and east boundaries of the sub-station. A walk over survey of the grasslands along the route of the proposed access road was carried out as part of the survey. The conservation value of the grasslands was assessed.

Habitat survey - Brynwilach & Abergelli Farms

Scale: 1:6,003

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*Map showing location of the woodland and grassland survey, Brynwilach & Abergelli farmland.*

## 2.1 Desk study

Abergelli Power Ltd commissioned a series of ecological surveys of the whole development site including both proposed access routes as part of the Preliminary Environmental Information Report 2014/2018. This included surveys on protected species and habitats. The recently published Non-technical summary for the Abergelli Power Project (2018) includes a summary of these surveys and data regarding proximity to local statutory protected sites including three Sites of Special Scientific Interest (SSSI) and a number of local non-statutory Sites of Nature Conservation Interest (SINCs). The closest sites to woodlands A and B are Llety-morfil and the Felindre Grasslands SINCs.

A search on the NRW Lle Geo-portal (lle.gov.wales) a hub for environmental information in Wales managed by Welsh Gov/Natural Resources Wales provided data on biosensitive sites with priority habitats and Phase 1 Habitat survey data from the early 1990s. A number of fields support Priority Habitats (deep peat and marshy grassland) within a 500m radius of the site, identified in the legacy CCW Habitat Survey of Wales Phase 1 data and the Lowland Grassland Survey of Wales Phase 2. Marshy grassland or rhos pasture is notable locally. This grassland type is a UK Biodiversity Action Plan habitat. The marsh fritillary *Euphydryas aurinia*, a butterfly of international importance has been recorded in association with this important habitat in the Felindre area. However none of these directly bordered the survey area and are highly unlikely to be detrimentally impacted by the proposed access route as they are located at least 300m from this.

The Ancient Woodland Register (AWR) was consulted for current information on the designations of the woodlands within the survey area. Woodlands that have been recorded on the register as being ancient are considered to have been in existence from at least medieval times (pre-1600) to the present day without ever having been cleared to any use other than production of timber. There are 101 areas of ancient woodland around the National Grid site.

Woodland A has been recorded as a **Restored Ancient Woodland Site (RAWS)** indicating that the woodland may have been partially felled and replanted with conifer in the past and the conifer crop has now been removed. A few large pines have been retained along the north and west boundaries. The Phase 1 Habitat Survey of Wales (CCW 1991-97) recorded this woodland as semi-natural broadleaved woodland whose main species are sessile oak, ash, birch and larch, the latter being a conifer crop that was presumably planted into the stand.

The land on which the National Grid Sub Station stands was formerly native woodland and is recorded on the AWR as an **Ancient Woodland Site of Unknown Category (AWSU)**. It is assumed that the ancient semi-natural woodland was cleared prior to the development of the sub-station, resulting in a significant loss of ancient woodland in the area.

It appears from the Ancient Woodland Register that woodland B is not included in the Ancient Woodland Site described in the previous paragraph suggesting it may be secondary in origin. It is bounded by two banks and forms a narrow strip that may have been an access track or very small enclosure along the edge of the former ancient woodland that extended northwards. There are several large diameter trees that form much of the canopy but these are growing on the banks. The land between the two banks supports younger maiden growth that is probably secondary growth as the land has been abandoned.

## 2.2 Field study

A walkover survey of two woodlands and grasslands along the proposed access route was undertaken on 25/5/18. Approximately 5 hours were spent onsite. Information was collated regarding tree, shrub and woodland plant species diversity, presence of ancient woodland features such as ancient woodland indicator species, veteran trees and presence of old coppice stools in order to assess their current status.

### Woodlands

**Woodland A** (GR SN642006) is a small Restored Ancient Woodland Site (RAWS) bordering the access road to the Swansea North Sub-Station. It extends over 3.16ha and adjoins further areas of Restored Ancient Woodland and a small Planted Ancient Woodland Site (PAWS) to the north and east. The site is owned by Mr Watkins of Brynwilach farm and is currently used as a site for a commercial paintballing facility. The paintballing infrastructure within the woodland includes a number of buildings, hides and artificial embankments.

The woodland is recorded on the Ancient Woodland Register as **restored** indicating that it had been at least partially planted with non-native conifers in the past. The Phase 1 habitat survey data for Wales (CCW 1991-97) states that the dominant species at that time were sessile oak *Quercus petraea*, birch *Betula pubescens*, ash *Fraxinus excelsior* and the conifer larch *Larix spp.* A small number of large mature pine remain in the canopy along the north and west boundaries.

Since the Phase 1 Habitat Survey, the woodland has been thinned and presumably the larch removal formed the main part of this operation. This has resulted in some large canopy gaps under which natural regeneration of native species and coppice regrowth has taken place, though some areas have been maintained as open for the paintball activities. Whilst oak and birch dominate with ash on the drier edges of the woodland, the wetter ground at the eastern end support young alder *Alnus glutinosa* and grey willow *Salix cinerea* under a canopy of widely spaced mature alder. The shrub layer is well developed in places and quite diverse with young sycamore *Acer pseudoplatanus*, hazel *Corylus avellana*, holly *Ilex aquifolium*, dog rose *Rosa canina* and guelder rose *Viburnum opulus*. Honeysuckle *Lonicera periclymenum* is also present.



**Woodland A – open canopy**

The woodland flora is variable and in many areas has been significantly altered as a result of the paintballing activity in the woodland. Species diversity was generally low for an ancient woodland site with widespread ruderal vegetation characterised by large patches of creeping buttercup (*Ranunculus repens*), soft rush (*Juncus effusus*) and rough meadow grass (*Poa trivialis*) growing on and alongside new (rather than of ancient origin) banks created for paintballing sport. The creation of banks and hides has also disturbed the old forest soils encouraging spread of ruderal plant species.

However a small number of **ancient woodland indicator plants** were recorded including tutsan *Hypericum androsaemum* in abundance, enchanters nightshade *Circea lutetiana*, bluebell *Hyacinthoides non-scripta*, yellow pimpernel *Lysimachia nemorum*, remote sedge *Carex remota*, pendulous sedge *Carex pendula* and wood sedge *Carex sylvatica*. Species diversity is low given that the site is ancient woodland with continuous cover since before 1600. This is likely to be due to recent disturbance rather than earlier partial conifer cover. Other common woodland plants include broad buckler fern *Dryopteris dilatata*, lady fern *Athyrium filix-femina*, male fern *Dryopteris filix-mas*, and where the ground is wettest, a number of mire species persist that are more commonly associated with marshy grassland communities. Common cotton-sedge *Eriophorum angustifolium*, wild angelica *Angelica sylvestris*, marsh thistle *Cirsium palustre*, purple moor grass *Molinia caerulea*, marsh bedstraw *Galium palustre* and *Sphagna spp* were recorded locally.

The woodland layers tend to be well developed in less disturbed parts of the wood, particularly along the main road to the sub station on the northern

boundary, where bramble, bluebells, dryopterid ferns and bracken grow beneath a canopy of stored oak coppice and occasional ash which is showing signs of ash dieback (*Chalara*). This woodland type occurs on the more freely draining soils. The canopy is less open here and the shrub layer beneath is well developed and has frequent hazel and rowan.



**Stored coppice, ancient woodland feature**

In summary the wettest ground at the eastern end of the woodland supports wet woodland dominated by alder and willow, a UK Biodiversity Habitat that can exhibit high conservation interest, particularly for invertebrates. The drier edges of the woodland support mainly ash, birch and oak with occasional pine. Much of the ancient woodland character has been impacted by current use for paintballing, particularly in relation to the woodland flora which exhibits low diversity with localised increases in ruderal plants. Regular disturbance is also highly likely to limit use by breeding birds and other wildlife.

**Woodland B** (GR SN649007) forms a narrow strip between two old boundary banks on the southern boundary of the National Grid site. It is bordered to the north for part of its length by semi-natural broadleaved woodland along the southern boundary of the National Grid site.

The woodland is small, extending over 0.15ha and as indicated earlier may be an old enclosure or trackway that has since established secondary woodland bordering an Ancient Woodland Site that once extended northwards over the area now covered by the National Grid site. It is not recorded as ancient woodland on the AWR, but this may be debateable as the site is located on the southern edge of the former ancient woodland site to the north and may be surviving woodland edge habitat.

The canopy is largely comprised of large oak and ash coppice stores and

standards growing along two old earth banks.



***c80yr old standards on earth bank in Woodland B***

Younger birch, willow and alder have more recently established (approx. 40-60yr) on the wetter soils between the banks, particularly at the western end of the stand. An understory of holly, sycamore, guelder rose, hazel and rowan has developed. This has been supplemented by recent patch planting of field maple, birch and hawthorn which have all been tubed and are mostly growing well. There are a number of fallen large trees creating sufficient light to allow bramble to become dense in places.



***View into woodland B – younger trees c 30yr, dense bramble etc.***

The woodland flora supports few ancient woodland indicator plants. Only hard fern *Blechnum spicant*, bluebell and enchanters nightshade were seen. This is likely to relate to the limited size of the woodland.



This woodland strip is linked to linear native woodlands that have survived around the National Grid site boundary and could support breeding birds and almost certainly contributes to the network of woodland and hedgerow habitats that are used by bat species for foraging and commuting. Recent surveys (2014/18) by Abergelli Power Ltd revealed the presence of several bat species in the area. Bats are protected by Schedule 2 of the Conservation of Habitats and Species Regulations 2017.

**Grasslands (A-SN650007, B-SN650008, C-SN652009, D-SN653010)**

The proposed route for the access track to the power station passes through four fields along the southern edge of the National Grid site under the ownership of two adjacent landowners Mr Watkins and Mr Edwards. The grassland is fairly uniform in character across the area and is of limited ecological interest. Most if not all of the grassland appears to have been reseeded in the past and species composition is similar in each field.



***Typical view of grassland in path of proposed access route.***

At the time of survey, field A was grazed by a small group of horses and foals and the other fields by sheep. Sweet vernal grass *Anthoxanthum odoratum* is widespread in the sward throughout with common bent *Agrostis capillaris*, creeping bent *Agrostis stolonifera*, smooth meadow grass *Poa pratensis*, Yorkshire fog *Holcus lanatus*, rye grass *Lolium perenne*, and in the case of the field A which was poached in places due to horse grazing frequent foxtail spp *Alopecurus spp* (probably *geniculatus*) and broad leaved dock *Rumex obtusifolius*. A small amount of crested dogs' tail *Cynosaurus cristatus* also occurs but this is generally uncommon. Forbs are few and scattered, mainly white clover *Trifolium repens*, creeping buttercup *Ranunculus repens*, meadow buttercup *R. acris*, sorrel *Rumex acetosa* and common mouse-ear *Cerastium fontanum*. Nettle *Urtica dioica* and bracken *Pteridium aquilinum*

are encroaching from the woodlands edge that runs along the north boundary of the pasture.

Field D has small patches of a slightly more diverse marshy grassland type on damper ground with frequent soft rush, marsh thistle, creeping bent, star sedge *Carex echinata*, common sedge *Carex nigra* and greater birds foot trefoil *Lotus uliginosus*. This grassland type extends into the proposed location for the access route and is likely to be similar to that recorded on areas of marshy grassland in the area (ie the L1e highlighted bio sensitive priority habitats).

The fields are separated by earth and stone banks with mature trees and hedges. There are number of sessile oak standards and scattered hazel, hawthorn, blackthorn, goat willow, holly and sycamore also occur. These features provide excellent linkage between remnant woodlands in the local landscape and are likely to be important for bats foraging in the area.

A small stream (approximately 80-100cm wide) flows along the along the eastern side of the field B. The flora on the boundary bank bordering this has a more diverse sward than the grazed field probably due to less grazing pressure on top of the bank. Pignut *Conopodium majus*, bluebell *Hyacinthoides non-scripta*, lady fern, red campion *Silene dioica*, wild angelica and meadowsweet *Filipendula ulmaria* were recorded here.

It is worth noting that the old earth banks separating the fields and bordering the woodlands provide good habitat for reptiles such as common lizards.

## **Conclusions**

The largest of the two woodlands is recorded as a Restored Ancient Woodland Site (RAWS). The shrub layer and ground flora layers show relatively low diversity which is largely due to the current use of the site for paintballing. It is however likely that the soils, although subject to recent disturbance, may retain a seed bank for other ancient woodland species. Quieter parts of the woodland may be used by breeding birds but again disturbance by paintballers is likely to be a constraint. The woodland canopy provides good foraging habitat for bats and there may well be trees that offer good roost sites.

The smaller woodland is not recorded on the Ancient Woodland Register but is located on the southern edge of a former ancient woodland that has been largely removed. The most notable feature of this tract of woodland is that it adjoins woodlands and mature tree lined field boundaries to the east that surround the sub-station and together they provide a useful wildlife corridor for the dispersal of animals and plant species. The boundary banks of the woodland support a number of large old trees that may support bat roosts and will form part of a network of linear habitats used by bats. Bat surveys commissioned by Abergelli Power have highlighted the importance of the woodlands and linking hedgerows and tree lined boundaries for bats.

The woodland is also likely to be used by breeding birds for nesting as the fallen trees and dense bramble growth amongst a string understory provides good wildlife cover. The recent surveys conducted by Aberwelli Power indicate that dormice are not present in the woodlands.

The grasslands that are in the path of the proposed power station access track are low in ecological interest. With the exception of the semi-improved marshy grassland at the east end, all are improved grasslands that have been reseeded in the past with low species diversity with a mix of commonly occurring pasture species.

### **References**

Abergelli Power Project – Non-technical summary Jan 2018

Natural Resources Wales - Lle Geo-portal - lle.gov.wales (Ancient Woodland Register, Priority Habitat and Phase 1 Habitat Data)