

Abergelli Power Project Hedgerow Survey Report

Abergelli Power Limited
July 2018

Document Control			
Document Properties			
Organisation	AECOM		
Author	Ursula Jones		
Approved by (1 st checker)	Lisbeth Nash		
Approved by (2 nd checker)	Kevin Webb		
Title	Hedgerow Survey Report		
Document Reference	N/A		
Version History			
Date	Version	Status	Description/Changes
05/06/2018	V1	First Draft	First Issue of report
26/07/2018	V2	Final	Final Issue of report

Prepared for:

Abergelli Power Limited

Prepared by:

AECOM Limited
 3rd Floor
 Portwall Place
 Portwall Lane
 Bristol
 BS1 6NA
 UK

T: +44 117 901 7000
 aecom.com

© 2018 AECOM Limited. All Rights Reserved.

This document has been prepared by AECOM Limited (“AECOM”) for sole use of our client (the “Client”) in accordance with generally accepted consultancy principles, the budget for fees and the terms of reference agreed between AECOM and the Client. Any information provided by third parties and referred to herein has not been checked or verified by AECOM, unless otherwise expressly stated in the document. No third party may rely upon this document without the prior and express written agreement of AECOM.

CONTENTS

1. Hedgerow Survey Report	4
1.1 Introduction	4
1.2 Background to the Protection of Hedgerows	5
1.3 Legislation and Policy.....	5
1.4 Hedgerow Removal.....	8
1.5 Quality Assurance	8
1.6 Hedgerow Survey Methodology	8
1.7 Survey Limitations.....	9
1.8 Hedgerow Survey Results.....	10
1.9 Hedgerow Survey Conclusions	11
1.10 Potential Effects	11
1.11 Recommendations	11
References.....	12
Figure 1 Hedgerow Survey Locations and Results	13

TABLES

Table 1.1: Legislation and Guidance relating to Hedgerows	5
Table 1.2 Hedgerow Survey Results	10

FIGURES

Figure 1 Hedgerow Survey Locations	13
--	----

1. Hedgerow Survey Report

1.1 Introduction

1.1.1 AECOM was commissioned to undertake a suite of ecological survey work to inform the Abergelli Power Project (the “Project”), and support the Environmental Statement (ES).

1.1.2 The Project Site is located near to the village of Felindre, Swansea, as shown in Figure 1, and the central grid reference for the Project Site is SN65280143. A full description of the development is provided in ES Chapter 3 (Project and Site Description).

1.1.3 The Preliminary Ecological Appraisal (PEA) Report (ES Appendix 8.1) identified that a hedgerow survey, in accordance with the Hedgerow Regulations, 1997, was required at the Project Site.

1.1.4 This report describes the status of hedgerows within the Project Site, makes an assessment of potential effects and provides recommendations for further work and mitigation.

1.1.5 The survey was undertaken on all hedgerows within the Project Site, as shown on Figure 1.

a) Objectives of the Study

1.1.6 The objectives of this study were:

- To assess hedgerows which are located entirely or partially within the Project Site in accordance with the Hedgerow Regulations, 1997 Ecological Criteria and to determine which are classified as 'Important'; and,
- To make recommendations for mitigation and further work that may be required in relation to permissions.

1.2 Background to the Protection of Hedgerows

1.2.1 The Defra Hedgerow Survey Handbook (2007) defines a hedgerow as *'any boundary line of trees or shrubs over 20 m long and less than 5 m wide at the base, provided that at one time the trees or shrubs were more or less continuous. It includes an earth bank or wall only where such a feature occurs in association with a line of trees or shrubs. This includes 'classic' shrubby hedgerows, lines of trees, shrubby hedgerows with trees and very gappy hedgerows (where each shrubby section may be less than 20 m long, but the gaps are less than 20 m).'*

1.2.2 Hedgerows are a defining character of the landscape and are important for agriculture, archaeology, ecology and culture (Defra, 2007). They assist in preventing soil erosion and water run-off, controlling livestock and providing shelter, but also are an important habitat for many globally threatened and rapidly declining species (Defra, 2007).

1.3 Legislation and Policy

1.3.1 Several statutes relate to the protection of hedgerows and are summarised in Table 1.1 below.

Table 1.1: Legislation relating to Hedgerows

Legislation/Policy	Description
Hedgerow Regulations 1997	The Hedgerow Regulations (1997) make provision for the protection of important hedgerows in England and Wales. The regulations affect hedgerows which are 20 m or more in length, or connected at both ends to another hedgerow of any length. They relate to hedgerows which are on, or adjoining land used for the following purposes: agriculture or forestry; the breeding or keeping of horses, ponies or donkeys; common land; village greens; and SSSIs (they do not include hedges that are attached to, or marking the boundaries of a private house). It is an offence to intentionally or recklessly remove or cause or permit another person to remove a hedgerow or intentionally or recklessly remove, or cause or permit another person to remove, a hedgerow which is the subject of a hedgerow retention notice.
The Wildlife and Countryside Act 1981 (as amended)	The Wildlife and Countryside Act 1981 (as amended) is the principal mechanism for the legislative protection of wildlife in Great Britain. This legislation is the means by which the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and (partially) the Birds Directive and the Habitats Directive are implemented in the UK. The Countryside and Rights of Way Act 2000 has strengthened this legal protection (see below).
Convention on Biological Diversity and the Countryside and Rights of Way Act 2000	The Countryside and Rights of Way Act 2000 provides a statutory framework for biodiversity conservation. The Act places a duty on Government Departments and the National Assembly for Wales to have regard for the conservation of biodiversity and maintain lists of species and habitats for which conservation steps should be taken or promoted, in accordance with the Convention on

Legislation/Policy	Description
	<p>Biological Diversity.</p> <p>Schedule 9 of the Act amends SSSI provisions of the Wildlife and Countryside Act 1981, including provisions to change SSSIs and providing increased powers for their protection and management. The provisions extend powers for entering into management agreements; place a duty on public bodies to further the conservation and enhancement of SSSIs; increases penalties on conviction where the provisions are breached; and introduce a new offence whereby third parties can be convicted for damaging SSSIs.</p> <p>Schedule 12 of the Act amends the species provisions of the Wildlife and Countryside Act 1981, strengthening the legal protection for threatened species. The provisions make certain offences 'arrestable' and create a new offence of reckless disturbance.</p> <p>The UK Biodiversity Action Plan (BAP) was published in 1994, and was the UK Government's response to the Convention on Biological Diversity (CBD), which the UK signed up to in 1992. It provides the framework for fulfilling the UK's responsibilities towards the Convention on Biological Diversity. Conservation of biodiversity (the variety of life on earth) is an essential element of sustainable development.</p>
Environment (Wales) Act 2016	<p>The Environment (Wales) Act puts in place the legislation needed to plan and manage Wales' natural resources in a more proactive, sustainable and joined-up way. Part 1 relates to the sustainable management of natural resources. This ensures that the way in which the use of and the impacts on natural resources do not result in long term decline. The aim is to sustainably manage natural resources in a way and rate that meets the needs of present and current generations without compromising the needs of future generations.</p> <p>The Act also contains at Section 7, a duty for the Welsh Ministers to prepare and publish a list of the living organisms and types of habitat which in their opinion are of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales.</p>

1.3.2 This is a brief summary of the legislation and is not to be regarded as a definitive legal opinion. When dealing with individual cases, the client is advised to consult the full texts of the relevant legislation and obtain further legal advice.

a) *The Hedgerow Regulations 1997*

1.3.3 The Hedgerow Regulations 1997 (HM Government, 1997) provide a series of comprehensive assessments to identify 'Important' hedgerows. To qualify as 'Important' under the Regulations, the hedgerow must comply with the following list of criteria:

- It must have a continuous length of or exceeding 20 m;
- Has a continuous length of less than 20 m, but meets another hedgerow (by intersection or junction) at each end; and
- It must be more than 30 years old.

1.3.4 In addition to the above criteria, to be deemed 'Important', a hedgerow must meet one or more of the following criteria:

i. *Archaeological*

- Marks a pre-1850 parish or township boundary;
- Incorporates an archaeological feature;
- Is part of or is associated with an archaeological site;
- Marks the boundary of, or is associated with, a pre-1600 estate or manor; or
- Forms an integral part of the a pre-Parliamentary enclosure field system.

ii. *Ecological*

- Contains certain categories of species of birds, animals or plants listed in the Wildlife and Countryside Act 1981 (as amended) or Joint Nature Conservation Committee publications (JNCC);
- Includes:
 - at least seven woody species; on average, in a 30 m length; or
 - at least six woody species; on average, in a 30 m length and has at least three associated features (see list below); or
 - at least six woody species, on average, in a 30 m length, including a black poplar; large-leaved lime, small-leaved lime or wild service tree; or
 - at least five woody species, on average, in a 30 m length and has at least four of the associated features listed below;
 - at least 4 woody species, on average, in a 30 m length; is adjacent to a bridleway, footpath, road used a public path, or a byway open to all traffic and includes and has at least two or more of the associated features listed below.

Associated Features

- A bank or wall for at least half the length of the hedgerow;
- Less than 10% gaps;
- On average, at least one standard tree per 50 m of hedgerow;
- A ditch for at least half the length of the hedgerow;
- At least three woodland species from a list of 57 woodland plants (as defined in Schedule 2 of the Regulations) within 1 m of the hedgerow;

- Connections scoring four or more points, where connection with a hedgerow counts as one, a broad-leaved woodland or pond counts as two;
- A parallel hedgerow within 15 m.

1.3.5 The hedgerow surveys conducted as described in this report only assess hedgerows present with the Project Site against the Ecological Criteria as listed above. Archaeology Criteria of Hedgerow Regulations 1997, 'Important Hedgerows' have not been considered.

1.4 Hedgerow Removal

1.4.1 If under the Hedgerow Regulations 1997 the hedgerow is not 'Important', the Local Planning Authority (LPA) cannot refuse permission to remove the hedgerow. If the hedgerow is 'Important', the LPA will decide if the circumstances justify removal of an 'Important' hedgerow. Unless satisfied that removal is justified, the LPA must refuse permission and issue a hedgerow retention licence.

1.4.2 However, under The Hedgerow Regulations 1997, the removal of any hedgerow to which the Regulations apply is permitted if it is required for carrying out development for which planning permission has been granted. Therefore, it may not be necessary to have to seek permission specifically to remove the hedgerow.

1.5 Quality Assurance

1.5.1 This survey and subsequent report was undertaken in line with AECOM's Integrated Management System (IMS). Our IMS places great emphasis on professionalism, technical excellence, quality, environmental and Health and Safety management. All staff members are committed to establishing and maintaining our certification to the international standards BS EN ISO 9001:2015 and 14001:2004 and BS OHSAS 18001:2007. In addition, our IMS requires careful selection and monitoring of the performance of all sub-consultants and contractors.

1.5.2 All AECOM Ecologists who worked on this project are members of (at the appropriate level) the Chartered Institute of Ecology and Environmental Management (CIEEM) and follow their code of professional conduct (CIEEM, 2017) when undertaking ecological work.

1.6 Hedgerow Survey Methodology

a) Initial Scope Assessment

1.6.1 The scope of the hedgerow survey work was informed by the PEA which was conducted in 2017 (ES Appendix 8.1). Field boundaries were mapped in accordance with the JNCC (2010) Phase 1 habitat codes; including the mapping of boundaries as species rich or species poor; defunct and intact hedgerows (with or without trees).

b) Field Survey

- 1.6.2 Hedgerows which were located within the Project Site were surveyed in April 2018.
- 1.6.3 Hedgerow surveys were undertaken paying due regard to the methodology as outlined in the Hedgerow Survey Handbook (Defra, 2007). A set of parameters were recorded for each hedgerow covering hedgerow type, connections, characteristics (length, height, width), shape, associated features, integrity, trees, non-native species, woody species, ground flora species and hedgerow management.
- 1.6.4 As per the Hedgerow Regulation 1997, where lengths of hedgerows were between 100 m and 200 m two 30 m sections were surveyed and the totals of the woody and woodland ground flora plants were averaged.
- 1.6.5 The field survey collated information to assess the Ecological Criteria of the Hedgerow Regulations 1997. A photograph of each hedgerow surveyed was taken and the extent of the hedgerow was marked onto field survey plans.

c) Hedgerow Assessment – Ecological Criteria

- 1.6.6 The ecological data gained during the field survey was assessed against the Ecological Criteria of the Hedgerow Regulations 1997 to ascertain which of the hedgerows could be classified as 'Important'.

d) Archaeological Desk Study – Archaeological Criteria

- 1.6.7 No assessment of the archaeological importance of the hedgerows was made as part of this Important hedgerow assessment.

1.7 Survey Limitations

- 1.7.1 Whilst the hedgerow survey was not undertaken at the most optimal time of the year (optimal survey period is May and June), all woody species and associated features were easily identifiable and due to some early season warm weather the woodland ground flora was present at the time of survey.
- 1.7.2 It was not possible to access the land in which Hedgerow C was located. As such the survey was conducted from a gateway next to the hedgerow to the south using binoculars. It was not possible to record the woodland ground flora; however, the hedgerow supported a sufficient number of woody species to classify it as an 'Important' hedgerow without relying on the woodland ground flora.
- 1.7.3 There are deemed to be no significant limitations to the hedgerow survey.

1.8 Hedgerow Survey Results

1.8.1 Figure 1 shows the hedgerows within the Project Site that were subject to hedgerow surveys and whether they are ‘Important’ or not ‘Important’ under Ecological Criteria (Hedgerow Regulations, 1997).

1.8.2 A total of three hedgerows were present within the Project Site and were subject to survey. Two were classed as ‘Important’ and the full results are given in Table 1.2.

Table 1.2 Hedgerow Survey Results

Hedge ID	Summary of Woody Species Recorded within 30 m section	Total/Average Number of Woody Species	Summary of Woodland Species Recorded within 30 m section	Total/Average Number of Woodland Species	Additional Ecological Qualifiers – Associated Features PROW = Public Right of Way	Ecological Justification in accordance with The Hedgerow Regulations, 1997	‘Important’ Hedgerow?
A	Section 1 Hazel, rose, rowan, oak, beech, holly. Section 2 Holly, hazel, elder, oak, rose, birch, willow, rowan, guelder rose.	7.5	Section 1 Wood sorrel, blubell, broadbuckler fern, enchanter’s nightshade. Section 2 Broadbuckler fern, herb robert, enchanter’s nightshde, hard fern, wood avens.	4.5	Gaps<10%; Hedge bank	At least 7 woody species, 2 associated features	Yes
B	Section 1 Rose, willow, elder, blackthorn, hazel, ash, hawthorn, rowan. Section 2 Hawthorn, blackthorn, holly, oak.	6	Section 1 Bluebell. Section 2 Broad-buckler fern.	1	Standard tree/50 m; Hedge bank.	At least 6 woody species, 2 associated features	No
C	Holly, gorse, willow, hazel, elder, oak, hawthorn.	7	Not able to access to assess.	Not possible to assess.	Standard tree/50 m; Ditch; Hedge bank.	At least 7 woody species, 2 associated features	Yes

1.9 Hedgerow Survey Conclusions

- 1.9.1 Three hedgerows were present within the Project Site and were scoped in for requiring an Important hedgerow survey during the PEA. Three hedgerows were assessed under Ecological Criteria (Hedgerow Regulations, 1997).
- 1.9.2 Two of the three hedgerows within the Project Site fulfil the Ecological Criteria for being 'Important' under the Hedgerow Regulations (1997).

1.10 Potential Effects

- 1.10.1 'Important' hedgerows will be partially removed. Hedgerow A will be severed to facilitate the construction of a Gas Connection and Hedgerow B will be partially removed to facilitate the widening of a section of the Access Road.

1.11 Recommendations

- 1.11.1 If planning permission is granted then the hedgerows classified as 'Important' can be removed without further permission (Hedgerows A and C, as shown on Figure 1).
- 1.11.2 New species rich hedgerow planting is proposed as well as reinstatement of any hedgerow removed during construction of the Project. Further details are provided in the Outline Landscape and Ecology Mitigation Strategy (ES Appendix 3.4).
- 1.11.3 Indicative typical species will include the following:
- *Acer campestre* (field maple);
 - *Corylus avellana* (hazel);
 - *Crataegus monogyna* (hawthorn);
 - *Rosa canina* (dog rose);
 - *Viburnum opulus* (guelder rose);
 - *Prunus spinosa* (blackthorn);
 - *Sorbus aucuparia* (rowan);
 - *Ilex aquifolium* (holly); and,
 - *Lonicera periclymenum* (honeysuckle).

References

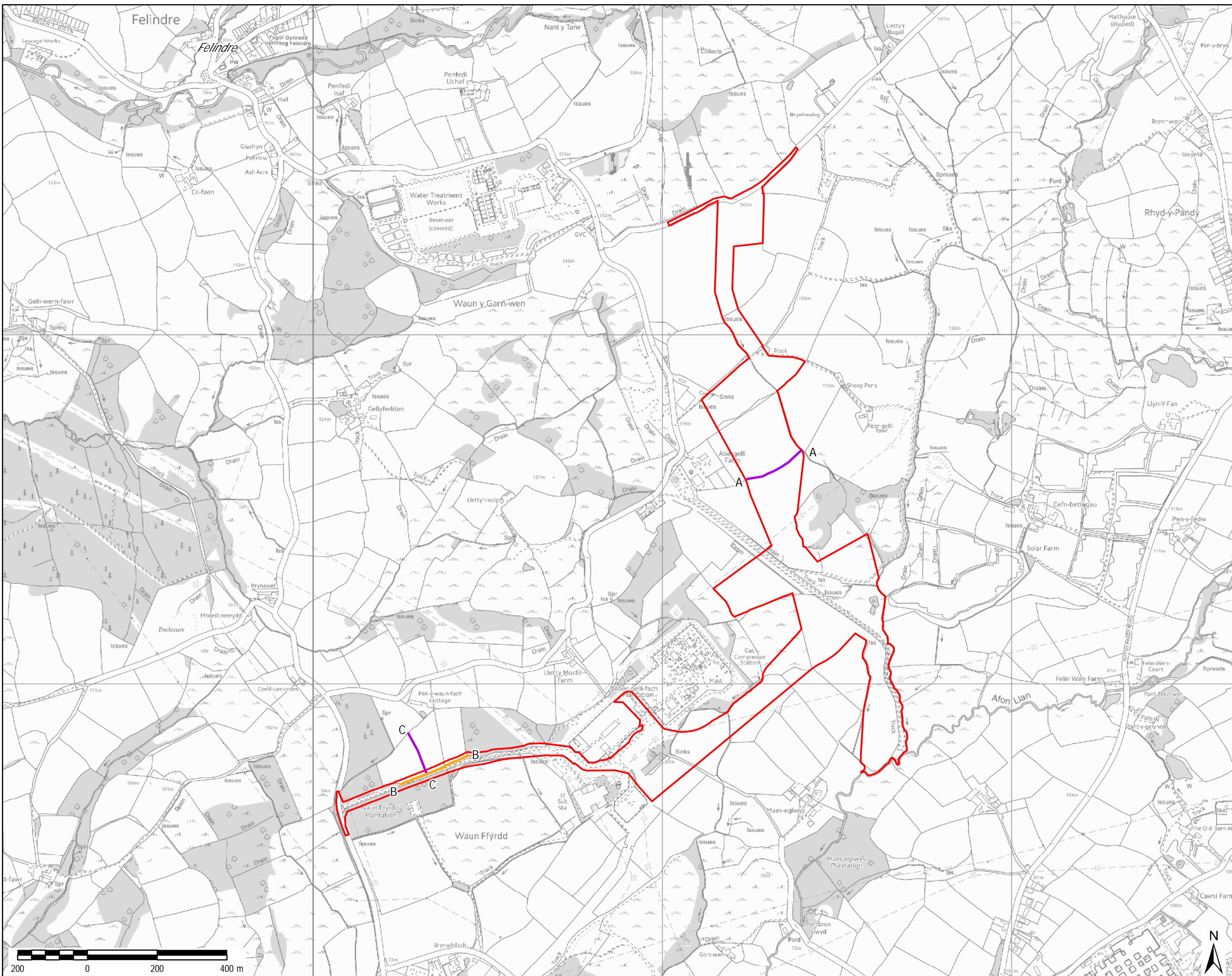
CIEEM (2017) Code of Professional Conduct. Chartered Institute of Ecology and Environmental Management (CIEEM) November 2017.

Defra (2007). Hedgerow Survey Handbook - A standard procedure for local surveys in the UK. Prepared on behalf of the Steering Group for the UK Biodiversity Action Plan for Hedgerows. 2nd Edition. Defra, London JNCC, 2010. Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit. Peterborough: Joint Nature Conservation Committee.

HMSO (1997). The Hedgerows Regulations 1997. Statutory Instrument 1997 No. 1160. Available from: <http://www.hmso.gov.uk/si/si1997/97116001.htm>.

Joint Nature Conservation Committee (2010 Ed.). Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit. JNCC. Peterborough.

Figure 1 Hedgerow Survey Locations and Results



Project Title:

ABERGELLI POWER PROJECT

Client:



LEGEND

- Project Site Boundary
- Hedge Importance
- Important
- Not-Important

Copyright:

© Crown copyright and database rights
 [2017] Ordnance Survey 0100031673

AECOM Internal Project No:
 60542910

Drawing Title:

HEDGEROW SURVEY

Scale at A3: 1:10,000

Drawing No: **Rev:**

FIGURE 1 **001**

Drawn: Chk'd: App'd: Date:

GM NW CA 18/07/18

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.