

Appendix 8.16

Breeding Bird Survey Report 2014

Abergelli
Abergelli Power Project
Breeding Bird Survey Report

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Client	Stag Energy
Job	Abergelli
Report title	Breeding Bird Survey Report
Draft version/final	FINAL
File reference	7399_R_Breeding Bird_APPR (4)_10032015

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Reviewed	Owain Gabb	Director	11 August 2014
Revised	Gareth Lang	Ecologist	18 August 2014
Reviewed	Owain Gabb	Director	18 August 2014
Approved for issue to client	Owain Gabb	Director	18 August 2014
Issued to client	Jim Gillespie	Partner	18 August 2014
2nd issue to client	Matthew Hobbs	Principal Ecologist	08 September 2014
3rd issue to client	Matthew Hobbs	Principal Ecologist	12 September 2014
4th issue to client	Matthew Hobbs	Principal Ecologist	10 March 2015

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1 Summary

- 1.1 Abergelli Power Limited (APL) is promoting a new Power Generation Plant with its associated Gas and Electricity Connections (the 'Project') on agricultural land within Abergelli Farm north of Swansea in the City and County of Swansea (approximately at National Grid Reference 265284, 201431).
- 1.2 APL commissioned BSG Ecology to undertake a breeding bird survey within 150 ha of pastoral farmland at and around Abergelli Farm in 2014, to inform and support an application for Development Consent for the Power Generation Plant.
- 1.3 Breeding birds were surveyed by walking along field boundaries and tracks within the Survey Site at a slow pace to enable all birds detected to be located, identified and recorded. Frequent stops were made to listen and scan for singing and calling birds. The Survey Site was visited on three occasions, once during each of April, May and June. A constant search effort was employed during each survey visit, with all habitat types being approached to within approximately 50 m.
- 1.4 Nine bird species of principal importance for nature conservation' as referred to in S42 of the NERC Act 2006 (S42)¹ (cuckoo *Cuculus canorus*, grasshopper warbler *Locustella naevia* dunnock *Prunella modularis*, house sparrow *Passer domesticus*, linnet *Carduelis cannabina*, lesser redpoll *Carduelis cabaret*, skylark *Alauda arvensis*, song thrush *Turdus philomelos*, and tree pipit *Anthus trivialis*) were considered likely to breed on site. All nine S42 species recorded within the Survey Site are also red-listed species of conservation concern in Wales (RSPB, 2009), with the exception of dunnock (which is amber-listed). An additional seven amber-listed species, bullfinch *Pyrrhula pyrrhula*, mistle thrush *Turdus viscivorus*, meadow pipit *Anthus pratensis*, reed bunting *Emberiza schoeniclus*, common redstart *Phoenicurus phoenicurus*, whitethroat *Sylvia communis* and willow warbler *Phylloscopus trochilus* were also considered to have bred.
- 1.5 No territories of species listed under Schedule 1 Part 1 of the Wildlife & Countryside Act 1981 (as amended) (Schedule 1 species) were recorded, although two Schedule 1 species were recorded during the surveys, as follows. A pair of red kite *Milvus milvus* was recorded mobbing a peregrine falcon *Falco peregrinus* over the Felindre Gas Compressor Station land during survey in May. A pair of kites was also recorded flying over the eastern boundary in the northern compartment of the Survey Site during the same survey day. Given the timing of the records, and that at least one pair were recorded during survey it is likely that red kite breed locally but that the single record of peregrine referred to a transient bird. No evidence was found to suggest breeding of either species occurred within the Survey Site during 2014.

¹ The Natural Environment and Rural Communities Act 2006 (NERC 2006) required the Welsh Assembly Government (WAG), based on advice from the Countryside Council for Wales (now part of Natural Resources Wales), to identify species and habitats of principal importance for the conservation of biodiversity in Wales. Section 42 of The NERC Act requires the WAG to take steps to "further the conservation" of these species/habitats.

2 Introduction

- 2.1 Abergelli Power Limited (APL) commissioned BSG Ecology to undertake a breeding bird survey to inform and support an application for Development Consent for the Project described below.

Site Description

- 2.2 The Survey Site consists of approximately 150 ha of pastoral farmland primarily grazed by horses. The extent of the Survey Site is shown in Figure 1 and is centred at National Grid Reference 265284, 201431. The nearest settlement is Felindre, which is located approximately 2 km to the north of the Survey Site, with Swansea approximately 5 km to the south.
- 2.3 The Survey Site is largely agriculturally improved pasture with several areas of marshy grassland, particularly in the north, south and north-western ends of the Survey Site. The fields are bounded by fences, running along the line of defunct hedgerows, and often accompanied by ditches. There is a block of broadleaved woodland on the eastern boundary of the Survey Site and other areas of woodland around the marshy grassland to the west of the Survey Site, and around Felindre Gas Compressor Station and the two National Grid 400 kV electrical substations that lie at the south-west end of the Survey Site. The habitats in the surrounding landscape are similar to those within the Survey Site boundary – a mixture of improved and marshy grassland interspersed with occasional patches of woodland.

Description of Project

- 2.4 APL is promoting a new Power Generation Plant with associated Gas and Electricity Connections within the Survey Site. The Power Generation Plant would operate as a Simple Cycle Gas Turbine (SCGT) peaking plant and would be designed to provide an electrical capacity of up to 299 Megawatts (MW). It would be fuelled by natural gas, supplied by a new underground gas pipeline connecting the Power Generation Plant to the existing National Grid Gas (NGG) National Transmission System (NTS). It would also connect to the National Grid Electrical Transmission System (NETS) via underground cable or overhead lines.
- 2.5 BSG Ecology has been appointed as the ecological consultant to undertake an ecological survey, which includes a desk study and Extended Phase 1 Habitat Survey as well as a range of Phase 2 surveys, including a breeding bird survey. These baseline surveys will be included in an appendix to an ecology chapter of an Environmental Statement, which is intended for submission, as an integral part of the application for Development Consent.

Aims of Study

- 2.6 The survey work undertaken at Abergelli Farm between April and June 2014 aimed to establish:
- The number of species present on the Survey Site or the immediate surrounding habitat;
 - The number of territories held by each species, and
 - Whether the Survey Site or the immediate surrounding habitat is used by bird species of high conservation interest, including:
 - a. Species protected under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended);
 - b. Species listed on Annex 1 of the Council Directive 79/409/EEC on the Conservation of Wild Birds;
 - c. Species listed in Section 42 of the Natural Environment and Rural Communities Act (NERC 2006) as species of principal importance for the conservation of biodiversity in Wales;
 - d. Species listed in the Swansea Local Biodiversity Action Plan (LBAP); and

- e. Species listed as having a Red or Amber population status² (RSPB, 2009).

² Seven quantitative criteria are used to assess the population status of each bird species and to categorise it on the red, amber or green list of conservation concern (species that are red-listed are of greatest conservation concern whereas those that are green-listed are not considered to be of particular conservation priority or (in a few cases) have insufficient data to be robustly categorised). Criteria considered are: global conservation status; evidence of recent decline; evidence of historical decline; an unfavourable European conservation status; rarity (in terms of breeding numbers); restricted (localised) distribution; and whether a species is considered to be of international conservation importance (featuring in the list of birds in Annex 1 of the Birds Directive 1979). When considering whether a species is added to the red or the amber list, factors such as the extent of decline and range contraction are considered.

3 Methods

Desk Study

3.1 Existing ecological information for the Survey Site and its surrounding area was requested from the South East Wales Biodiversity Records Centre (SEWBRc). Information on designated sites was requested from within 10 km for European sites, 5 km for nationally designated sites and 2 km of the Survey Site for non-statutory sites. The latter search radius was also used for information on protected³ or notable species (particularly those identified as S42 species and/or of local conservation importance or LBAP⁴ species), including birds. In addition, an initial study of on-line aerial photographs, topographical, and Ordnance Survey maps was made using web-based resources including: Where's the path?⁵, Google Maps⁶ and Google Earth Version 6 (Google Inc, 2010). This, together with the results from a preliminary ecological appraisal⁷ carried out in February 2014 and updated in April 2014, resulted in a detailed understanding of the habitats and features on the Survey Site along with an indication of the bird community potentially present.

Field Survey

3.2 The method used was adapted from the British Trust for Ornithology (BTO) Common Bird Census (CBC) as described by Gilbert *et al.* (1998), Although eight to ten visits are usually undertaken for CBC sites being monitored over the long term, it is generally accepted that for the purposes of assessing potential environmental impacts, three visits are sufficient to describe the value of a Survey Site for breeding birds and give an approximation of the number of breeding bird territories present within a Survey Site (e.g. SNH, 2005⁸). Breeding birds were surveyed by walking along field boundaries and tracks within the Survey Site at a slow pace to enable all birds detected to be located, identified and recorded. Frequent stops were made to listen and scan for singing and calling birds. All habitat features were approached to within approximately 50 m, except in horse pasture fields. Transects were not walked across closely grazed pasture fields, as it was possible to easily view birds by scanning from field boundaries (due to the lack of vegetation and small field sizes) and to avoid disturbing horses that were kept in many of them at the time of the survey. Bird locations were mapped using standard two-letter British Trust for Ornithology (BTO) codes, and bird activity was recorded using standard BTO behaviour codes (Marchant 1983).

3.3 The breeding status of birds recorded was categorised as either 'holding territory' or 'showing other evidence of breeding'. Birds presumed to be holding territory were those recorded in song. Other evidence of breeding included observations of:

- Distraction display or injury feigning;
- Used nests or eggshells found (occupied or laid within the survey period);
- Recently fledged young or downy young;
- Adults entering or leaving a nest site in circumstances indicating an occupied nest or an adult sitting on nest;
- Adults carrying food for young or faecal sacs;
- Nest containing eggs; and
- Nest with young seen or heard.

3.4 The presence of house sparrow near a suitable nesting building was also taken as evidence for breeding in this species.

³ Wildlife and Countryside Act 1981 Schedules 1, 5 & 8; Conservation of Habitats and Species Regulations 2010; Protection of Badgers Act.

⁴ Those listed under Local Biodiversity Action Plans for Swansea.

⁵ <http://mortimermaps.appspot.com/wtp3/wtp3.htm>

⁶ <https://maps.google.co.uk/>

⁷ BSG Ecology (2014). Abergelli Power Project: Preliminary Ecological Appraisal.

⁸ See Section 6.9.1. Although this reference describes methods appropriate for surveying at onshore wind farms this method is also appropriate for most walkover breeding bird surveys of lowland and/or farmland sites.

- 3.5 The results of the three breeding bird territory mapping surveys were combined to create a single map showing all birds considered to be holding territory (Figures 1a and 1b in Appendix 1). BTO codes for each species illustrated in Figure 1a and 1b are provided in Table 2 (below). Where a bird was observed in the same location during more than one survey visit, and this is judged to be the same individual bird, only one registration of that bird is shown on the map. Where more than one individual of the same species is shown in close proximity, these are individual birds seen simultaneously during a single survey. Note the locations of presumed territories do not represent specific nest locations.
- 3.6 The Survey Site was divided into two survey compartments due to its size; the first covered the north of the Survey Site (the land north of the gallops that runs from the houses at Abergelli Farm to the south-east corner of the Survey Site), and the second covered the south of the Survey Site (the land south of the gallops). Three survey visits were made to each compartment; one in each of late April, late May and mid-June. Table 1 below provides details of the duration and weather conditions during surveys.

Table 1: Details of breeding bird surveys.

Compartment	Date	Time	Weather conditions
North	25/04/2014	06:30 – 10:15	Wind E 1-2, cloud 8/8, dry, dull
South	25/04/2014	06:40 – 11:00	Wind E 1-2, cloud 8/8, dry, dull
North	24/05/2014	06:00 – 09:00	Wind W 1-2, cloud 6/8, dry, sunny
South	24/05/2014	07:00 – 10:00	Wind W 1-2, cloud 6/8, dry, sunny
North	19/06/2014	06:30 – 10:00	Wind NW 1-3, cloud 1/8, dry, sunny
South	19/06/2014	06:45 – 10:00	Wind NW 1-3, cloud 1/8, dry, sunny

- 3.7 The Felindre Gas Compressor Station and the National Grid electrical substation compounds to the south-west of the Survey Site were not entered, due to lack of access. The compounds can be viewed adequately from the fence and there is very little suitable habitat for breeding birds within these compounds. The land immediately beyond the northern and eastern Survey Site boundaries was also not entered. The surveyor(s) scanned areas of adjacent habitat by walking paths and field edges and made use of local vantage-points to record species present around the access restricted areas. This enabled the entire site to be sampled without trespassing.
- 3.8 In late June, all buildings within the Survey Site, with the exception of those within the National Grid compounds referred to above, were inspected for barn owl *Tyto alba* presence or other evidence of presence, such as pellets, nests, or faecal matter. The buildings were primarily visited to inspect for bat roosts and the methods are described in detail in the bat roost inspection report. Anecdotal evidence from the land owner prior to inspection suggested that none of the buildings were in use or had historically been used by barn owl. All trees within the Survey Site were also inspected from ground level for evidence of use by bats and barn owl. A sub-set of these trees were identified for further roped-access (tree-climbing) survey that involved internal and external inspection of these trees. Full details of these surveys are provided in the bat survey report.
- 3.9 The maps from the three visits were combined. For species where definitive evidence of breeding was not obtained, professional judgement (based on a range of factors including knowledge of habitat requirements, local status and/or repeat sightings) was used to conclude whether breeding was likely. A precautionary approach was taken, with species suspected to have bred being plotted as having done so.

Survey Limitations

- 3.10 It was not possible to gain access to the access road to the south-west of the Felindre Gas Compressor Station and the two National Grid 400 kV electrical substations and also the land immediately surrounding these areas during the breeding bird surveys, as shown in Figure 1b. It is unlikely that this is a significant constraint to the surveys as the areas that could not be surveyed contain similar habitats to those within the areas that were surveyed and it is unlikely that they support any additional species that are protected or notable.

4 Results

Desk Study Data

- 4.1 A full list of the European designated sites within 10 km, national statutory designated sites within 5 km, and non-statutory designated sites within 2 km of the Survey Site boundary is provided in the preliminary ecological appraisal. Sites that include a cited ornithological interest are described below.

Statutory Sites of Nature Conservation Importance

- 4.2 Carmarthen Bay and the tidal estuaries that extend from it, approximately 7.2 km west of the Survey Site, has been afforded multiple designations and is referred to under the umbrella term European Marine Site (EMS⁹) which includes the Carmarthen Bay area and Estuaries Special Area of Conservation (SAC¹⁰), and the Burry Inlet Special Protection Area (SPA¹¹). This area also contains a Ramsar Wetland of International Importance (Ramsar¹²). The boundaries of each of these sites are not contiguous but all fall within the EMS site. The details of each designation are provided below.
- 4.3 The Burry Inlet SPA and Ramsar, located approximately 9.7 km west south-west of the Survey Site, is classified for large numbers of overwintering wildfowl and waders that feed in the saltmarshes and on the intertidal mud and sand.
- 4.4 The SPA has been classified as it supports important overwintering populations of eleven migratory species of waterfowl and an assemblage of 34,962 wintering water fowl including common shelduck *Tadorna tadorna*, Eurasian wigeon *Anas penelope*, Eurasian teal *Anas crecca*, northern pintail *Anas acuta*, shoveler *Anas clypeata*, Eurasian oystercatcher *Haematopus ostralegus*, grey plover *Pluvialis squatarola*, red knot *Calidris canutus*, dunlin *Calidris alpina alpina*, Eurasian curlew *Numenius arquata*, and common redshank *Tringa totanus*. The SPA includes extensive areas of intertidal sand and mud-flats, large sand dune systems and the largest continuous area of saltmarsh in Wales.
- 4.5 The spring and autumn population of common redshank, and wintering population of northern pintail, Eurasian oystercatcher, and red knot are qualifying features for the Burry Inlet Ramsar designation.
- 4.6 The Carmarthen Bay and Estuaries SAC, located approximately 7.2 km to the west, is designated for its 'Sandbanks which are slightly covered by sea water all the time', 'Estuaries', 'Mudflats and sandflats not covered by water at low tide', 'Large shallow inlets and bays', 'Salicornia and other annuals colonising mud and sand', and 'Atlantic salt meadows'.

Non-Statutory Sites

- 4.7 There are 23 Sites of Interest for Nature Conservation (SINC) within 2 km of the Survey Site. These are described in detail in the preliminary ecological appraisal. Three SINC lie partially within the Survey Site boundary, of which two have cited ornithological interest.
- 4.8 Rhyd-Y-Pandy Valley Grasslands is a large SINC, which includes three fields that lie within the north-east corner of the Survey Site. The site is designated for its wet woodland and woodland with

⁹ The term 'European Marine Sites' (EMS) collectively describes Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) that are covered by tidal waters and protect some of our most important marine and coastal habitats and species of European importance.

¹⁰ SACs are strictly protected sites designated under the EC Habitats Directive in order to conserve the 189 habitat types and 788 faunal species identified in Annexes I and II of the Directive (as amended). They do not afford protection to birds directly (although are often subject to various other designations that do have an ornithological component and often offer protection to habitats of value to a range of bird species).

¹¹ SPAs are internationally important sites classified in accordance with Directive 79/409/EEC on the conservation of wild birds (commonly referred to as the Bird Directive).

¹² Ramsar sites are wetlands of international importance designated under the Ramsar Convention.

assemblage of ancient woodland indicator species, scrub, purple moor grass and rush pasture, lowland meadow, neutral grassland, scrub, reed bed and water course habitats. Species of bird listed on the SINC form include sky lark, tree pipit, reed bunting, common kestrel *Falco tinnunculus*, herring gull *Larus argentatus*, red kite, house sparrow, common starling *Sturnus vulgaris*, song thrush and barn owl. It is unclear what the status of these species on the SINC is.

- 4.9 Warn Garn Wen is also an extensive SINC which includes the marshy grassland that lies within the western boundary of the Survey Site. The site is designated for purple moor grass and rush pasture, wet woodland, scrub and watercourse habitats. Species of bird listed on the SINC form include herring gull, lesser black-backed gull *Larus fuscus*, house sparrow, stonechat *Saxicola rubicola*, common starling and song thrush. It is unclear what the status of these species on the SINC is.
- 4.10 There are two SINC's located adjacent to the boundary. Rhos Fawr SINC is a block of land immediately to the north of the Survey Site boundary, and Felindre Grasslands SINC lies adjacent to the southern tip of the proposed access route. Both have cited ornithological interest.
- 4.11 The Rhos Fawr SINC is designated for its woodland containing an assemblage of ancient woodland indicator species, scrub, purple moor grass and rush pasture, and neutral grassland habitats. Species of bird listed on the SINC form include tree pipit and common cuckoo *Cuculus canorus*. It is unclear what the status of these species on the SINC is.
- 4.12 The Felindre Grasslands SINC is designated for its wet woodland and lowland mixed deciduous woodland, purple moor grass and rush pasture, and scrub habitats. Species of bird listed on the SINC form include northern goshawk *Accipiter gentilis*, tree pipit, lesser redpoll, common linnet, reed bunting, common kestrel, common snipe *Gallinago gallinago*, herring gull, house sparrow, green woodpecker *Picus viridis*, willow tit *Poecile montanus*, common bullfinch, water rail *Rallus aquaticus*, stonechat, Eurasian woodcock *Scolopax rusticola*, common starling, song thrush, barn owl, and northern lapwing *Vanellus vanellus*. It is unclear what the status of these species on the SINC is.
- 4.13 Two additional SINC's have cited ornithological interest. These are; Penllergaer Forest, located approximately 1 km south-west of the Survey Site, and Penllergaer to Llangyfelach Tunnel and Railway Line, located approximately 1 km south of the Survey Site.
- 4.14 The Penllergaer Forest SINC is designated for its range of woodland types, purple moor grass and rush pasture, reedbeds and watercourses. Species of bird listed on the SINC form include Northern goshawk, common kingfisher *Alcedo atthis*, lesser redpoll, common cuckoo, lesser spotted woodpecker *Picoides minor*, common grasshopper warbler, common crossbill *Loxia curvirostra*, red kite, house sparrow, wood warbler *Phylloscopus sibilatrix*, green woodpecker, willow tit, common bullfinch, common starling and song thrush. It is unclear what the status of these species on the SINC is.
- 4.15 Penllergaer to Llangyfelach Tunnel and Railway Line SINC is also designated for its range of woodland types, purple moor grass and rush pasture, scrub and watercourses. Species of bird listed on the SINC form include tree pipit, lesser redpoll, common bullfinch, and song thrush. It is unclear what the status of these species on the SINC is.
- 4.16 Most of the woodland within the Survey Site is also designated as Ancient Woodland.

Species Data

- 4.17 SEWBRc provided 21 records of barn owl. The closest of these records is 0.7 km to the west of the Survey Site boundary from 1997, with the nearest breeding record 3 km to the south west near Penllergaer Woods in 2000. The most recent record is from approximately 3.7 km north-west of the Survey Site in April 2013. An additional 5 records were provided for the last 10 years, the nearest of which was recorded in 2007, approximately 2 km south-west of the Survey Site,
- 4.18 A red kite was noted circling above a field in the north-west corner of the Survey Site and also over Abergelli Farm during the Phase 1 Survey in April 2014. SEWBRc provided 54 records for red kite between 1999 and 2013, the record nearest the Survey Site being approximately 150 m to the east.

4.19 SEWBRc provided a number of records of ground nesting birds in the search area. These included records for Eurasian curlew, northern lapwing and skylark. A total of 63 records of lapwing were provided from between 2000 and 2009, all south of the Survey Site. The closest of these records are located at the tinplate workings site near to Bryn Whilach Farm, approximately 1 km to the south-west of the Survey Site boundary. There was one record of curlew from 2011, located at the Lliw Reservoir, 1 km north of the Survey Site boundary.

4.20 A full list of species, returned from the data search can be found in **Table 3** in **Appendix 2**.

Breeding Bird Survey (2014)

4.21 A total of 53 species were recorded on the Survey Site during the breeding bird survey in 2014. Of these, 46 were passerines (including near-passerines) and seven non-passerines.

Breeding passerines

4.22 The bird community was passerine dominated. Those observed holding territories and considered to have bred on the Survey Site are presented in Table 2 below. A full list of species, including non-breeding birds, recorded during the breeding bird survey can be found in Table 4 in Appendix 2.

Table 2: Estimated numbers of passerine territories recorded.

Species	BTO species code	Number of territories	Other evidence of breeding ¹³	S42 species	Red (R) or Amber (A) listed species
Blackbird <i>Turdus merula</i>	B.	8	6		
Blackcap <i>Sylvia atricapilla</i>	BC	10			
Bullfinch <i>Pyrrhula pyrrhula</i>	BF	4	2		A
Blue Tit <i>Cyanistes caeruleus</i>	BT	9	9		
Chiffchaff <i>Phylloscopus collybita</i>	CC	19			
Chaffinch <i>Fringilla coelebs</i>	CH	22	3		
Cuckoo <i>Cuculus canorus</i>	CK	3		☐	R
Coal Tit <i>Periparus ater</i>	CT	1			
Dunnock <i>Prunella modularis</i>	D.	15	1	☐	A
Goldcrest <i>Regulus regulus</i>	GC	2	1		
Grasshopper Warbler <i>Locustella naevia</i>	GH	2		☐	R
Goldfinch <i>Carduelis carduelis</i>	GO	3	1		
Great Tit <i>Parus major</i>	GT	4	5		
House Sparrow <i>Passer domesticus</i>	HS		3	☐	R
Linnet <i>Carduelis cannabina</i>	LI	2	1	☐	R
Mistle Thrush <i>Turdus viscivorus</i>	M.	2			A
Meadow Pipit <i>Anthus pratensis</i>	MP	7	1		A
Nuthatch <i>Sitta europaea</i>	NH	1	2		
Lesser Redpoll <i>Acanthis cabaret</i>	LR		1	☐	R
Robin <i>Erithacus rubecula</i>	R.	27	8		
Reed Bunting <i>Emberiza schoeniclus</i>	RB	3			A

¹³ The number of territories where other evidence was found to confirm breeding is indicated. Other evidence of breeding was considered to include observations of adults carrying nesting material or food, adults being repeatedly alarmed or engaging in territorial disputes, and families including juveniles accompanied by adults. The presence of house sparrow near a suitable nesting building was also taken as evidence for breeding in this species.

Species	BTO species code	Number of territories	Other evidence of breeding ¹³	S42 species	Red (R) or Amber (A) listed species
Redstart <i>Phoenicurus phoenicurus</i>	RT	6			A
Skylark <i>Alauda arvensis</i>	S.	4		☐	R
Stonechat <i>Saxicola torquata</i>	SC	2	2		
Song Thrush <i>Turdus philomelos</i>	ST	18		☐	R
Sedge Warbler <i>Acrocephalus schoenobaenus</i>	SW	1			
Tree Pipit <i>Anthus trivialis</i>	TP	3	2	☐	R
Whitethroat <i>Sylvia communis</i>	WH	12	1		A
Wren <i>Troglodytes troglodytes</i>	WR	34			
Willow Warbler <i>Phylloscopus trochilus</i>	WW	49	2		A

- 4.23 Twenty eight species of passerine were noted holding breeding territories on the Survey Site. An additional two species, lesser redpoll and house sparrow, were observed showing other evidence of breeding.
- 4.24 No passerine species listed under Schedule 1 Part 1 of the Wildlife & Countryside Act 1981 (as amended)¹⁴ were recorded.
- 4.25 Nine S42 species (cuckoo, dunnoek, grasshopper warbler, house sparrow, linnet, lesser redpoll, skylark, song thrush, and tree pipit) were considered likely to breed on the Survey Site. All nine S42 species recorded within the Survey Site are also listed in the Swansea LBAP¹⁵, and are red-listed species of conservation concern in Wales (RSPB Undated), with the exception of dunnoek (which is amber-listed). An additional seven amber-listed species, bullfinch, mistle thrush, meadow pipit, reed bunting, redstart, whitethroat and willow warbler were also considered to have bred.
- 4.26 Willow warbler was the most abundant breeding species on the Survey Site. Large numbers of territories were also held by other passerines typical of a lowland farmland mosaic habitat including chiffchaff, chaffinch, robin and wren. Of the S42 species recorded, dunnoek and song thrush were most abundant, with territories widely distributed across the Survey Site. The abundance of willow warbler, dunnoek and song thrush on the Survey Site may be attributed to the relatively wide-ranging habitat preferences of these generalist species (and the tendency of the former two species to breed in scrub).
- 4.27 The presence of ground nesting species (skylark and meadow pipit) within the Survey Site reflects the fact that much of the Survey Site is grazed pasture. However, the distribution of these species was localised, only being recorded in the pasture fields in the north-west of the Survey Site. Other species recorded on the pasture habitat during survey in April include stonechat, for which two territories were recorded, and northern wheatear *Oenanthe oenanthe* which were likely to have been on passage and not remained to breed on site (see Incidental Records below). Stonechat and wheatear were not recorded during breeding bird surveys in May and June.
- 4.28 Grasshopper warbler was associated with marshy areas in the north-western part of the Survey Site which reflect the species' breeding habitat preferences. The species was only recorded during survey in April. No further records were made during dusk bat surveys or moth trap surveys carried out on the Survey Site during 2014. All registrations of cuckoo were beyond the Survey Site boundary. These were recorded near Lletty'r Bugail, approximately 300 m north of the Survey Site and at Waun y Garn-wen, and approximately 100 m west of the Survey Site, during survey in April

¹⁴ Schedule 1 birds receive full protection under the Wildlife and Countryside Act 1981 (as amended), In addition to the protection from killing or taking that all birds, their nests and eggs have under the Act, Schedule 1 birds and their young must not be disturbed at the nest.

¹⁵ Based on the 2005 consultation draft of the Swansea LBAP. The forthcoming replacement to this plan will be expected to reflect Section 42 Species and Habitats more closely.

and near a pond, north of Cefn-betingau, approximately 100 m east of the Survey Site during survey in May.

- 4.29 House sparrow colonies were recorded at the barn north of Abergelli Farm during all survey visits and at the Abergelli Farm buildings during the survey in May and June. The individual count was 26 during the visit in April, 20 during the survey in May and 18 during the survey in June. Therefore, the number of breeding pairs within the Survey Site is likely to be between nine and 13.
- 4.30 A family of lesser redpoll were observed in scrub bordering the marshy grassland to the west of the Survey Site during the survey in June. Two birds were also recorded in this area during the survey in April. No further evidence of breeding in this species was recorded. Observations of single individuals were made near the Felindre Gas Compressor Station and National Grid electrical substation during survey in May and June.
- 4.31 Three tree pipit territories were recorded during survey. These were recorded immediately south of the gallops at the centre of the Survey Site in May and around the fringes of marshy grassland in the western part of the Survey Site and in the scrub line on the north-east corner of the Survey Site in June. Tree pipit were recorded during all survey visits, with flocks of up to 14 observed over the marshy grassland in the western part of the Survey Site during survey work in May. A family of tree pipit were recorded on a field boundary in the south-east corner of the Survey Site in June. Two pairs of tree pipit were observed immediately south of the gallops at the centre of the Survey Site in June. It is likely that these records are of breeding pairs.
- 4.32 Indicative central territory locations are shown on **Figures 1a** and **1b** in **Appendix 1**.

Non-Passerines

- 4.33 Red kite were recorded during surveys in April and May. A bird was noted flying over the houses at Abergelli Farm and over the pasture in the northern part of the Survey Site during the survey in April. Two red kites were recorded mobbing a peregrine falcon over the Felindre Gas Compressor Station land during the survey in May. An apparent pair was also recorded flying over the eastern boundary in the northern compartment of the Survey Site during the same survey day. Given the timing of the records, and that at least one pair was recorded during the survey in May it is likely that red kite breed locally. However, no evidence was found to suggest breeding occurred within the Survey Site during 2014.
- 4.34 Red kite are listed under Schedule 1 Part 1 of the Wildlife & Countryside Act 1981 (as amended) and Annex 1 of the Council Directive 79/409/EEC on the Conservation of Wild Birds making it an offence to intentionally or recklessly disturb birds at, on or near an 'active' nest, or to directly threaten birds, such as deliberately kill or capture birds, destroy their nests or take their eggs.
- 4.35 A peregrine falcon was observed flying over the Felindre Gas Compressor Station and National Grid electrical substation during survey in May. There is limited suitable breeding habitat within the Survey Site for peregrine falcon, and therefore this species is only likely to visit the Survey Site to forage on an occasional basis. Electricity pylons within the Survey Site were scanned from the ground for the presence of peregrine (and corvid) nests. No evidence of crow nests, which are sometimes appropriated by peregrine were found. Peregrine falcon is listed under Schedule 1 Part 1 of the Wildlife & Countryside Act 1981 (as amended).
- 4.36 It is possible that some of the farm buildings within the Survey Site may support breeding barn owl, although no trees were found that appear, from a ground level inspection, to have sufficiently large cavities to support nesting barn owls. The marshy fields in the north-west and at the southern end of the Survey Site could provide habitat for field vole *Microtus agrestis* (a preferred prey species) given the thick, tussocky structure of some parts of the sward. There was no evidence that barn owl breed within the Survey Site, and are unlikely to have done so in the recent past due to lack of droppings in the buildings and anecdotal evidence to this effect from the landowner. No signs of barn owl presence were found during building inspections and no birds were recorded during the breeding bird surveys.

Incidental Records

- 4.37 Species recorded during other survey work in the bird breeding season but not recorded during breeding bird surveys are described below.
- 4.38 Ten male and two female wheatear were observed on the horse pasture in the northern part of the Survey Site during a bat transect recce on 24 April 2014, and were presumably transient migrant birds.
- 4.39 Young tawny owls *Strix aluco* were heard calling near the houses in the western part of the Survey Site during a moth survey on 16 June, with birds of unknown age heard during a second survey on 13 August 2014. This suggests that tawny owl bred on the Survey Site in 2014, presumably in the woodland block immediately to the south-west of Abergelli Farm, although much of the woodland within the Survey Site is suitable nesting habitat for this species. No further observations of tawny owl were made. A goshawk (female) was observed flying over the Survey Site at dusk on 16 June, and a sparrowhawk *Accipiter nisus*, was recorded roosting in a tree near the aforementioned houses on 13 August.
- 4.40 Red kite were observed flying over the marshy grassland in the western part of the Survey Site during a dormouse survey on 29 May, and near Abergelli Farm during bat transect surveys on 22 May and 17 July 2014. Single red kites flying over the Survey Site were also recorded during Phase 1 habitat surveys on 24 February 2014 and 14 April 2014.
- 4.41 A spotted flycatcher *Muscicapa striata* was recorded in the hedge-line near the two houses on 17 June 2014. Spotted flycatcher is a S42 species of principal importance in Wales, is listed in the Swansea LBAP and is a red-listed species of conservation concern in Wales (RSPB, 2009).

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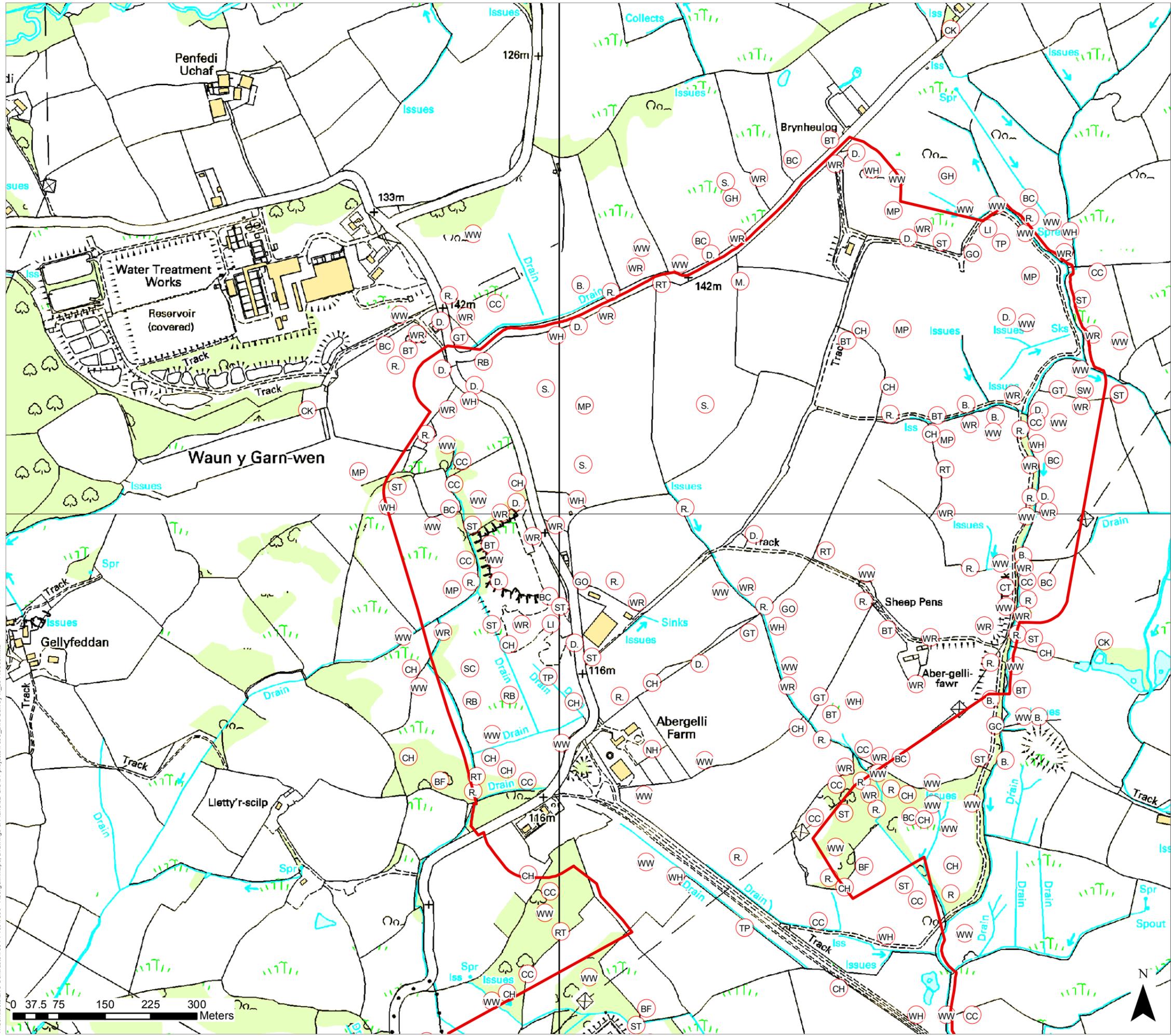
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Appendix 1: Figures

(overleaf)



- LEGEND**
- Survey Site Boundary
 - Breeding Bird Territories

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PROJECT TITLE
 ABERGELLI BREEDING BIRD SURVEY 2014

DRAWING TITLE
 Figure 1a - Breeding Bird Territories - North

DATE: 11.08.2014 CHECKED: OG SCALE: 1:6,000
 DRAWN: GL APPROVED: OG STATUS: FINAL

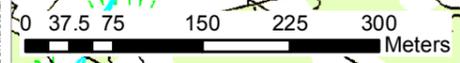
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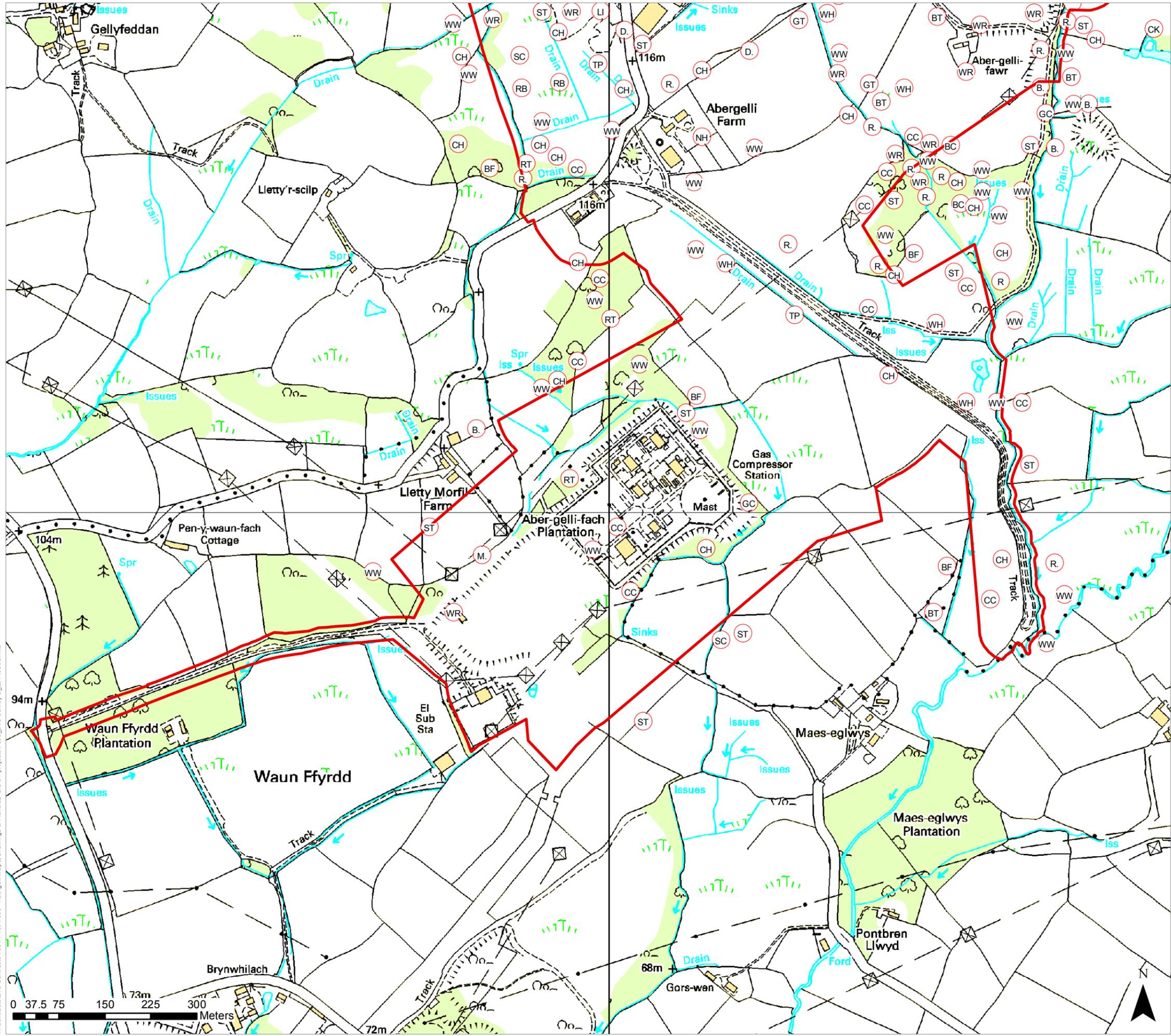
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LEGEND

- Survey Site Boundary
- Breeding Bird Territories

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PROJECT TITLE
 ABERGELLI BREEDING BIRD SURVEY 2014

DRAWING TITLE
 Figure 1b - Breeding Bird Territories - South

DATE: 11.08.2014 CHECKED: OG SCALE: 1:6,000
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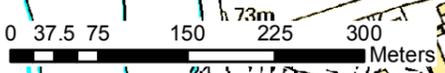
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Appendix 2: Species Tables

Table 3. List of species and count of records within 2 km of the Survey Site obtained from the SEWBReC data search.

Species	Count of records
Barn Owl <i>Tyto alba</i>	21
Black-headed Gull <i>Chroicocephalus ridibundus</i>	11
Common Bullfinch <i>Pyrrhula pyrrhula</i>	94
Common Crossbill <i>Loxia curvirostra</i>	3
Common Cuckoo <i>Cuculus canorus</i>	17
Common Goldeneye <i>Bucephala clangula</i>	2
Common Grasshopper Warbler <i>Locustella naevia</i>	6
Common Kestrel <i>Falco tinnunculus</i>	22
Common Kingfisher <i>Alcedo atthis</i>	6
Common Linnet <i>Carduelis cannabina</i>	17
Common Starling <i>Sturnus vulgaris</i>	55
Corn Crane <i>Crex crex</i>	1
Eurasian Curlew <i>Numenius arquata</i>	1
Eurasian Hobby <i>Falco subbuteo</i>	1
Fieldfare <i>Turdus pilaris</i>	6
Hedge Accentor <i>Prunella modularis</i>	145
House Sparrow <i>Passer domesticus</i>	33
Lesser Redpoll <i>Carduelis cabaret</i>	22
Lesser Spotted Woodpecker <i>Dendrocopos minor</i>	4
Little Plover <i>Charadrius dubius</i>	42
Marsh Tit <i>Poecile palustris</i>	7
Merlin <i>Falco columbarius</i>	2
Northern Goshawk <i>Accipiter gentilis</i>	4
Northern Lapwing <i>Vanellus vanellus</i>	63
Osprey <i>Pandion haliaetus</i>	1
Peregrine Falcon <i>Falco peregrinus</i>	14
Pied Flycatcher <i>Ficedula hypoleuca</i>	3
Red Kite <i>Milvus milvus</i>	54
Redwing <i>Turdus iliacus</i>	45
Reed Bunting <i>Emberiza schoeniclus</i>	23
Ring Ouzel <i>Turdus torquatus</i>	1
Ringed Plover <i>Charadrius hiaticula</i>	31
Sky Lark <i>Alauda arvensis</i>	13
Song Thrush <i>Turdus philomelos</i>	140
Spotted Flycatcher <i>Muscicapa striata</i>	12
Tree Pipit <i>Anthus trivialis</i>	7
Willow Tit <i>Poecile montanus</i>	11

Species	Count of records
Wood Warbler <i>Phylloscopus sibilatrix</i>	8
Yellowhammer <i>Emberiza citrinella</i>	15

Table 4. List of all species recorded during the 2014 breeding bird surveys

Species	BTO species code	Species count			Schedule 1 species	Section 42 species	Red (R) or Amber (A) listed species
		April	May	June			
Blackbird <i>Turdus merula</i>	B.	22	29	29			
Blackcap <i>Sylvia atricapilla</i>	BC	9	6	5			
Blue Tit <i>Cyanistes caeruleus</i>	BT	20	20	26			
Bullfinch <i>Pyrrhula pyrrhula</i>	BF	8	3	5			A
Buzzard <i>Buteo buteo</i>	BZ	2	0	3			
Canada Goose <i>Branta canadensis</i>	CG	10	1	1			
Carrion Crow <i>Corvus corone</i>	C.	38	18	27			
Chaffinch <i>Fringilla coelebs</i>	CH	24	18	30			
Chiffchaff <i>Phylloscopus collybita</i>	CC	15	11	17			
Coal tit <i>Periparus ater</i>	CT	3	0	1			
Cuckoo <i>Cuculus canorus</i>	CK	3	0	1		☐	R
Dunnock <i>Prunella modularis</i>	D.	12	6	6		☐	A
Feral Pigeon <i>Columba livia</i>	FP	0	0	4			
Goldcrest <i>Regulus regulus</i>	GC	2	2	1			
Greenfinch <i>Carduelis chloris</i>	GF	0	0	2			
Goldfinch <i>Carduelis carduelis</i>	GO	9	10	16			
Grasshopper Warbler <i>Locustella naevia</i>	GH	2	0	0			R
Great Spotted Woodpecker <i>Dendrocopos major</i>	GS	3	1	6			
Garden Warbler <i>Sylvia borin</i>	GW	1	0	0			
Great Tit <i>Parus major</i>	GT	16	10	13			
Herring Gull <i>Larus argentatus</i>	HG	2	0	2			R
House Sparrow <i>Passer domesticus</i>	HS	34	19	22		☐	R
Jackdaw <i>Corvus monedula</i>	JD	9	30	29			
Jay <i>Garrulus glandarius</i>	J.	4	1	1			
Lesser Black-backed Gull <i>Larus fuscus</i>	LB	2	2	1			A
Linnet <i>Carduelis cannabina</i>	LI	14	15	10			R
Magpie <i>Pica pica</i>	MG	11	23	6			
Mallard <i>Anas platyrhynchos</i>	MA	1	0	0			
Meadow Pipit <i>Anthus pratensis</i>	MP	2	12	9			
Mistle Thrush <i>Turdus viscivorus</i>	M.	3	2	12			A
Nuthatch <i>Sitta europaea</i>	NH	1	3	0			
Peregrine <i>Falco peregrinus</i>	PE	0	0	1	☐		
Pied Wagtail <i>Motacilla alba</i>	PW	1	1	2			
Red Kite <i>Milvus milvus</i>	KT	2	0	5	☐		A

Species	BTO species code	Species count			Schedule 1 species	Section 42 species	Red (R) or Amber (A) listed species
		April	May	June			
Redpoll (Lesser) <i>Carduelis cabaret</i>	LR	1	7	5		<input type="checkbox"/>	R
Redstart <i>Phoenicurus phoenicurus</i>	RT	3	5	8			A
Reed Bunting <i>Emberiza schoeniclus</i>	RB	3	1	1		<input type="checkbox"/>	A
Robin <i>Erithacus rubecula</i>	R.	30	24	23			
Rook <i>Corvus frugilegus</i>	RO	1	18	0			
Sand Martin <i>Riparia riparia</i>	SM	0	0	1			A
Sedge Warbler <i>Acrocephalus schoenobaenus</i>	SW	0	1	0			
Skylark <i>Alauda arvensis</i>	S.	6	6	1		<input type="checkbox"/>	R
Song Thrush <i>Turdus philomelos</i>	ST	14	19	13		<input type="checkbox"/>	R
Starling <i>Sturnus vulgaris</i>	SG	3	6	15			R
Stonechat <i>Saxicola torquata</i>	SC	2	6	6			
Swallow <i>Hirundo rustica</i>	SL	21	7	17			A
Swift <i>Apus apus</i>	SI	0	7	0			A
Tree Pipit <i>Anthus trivialis</i>	TP	19	8	18		<input type="checkbox"/>	R
Whitethroat <i>Sylvia communis</i>	WH	13	12	15			A
Willow Warbler <i>Phylloscopus trochilus</i>	WW	41	18	21			A
Woodpigeon <i>Columba palumbus</i>	WP	8	15	20			
Wren <i>Troglodytes troglodytes</i>	WR	22	26	31			
Northern wheatear <i>Oenanthe oenanthe</i>	W.	2	0	0			A