

APPENDIX A

Ecological Assessment by Eco-scope (August 2016)



ECOLOGICAL ASSESSMENT

**TO SUPPORT A PLANNING APPLICATION FOR A RESIDENTIAL DEVELOPMENT
ON LAND IN SARON, BETHEL**

for

Cadnant Planning Ltd.

August 2016

Ref: ECO 114

Eco-scope ltd.

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CRYNODEB:

Cafodd Ecoscope Cyf. ei gomisiynu gan Mr John Williams drwy Cadnant Planning Cyf. i wneud arolwg ecolegol ar dri chae ym Methel, Caernarfon, Gwynedd. Mae'r safle yn lleoliad arfaethedig ar gyfer datblygiad preswyl. Yn Ebrill a Gorffennaf 2016 yn dilyn gwaith ymchwil data, gwnaethpwyd arolwg eang ac astudiaeth fotanegol fanwl o'r safle.

Mae'r data a gasglwyd yn dangos fod y tri chae dan sylw yn laswelltir niwtral wedi'i led-wella. Mae'r safle 'n ffurfio cyrion safle Bywyd Gwyllt ymgeisiol Rhos-chwilog (Deheuol). Mae'r caeau yn dangos ôl gor-bori a defnydd rheolaidd o wrtaith. Nid yw'r caeau hyn yn cyfrannu at yr asedau ecolegol sy'n gwneud Rhos-chwilog (Deheuol) yn safle bywyd gwyllt ymgeisiol.

Mae'r adroddiad yn asesu effeithiau bosibl y datblygiad arfaethedig, sydd yn y camau cyntaf o'i ddyluniad ac yn awgrymu ffyrdd i liniaru unrhyw effeithiau negyddol o'r cynigiad.

SUMMARY

Ecoscope Ltd. were commissioned by Mr John Williams through Cadnant Planning Ltd to undertake an ecological survey of three fields in Bethel, Caernarfon, Gwynedd. The site is the proposed location of a housing development. A detailed botanical and walkover survey of the site was undertaken in April and July 2016 along with a desktop search.

The survey data collected indicates that the three fields in question are semi-improved neutral grassland. The site forms the periphery of the Rhos-chwilog (South) candidate wildlife site. The fields are subject to overgrazing and the regular application of fertiliser. The habitat present does not contribute to the ecological assets that make Rhos-chwilog (South) a candidate wildlife site.

The report assesses the potential impact of the proposed development which is in the very early stages of design and suggests possible mitigation measures to offset any negative impacts of the proposal.

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11th August 2016 **Revision** #2

Field surveyors: Mr. Stuart Kato M.Sc., MCIEEM
Mr Simon Cope M.Sc., MCIEEM
Mr. Mathew Saunders, B.Sc. (Hons.)

Figure 1. OS Map showing the site location (red arrow marks the plot position)



Figure 2. Aerial photograph of the site (approximate boundary highlighted in red)

1.2 Legislative context

1.2.1 A wide range of legislation relating to wildlife exists, this study considered all relevant legislation. A summary of wildlife legislation is provided in **Appendix II**.

2 APPROACH AND METHOD OF ASSESSMENT

2.1 General approach

2.1.1 To assess the likely effects of the development of the site, a series of desk-top and site investigations were undertaken during the spring of 2016 with an update survey undertaken in July of the same year. The data collection method followed the general guidance provided by the Institute of Ecology and Environmental Management (IEEM) in the Ecological Impact Assessment Guidelines (EclA). Information about the site has been gathered through a graduated series of surveys and searches which have highlighted the key ecological issues concerning the proposals. The search area was not limited to the site boundary, the desk top search considered habitat and species within 1km.

2.1.2 Three levels of survey were used to establish the ecological baseline for the site:

- A desktop search;
- A preliminary ecological assessment;
- A full botanical survey

2.1.3 The surveyors were all appropriately experienced ecologists licensed to undertake surveys for protected species as required and experienced in botanical survey work.

2.2 Survey and assessment methods

Desktop search

2.2.1 A 'desk-top' search for protected species and sites within 1km radius of the site centred on NGR SH 5301 6550 was conducted, using Cofnod. Cofnod is one of the four local record centres in Wales. Cofnod holds the largest number of records for biodiversity and geo-diversity information in North Wales. The results of this combined with walkover surveys enabled surveys to focus upon specific species and habitats of particular relevance to the project.

Preliminary Ecological Assessment

2.2.2 A preliminary ecological assessment of the site was undertaken in March/April 2016 to ascertain the ecological value, identify habitat types which have the potential to support protected species, record any evidence of protected species and to establish if further surveys needed to be undertaken. The survey recorded the general vegetation, making a list of vascular plant species. Features of wildlife interest were recorded, and the potential for protected / important species to be present was noted.

Detailed ecological surveys

2.2.3 The following specialist surveys, shown by the desk-top and preliminary ecological assessment work to be needed, were undertaken. All survey methods followed best practice guidance and were undertaken by suitably experienced and where appropriate licensed ecologists;

- Botanical survey

2.2.4 In addition, an assessment of the site was made against the local and national Bio-Diversity Action Plan Species (BAP and LBAP species) and the Section 42 'Welsh Species and Habitats of Principal Importance' (as listed in the Natural Environment and Rural Communities Act (NERC Act). Planning guidance publication Technical Advice Note 5 (TAN5) recommends that these species are taken into account (in addition to those protected by U.K. and European legislation) as a material consideration in the planning process.

2.3 Limitations of the method

2.3.1 The observations and evidence of wildlife using the landscape are valid and accurate for the times the survey was conducted. Undertaking the botanical survey in early April may limit the detectability of some herbaceous perennial species. Wild

animals can be unpredictable and regularly change their territories and habits; therefore we advise that the results are valid for one year from the date of collection. If the data is relied upon after this period update surveys will be required.

3 BASELINE

3.1 Planning context

3.1.1 Relevant nature conservation legislation and planning guidance has been taken into consideration during the impact assessment phase of this investigation. Please see Section 1.2 for an outline of the nature conservation legislation affecting the proposals. The following planning documents have been consulted:

- Technical Advice Note Five: Nature Conservation and Planning (TAN5);
- The Gwynedd Unitary and Local Development Plan (UDP / LDP);
- The Local and National Biodiversity Action Plans (L/N BAP).

3.1.2 TAN 5 provides guidance on how local planning authorities, developers and key stakeholders can work together to deliver more sustainable development that does not result in losses from the natural habitat but enhances it. It contains information on the role of nature conservation in relation to development control, a topic relevant to this proposal.

3.1.3 The assessment has been undertaken to satisfy the following points:

- To ensure that all potentially significant nature conservation interests and effects on them are considered at the outset;
- To ensure that the planning application fully address all likely significant environmental effects;
- To ensure that opportunities for the enhancement of nature conservation interest are considered.

3.1.4 The Gwynedd UDP has the following policies which relate directly to this project and nature conservation:

Policy B17: Protecting sites of regional or local significance:

“Proposals likely to cause direct or indirect significant harm to a Local Nature Reserve (LNR), or Non-statutory Nature Reserve (NsNR) or Wildlife Site (WS) will be refused unless:

- 1. the damage to nature conservation features can be prevented and the developer takes steps to protect, enhance and manage the nature conservation features, or*
- 2. the proposal is required in order to fulfil social, environmental and/or economic needs that override the site’s regional or local importance and all the following criteria can be met:*
 - a) the location, design and construction of the development is such that damage to nature conservation features are minimised, and opportunities for nature conservation gain are taken;*
 - b) compensating and equivalent nature conservation features are provided;*
 - c) the remaining nature conservation features are protected and enhanced and provision is made for their management;*
 - d) where appropriate opportunities are provided for the public to enjoy and interpret the site.*

When a development is approved planning conditions or agreements will be used in order to conserve and enhance the biodiversity value of any affected site, or any new site that is created, and to put in place appropriate compensatory and management measures.”

Policy B20: Species and their habitats that are internationally and nationally important:

“Proposals likely to result in direct or indirect unacceptable disturbance or harm to protected species and their habitats will be refused unless:

2. *In the case of a species protected under national legislation:*
 - a) *the effects will be minimised or mitigated through careful design, work arrangements or other actions or, when this is not practical and the following is likely to prove effective;*
 - b) *the developer will take careful and effective steps to relocate the species or habitat.*

When a development is approved, planning conditions and/or agreements will be used in order to protect and sustain the species' vitality."

Policy B21: Wildlife corridors, habitat linkages and stepping stones:

"Development which may adversely affect the integrity or continuity of the landscape features which are of major importance for wild flora and fauna will only be permitted if it can be shown that the reasons for the development clearly outweigh the need to retain the features and that mitigating measures can be provided, which are within the control of the developer, which would reinstate the integrity or continuity of the features.

Appropriate management of these features will be encouraged generally and particularly by the imposition of conditions on planning permissions, by the use of planning agreements and by entering into management agreements with landowners and developers where appropriate."

- 3.1.5 Biodiversity action plan species and habitats are considered to be important local features of the landscape. Action plans are split into two levels covering Local (LBAP) and National (UKBAP) action plan species. The presence of a listed species on a development site is taken into account during the planning process as a material consideration.
- 3.1.6 Nineteen species and fifteen habitat types are included for consideration in the Natur Gwynedd Biodiversity Action Plan (LBAP), not all of these habitats and species are relevant to the study area. Throughout the report we have highlighted BAP species and habitats as they occur, we have also considered species considered likely to use the site but were not recorded.

3.2 Desktop Study

- 3.2.1 The full results of the COFNOD environmental information search are displayed in **Appendix III**. Searches were also made through the NBN Gateway and the MAGIC map application websites, the results of these investigations are detailed below.
- 3.2.2 A desk study was carried out to identify species or habitats that are considered important in a local context and to identify any species recorded locally that may be associated with the application site. A search of the Natural Resources Wales website was undertaken to determine the presence of all statutory sites (e.g. Sites of Special Scientific interest [SSSI's], Special Areas of Conservation [SAC] etc.) within 2km of the application site.
- 3.2.3 Cofnod, the North Wales environmental information service was contacted for records of protected, priority and locally important species and habitats, international, national and local biodiversity sites within a 1km radius of the application site.

Statutory and non-statutory wildlife site records

- 3.2.4 The only statutory site within 2km of the study area is the Menai Strait Special Area of Conservation (SAC), located 1.87km from the proposed development plot. This statutory designation is due to sandbank, mudflat and reef habitats within the strait; thus no further consideration of this SAC is required for the scope of this study.
- 3.2.5 Seven non-statutory candidate wildlife sites are present in the search area. Data supplied by Cofnod revealed that the application area itself lies within the non-statutory candidate wildlife site of Rhos-chwilog (South). This wildlife site consists of 10.6ha of rhôs pasture which is known for marshy grassland habitat containing species such as purple moor grass and rush pasture; the application area consists of 1.31ha of this area.

3.2.6 The remaining six non-statutory wildlife sites within the search area include; “Pen-yr-orsedd” rhôs pasture (located 137m to the south-west on the opposite side of the B4366), “Gwyndy” semi-improved neutral grassland (located 215m to the north-east with broadleaved woodland plots further afield), “Rhos-chwilog (North)” semi-improved neutral grassland (located 300m north-west), “Coed Belyn Mawr/Wern Fawr” marshy grassland (located 476m to the south-east), “Cefn-Cynrig” semi-improved neutral grassland & marshy grassland (located 534m to the west) and “Penrhyn Stud” marshy grassland (located 643m to the south with semi-improved neutral grassland and broadleaved woodland further afield).

Protected species records

3.2.7 Category 1 (species with European and/or UK Legal Protection, Section 42 [NERC] Species or UK BAP Priority species) recorded in the search area include;

- Barn Owl (*Tyto alba*): 441m south-east, 2006.
- Red Kite (*Milvus milvus*): 1km north-west above the Felinheli bypass, 2014.
- Whiskered Bat (*Myotis mystacinus*): 407m west on the outskirts of Bethel, 1992.
- Badger (*Meles meles*): 441m west on the outskirts of Bethel (old record 1979).
- Otter (*Lutra lutra*): 603m to the north (old record 1998, individual found dead)

3.2.8 Category 2 species (Global Red List, British Red Data Book, Nationally Rare & Scarce, Welsh Red and Amber Birds & Welsh Vascular Plant Red Data List, where these are not identified in Category 1) recorded within 1km of the proposed development area include;

- Snipe (*Gallinago gallinago*): 462m south-west in Pen-yr-orsedd wildlife site, 2008.
- Whitethroat (*Sylvia communis*): 594m south, 2013.
605m north, 2013.
827m north, 2013.

- Swallow (*Hirundo rustica*): 505m north, 2013.
605m south, 2013.
817m north, 2013.
- Willow Warbler (*Phylloscopus trochilus*) 623m north, 2013.
- Greylag Goose (*Anser anser*) 868m south-west, 2013.
- Lesser black-backed gull (*Larus fuscus*) 879m south-west, 2013.
- *Laccobius sinuatus* (Beetle): 464m west, 2002.

3.2.7 Category 3 species (LBAP Species not identified under Categories 1 & 2, Locally Important species as specified by local experts) identified during the data search include;

- Brown Hare (*Lepus europaeus*): 255m south, 2003.
- Hedgehog (*Erinaceus europaeus*): 796m west, 2008.
- Corn Spurrey (*Spergula arvensis*): 443m south-east, 2005.
- Field Woundwort (*Stachys arvensis*): 443m south-east, 2005.
- Lesser Butterfly-orchid (*Platanthera bifolia*): 470m north within Rhos-chwilog (South), 1992.
- Common Toad (*Bufo bufo*): 816m west, 2007.

3.3 Walkover Survey results

- 3.3.1 A 'walkover survey' (visual inspection) as part of a Preliminary Ecological Assessment of the site was conducted in daylight to assess the potential for the site to be used by protected species. The walkover survey was undertaken by Principal Ecologist Mr Stuart Kato M.Sc. MCIEEM on 29th March 2016. Weather conditions were calm and cloudy with no precipitation, suitable for such a survey.
- 3.3.2 The study area is situated on the eastern end of the village of Bethel. The village lies immediately adjacent to the site; bordering the entire western boundary of the site, and continues approximately 1km to the West. The village comprises of a considerable residential area of hard-standing and road infrastructure. The southern boundary of the site lies adjacent to the B4366 road which runs in an east-to-west direction beyond which lie approximately 12 other residential buildings and improved agricultural pasture further afield to the south. A hard-standing private driveway runs along the entire eastern boundary of the site leading to a residential plot of Tyddyn Andrew Isaf adjacent to the north-eastern corner of the study area. The area beyond the driveway to the east comprises predominantly of improved agricultural pasture with very little connectivity to any features of ecological value. The northern boundary of the site comprises of a drainage ditch and public footpath, beyond which lies the remainder (and majority) of the Rhos-chwilog (South) candidate wildlife site, comprising of marshy grassland. This area of marshy grassland contains a network of hedgerows and standard trees providing connectivity to other wetland areas and 3 small plots of restored ancient woodland approximately 900m to the north-east.
- 3.3.3 The application area consists of 3 fields which are separated by two hedgerows running parallel in a north-west to south-east direction. A third short hedgerow (50m) lies parallel to the others along the north of the plot. The hedgerows form one of the two primary habitat types at this site; the second and most abundant habitat being semi-improved neutral grassland across all 3 of the fields on site.
- 3.3.4 The 3 field areas of semi-improved neutral grassland have undergone agricultural improvement by application of fertilisers for the production of bales, the vegetation

within the fields was short at the time of survey due the fields also having been used for grazing. Cock's-foot (*Dactylis glomerata*), Perennial Rye-grass (*Lolium perenne*) and White Clover (*Trifolium repens*) were dominant along with Yarrow (*Achillea millefolium*), Common Bent (*Agrostis capillaris*), and Ribwort Plantain (*Plantago lanceolata*).

- 3.3.5 Three hedgerows in the application area have undergone intense maintenance by use of a tractor-mounted flail and coppicing works. The hedgerows are species-poor, dominated by Bramble (*Rubus fruticosus*), with recently-coppiced Hawthorn (*Crataegus monogyna*), Holly (*Ilex aquifolium*) and Oak (*Quercus sp.*). The three hedgerows are “intact” however have little connectivity on either end due to the village of Bethel being on the western end and a defunct hedge on the eastern end. As a result these are isolated short lengths of hedgerow, likely relics of previous field boundaries within the surrounding area.
- 3.3.6 A ditch and public footpath form the northern boundary of the application area, the ditch has been subject to clearance and thus the banks have low vegetation and are the same as the surrounding semi-improved neutral grassland fields, with no further species of interest or any areas of potential refuge for protected species.
- 3.3.7 A further drain runs north to south along the western boundary of the site. This drain was installed relatively recently as infrastructure to remove standing water from the village of Bethel. At the time of survey the water level was very low. The banks have low vegetation and are the same as the surrounding semi-improved neutral grassland fields.
- 3.3.8 The application site is included within the Rhos-chwilog (South) candidate wildlife site. Rhos-chwilog (South) has received this classification due to the presence of marshy grassland habitat which forms “Rhôs pasture” as specified by the Natur Gwynedd Local Biodiversity Action Plan (Gwynedd LBAP). Rhôs pasture is defined as areas of marshy grassland containing a mixture of Purple Moor-grass and rush pasture occurring below the “fridd” wall. The initial ‘walkover survey’ did not identify obvious features to imply the application area as being suitable for such a

designation; therefore a full botanical survey was conducted of the proposed development area in order to establish the botanical value of the grassland in question.

3.4 Botanical survey

3.4.1 A full botanical survey of the site was conducted in daylight to assess the botanical value of the site and the habitats present. The botanical survey was undertaken by Ecologist Mr Simon Cope M.Sc. MCIEEM on 1st April 2016. Weather conditions were calm and cloudy with no precipitation, suitable for such a survey. The results of this survey are displayed in **Table 1**. An update survey was conducted in June, this survey considered the results of the earlier survey to be concurrent. The fields had been cut which we understand is part of their usual management regime.

Table 1. Species recorded within the grassland habitat

Scientific name	Common name	Frequency (DAFOR)
<i>Acer pseudoplatanus</i>	Sycamore	R
<i>Achillea millefolium</i>	Yarrow	F
~ <i>Agrostis capillaris</i>	Common Bent	F (LA)
* <i>Agrostis stolonifera</i>	Creeping Bent	O (LF)
* <i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	O
<i>Centaurea nigra</i>	Knapweed	R (LO)
<i>Cerastium fontanum</i>	Common Mouse-ear	O
* <i>Conopodium majus</i>	Pignut	F
<i>Crataegus monogyna</i>	Hawthorn	O
* <i>Cynosurus cristatus</i>	Crested Dog's-tail	F
<i>Dactylis glomerata</i>	Cock's-foot	F (LA)
<i>Epilobium sp.</i>	A Willowherb	R
<i>Ficaria verna</i>	Lesser Celandine	O
<i>Hedera helix</i>	Ivy	O (LF)

Scientific name	Common name	Frequency (DAFOR)
<i>Heracleum sphondylium</i>	Hogweed	R
<i>Holcus lanatus</i>	Yorkshire Fog	O
<i>Hyacinthoides non-scripta</i>	Bluebell	R
<i>Hypochaeris radicata</i>	Cat's-ear	LO
<i>Ilex aquifolium</i>	Holly	R
<i>Iris pseudacorus</i>	Flag Iris	R (LF)
<i>Juncus acutiflorus</i>	Sharp-flowered Rush	LF
<i>Lolium perenne</i>	Perennial Rye-grass	F (LA)
* <i>Luzula campestre</i>	Field Wood-rush	LO
<i>Odontites vernus</i>	Red Bartsia	O
<i>Plantago lanceolata</i>	Ribwort Plantain	F
<i>Poa annua</i>	Annual Meadow-grass	LO
<i>Poa trivialis</i>	Rogh-stalked Meadow-grass	O
<i>Prunus spinosa</i>	Blackthorn	O (LD)
* <i>Ranunculus acris</i>	Meadow Buttercup	LF
<i>Ranunculus repens</i>	Creeping Buttercup	O
<i>Rosa canina</i> agg.	Dog-rose	R
<i>Rubus fruticosus</i> agg.	Bramble	R (LO)
<i>Rumex acetosa</i>	Sorrel	LO
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O (LF)
<i>Senecio jacobaea</i>	Common Ragwort	R
<i>Taraxacum officinale</i> agg.	Dandelion	R
* <i>Trifolium pratense</i>	Red Clover	R
<i>Trifolium repens</i>	White Clover	F
<i>Urtica dioica</i>	Nettle	R (LO)
<i>Veronica serpyllifolia</i>	Thyme-leaved Speedwell	O
<p>DAFOR scale: D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare, Prefix L = Locally. *indicator of neutral grassland ~ indicator of Acid grassland</p>		

- 3.4.2 Overall, the site is considered to be a “low quality” example of neutral Semi – improved grassland, with only relics and small patches of the original sward remaining intact. The survey did not reveal the presence of any unimproved grassland indicator species. Seven indicator species for neutral grassland were identified compared with a single species indicating acid grassland
- 3.4.3 The sward has been degraded by the regular application of fertilisers and apparent heavy grazing. Along the route of recently replaced pipelines (gas and water) (running along the eastern boundary of the southern field) the ground has been re-seeded with low quality grass. The “best quality” area of intact original sward is concentrated in a small area in the southern-most field nearest the main road. The site is regularly grazed by sheep and horses. Evidence of heavy over-grazing was present in areas of poached ground at pinch points.
- 3.4.4 Overall the botanical survey identified the bulk of the grassland habitat as semi-improved neutral grassland, some very small patches of poor quality relict MG5 grassland were present in the southern field. It is possible that in the past more of the grassland was MG5 but little currently remains because of management practices.
- 3.4.5 Rhos-chwilog (South) is designated as a candidate wildlife site due to “marshy grassland” habitat which is located to the north of the application area. It is therefore arguable that the application site, which is on the very edge of the designated area, does not contribute to the ecological assets that make Rhos-chwilog (South) a candidate wildlife site. In addition the survey undertaken indicated the grassland to be of low quality.
- 3.4.6 Of the 1.3ha application site only a very small proportion of this area is considered to be of wildlife value, this is concentrated in patches in the southernmost field and is estimated to equate to less than 0.1 hectares.

3.5 Assessment of other Section 42 and LBAP species present

3.5.1 Assessment of the site was made on the ability of the habitat present to support species listed as important on Biodiversity Action Plans (Local and National) and those species listed on Schedule 42 of the NERC Act (Species of Principal Importance in Wales).

3.5.2 The habitat is considered to be suitable for a range of species which were not recorded but considered possible to be present. Their absence during the survey period may be because of a low population density, survey timing, chance or simply that the species has not expanded its range to this area yet. Section 42 and LBAP species that meet these criteria are listed below along with their status and reasons for consideration:

- **Hedgehog** (*Erinaceus europaeus*) – suitable habitat present, recorded locally
- **Brown Hare** (*Lepus europaeus*) – suitable habitat present, recorded locally

3.5.3 These species were not observed on site but the habitat and on the site is suitable and they are known to occur locally.

3.6 Limitations

3.6.1 All data presented in this report was correct at the time of collection. An update inspection was undertaken in early July and found the initial survey results to be concurrent.

3.6.2 The data presented is considered to be valid for a period of one year, after which update surveys are recommended.

4 IMPACT ASSESSMENT

4.1 Construction and operational effects

4.1.1 The anticipated potential impacts, without mitigation, are outlined in the following section.

Avifauna

4.1.2 Three short lengths of heavily managed hedgerow amounting to a total of 185m are located within the application plot; any vegetation clearance works would need to be timed to avoid the bird nesting season which runs from March to September inclusive. The potential removal of hedgerows would result in the loss of some nesting habitat for common species. The lack of ecological connectivity of these hedgerows restricts their ecological concern to bird species. The impacts are considered to be **LOW** and of **LOCAL** scale.

Habitat

4.1.3 Any development of the plots would involve the loss of part of the semi-improved neutral grassland forming the majority of the site. The development site is not considered to form a rare habitat in itself although the site is associated with the Rhos-chwilog (South) candidate wildlife site known for its “Rhôs-pasture” or “marshy grassland”. The proposal will not impact upon any wildlife corridors or wildlife links and is not considered to have a direct impact upon the Rhôs-pasture. The impact on habitat without mitigation is considered to be **LOW** and of **LOCAL** scale.

Chiroptera

- 4.1.4 The proposals do not interfere with any known roosting areas for bats. The short lengths of hedgerow do not provide connectivity or “linear features” such as those commonly used by bats. Suitable foraging habitat is common in the locality and the loss of this area in isolation is not considered to be detrimental to the continued survival of bat species in the area. The impact upon bats is considered to be **LOW** and of **LOCAL** scale.

Herpetofauna

- 4.1.5 The habitat on site provides very little suitable habitat for reptile species, the grassland is heavily managed (i.e. cut for hay and grazed) and vegetation on the site provides little ground cover as potential refuge; no reptiles were recorded as being present thus no impacts are considered to be likely.

Wildlife sites

- 4.1.6 The application site resides within the “Rhos-chwilog (South)” non-statutory candidate wildlife site. It is arguable however that the land in question does not contribute to the ecological assets that make Rhos-chwilog (South) a candidate wildlife site. The wildlife site has been designated due to “marshy grassland” habitat, while the application area consists to semi-improved neutral grassland. This grassland is subject to agricultural practices including fertilisation and grazing thus reducing its potential ecological value. Semi-improved neutral grassland is not listed as an important local habitat.

- 4.1.7 The application site forms a “peninsula” extending to the south from the majority of Rhos-chwilog (South), it is surrounded on 3 of its 4 sides by a residential area, a main road and a hard-standing driveway, beyond which lies intensively-managed, improved farmland of low ecological value.
- 4.1.8 **Figure 3** shows the application area in relation to candidate wildlife sites in the locality. The site does not form a wildlife corridor, habitat linkage or stepping stone. The site lies between the village of Bethel to the west and improved farmland to the east.



Figure 3. Application site (blue) in relation to local wildlife sites (brown) and the village of Bethel to the west.

5 ENHANCEMENT AND MITIGATION

5.1 Possible measures

- 5.1.1 There is little information currently available on the detail of the proposal. Developing the fields in question will result in an overall minor negative impact to nature conservation. However, the habitat present is not exceptional and improvements to nearby habitat and incorporation of wildlife enhancing measures with the proposed development are a realistic possibility to ensure that the development results in an overall net biodiversity gain. We propose possible mitigation and enhancement, these suggestions would need to be further refined once more detailed plans are available.
- 5.1.2 The landowner owns 18 acres of land in the locality. The development would represent an opportunity to condition long term management of both the immediate site and adjacent land to a management plan approved by Gwynedd council.
- 5.1.3 The impacts and possible mitigation measures are detailed in table two below.

Table 2. Impacts, enhancements and mitigation

Impact	Description of possible impact	Mitigation / enhancement proposal	Possible Impact following mitigation
Avifauna	Loss of bird nesting habitat.	RAMS to avoid interference. Bird nesting boxes included as part of the scheme.	Negligible
Habitat	Loss of semi-improved neutral grassland	Incorporate areas of wildflower grassland and invertebrate attracting planting in the proposal	Low

Impact	Description of possible impact	Mitigation / enhancement proposal	Possible Impact following mitigation
Habitat	Enhancement	Manage adjacent habitat to an agreed ten year management plan to enhance the biodiversity value of the local area.	Potential enhancement
Habitat	Enhancement	Install bat boxes	Potential enhancement
Habitat	Enhancement	Create wetland habitat on adjacent land.	Potential enhancement

6 CONCLUSION

6.1 Concluding Statement

- 6.1.1 The survey data indicates that the three fields in question are semi-improved neutral grassland. The site is subject to overgrazing and regular application of fertiliser. The habitat present does not contribute to the ecological assets that make Rhos-chwilog (South) a candidate wildlife site.
- 6.1.2 Provided that the possible mitigation and enhancement recommendations suggested are implemented it is feasible that the impacts noted could be significantly offset and biodiversity gain realised.
- 6.1.3 The Gwynedd UDP policies do allow provision for development on candidate wildlife sites with the condition that any loss is appropriately compensated for. It is considered that with careful planning and a long term commitment to management, the proposed development could provide an opportunity to better manage nearby existing habitat. The loss of a small area of steadily-degrading, poor quality relict grassland could be offset by local mitigation and enhancement resulting in an overall biodiversity gain.

Appendix I Relevant wildlife Legislation Summary

Although we believe our interpretation of the law to be accurate, we recommend that for any further clarification required, that advice is sought from a legal professional.

The Wildlife and Countryside Act (1981) as amended

- 1.2.2 The Wildlife and Countryside Act 1981 (as amended) is the principal mechanism for the legislative protection of wildlife in Great Britain. This piece of legislation protects the species listed in Section Nine of the Act from a range of actions including disturbance, capture or damage to breeding or resting places. It is important to consider this legislation as actions undertaken during construction may be classed as illegal under the act if any of the protected species listed occur on the site.

The Conservation of Habitats and Species Regulations (2010)

- 1.2.3 This piece of legislation transposes European legislation (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive)) into national law. Of particular relevance to development projects these regulations require that important sites are designated Special Area of Conservation (SAC) and the protection of certain species listed in the regulations from, killing, disturbance, trade or deliberate capture.
- 1.2.4 The illegal actions under the Conservation of Habitats and Species Regulations (2010) can be made lawful through the granting of licenses by the appropriate authorities. Licenses may be granted for a number of purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild population of the species concerned.

The protection of Badgers Act (1992)

1.2.5 Badgers are protected under the Protection of Badgers Act 1992. This Act consolidates all previous legislation including the Badgers Act 1973 (as amended) and the Badgers (Further Protection) Act 1991. It is an offence to wilfully take, kill, injure or ill-treat a badger. Amongst other offences it is illegal to interfere with a badger sett through actions such as:

- damaging a sett or any part thereof;
- destroying a sett;
- obstructing access to a sett;
- causing a dog to enter a sett;
- disturbing a badger while occupying a sett

1.2.6 These offences can easily be committed during development proposals if a Badger sett is located close to the works. Some activities can be undertaken close to a sett in certain circumstances under licence.

The Natural Environment and Rural Communities Act (NERC) (2006)

1.2.7 This legislation means that local authorities and other public authorities in England and Wales have a duty to promote and enhance biodiversity in all of their functions. The act aims to raise the profile of biodiversity and to make sure that it is considered in all local authority decisions and policies. The official wording of the legislation, in section 40 of the Act, states that: "Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity."

Appendix II Photographs of the site



A. View from southern field boundary hedge looking North-west



B. View from the southern field boundary hedge looking west



C. View from the southern field boundary hedge looking North.

Appendix III COFNOD data search records

Search Location	Grid Reference
Bethel	SH5300965505

Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID
H5271264567	May 2013 - July 2013	Anon - Wildwood Ecology Ltd				BBS survey	D1374/005/01
H5329366371	May 2013 - July 2013	Anon - Wildwood Ecology Ltd				BBS survey	D1374/005/01
H5265 (Approximate)	28/05/1999	Andrew Clarke	1		Bethel		D0061/005/01
H532650 (Supplied by Original Recorder)	28/12/2005	John Harold	1		Bethel East; Tyddyn y Berth		D0061/009/01
H5306866117	May 2013 - July 2013	Anon - Wildwood Ecology Ltd				BBS survey	D1374/005/01
H525651	11/10/2008	Bratton, Mr J.H.			Marsh N of Llwyn Bedw, Bethel	Tussocky marsh on a north-facing slope. Largely consists of seepage, with scattered Sphagnum tussocks.	D1451/001/01
H5306166095	May 2013 - July 2013	Anon - Wildwood Ecology Ltd				BBS survey	D1374/005/01
H5298064798	May 2013 - July 2013	Anon - Wildwood Ecology Ltd				BBS survey	D1374/005/01
H5329966358	May 2013 - July 2013	Anon - Wildwood Ecology Ltd				BBS survey	D1374/005/01
H5305466107	May 2013 - July 2013	Anon - Wildwood Ecology Ltd				BBS survey	D1374/005/01
H5298064815	May 2013 - July 2013	Anon - Wildwood Ecology Ltd				BBS survey	D1374/005/01

H5331264493	May 2013 - July 2013	Anon - Wildwood Ecology Ltd				BBS survey	D1374/005/01	BA BU LE
H5271264555	May 2013 - July 2013	Anon - Wildwood Ecology Ltd				BBS survey	D1374/005/01	BU LE SI
H56 (Selected from Interactive Map)	08/06/2014	Catrin Slade	1		Site Name Withheld	Comments Withheld	D1117/001/01	BR W W G
H535662 (Estimated Centroid of Site))	2005 approx	BASC Recorder (13461753-2)				Shoot Size Range: 0-3km	D0132/001/02	BA RI W CO G
H5330564496	May 2013 - July 2013	Anon - Wildwood Ecology Ltd				BBS survey	D1374/005/01	BA UL LE G
H5314566198	May 2013 - July 2013	Anon - Wildwood Ecology Ltd				BBS survey	D1374/005/01	UL LE
H540652	2003	Kate Williamson	1 Adult, 1 Juvenile		Dinorwig Quarry	Grid Reference Type: Estimated from Map	D0106/001/07	Be LE G
H5306066088	May 2013 - July 2013	Anon - Wildwood Ecology Ltd				BBS survey	D1374/005/01	BA SA LE
H5312566170	May 2013 - July 2013	Anon - Wildwood Ecology Ltd				BBS survey	D1374/005/01	BA SA LE
H5298264803	May 2013 - July 2013	Anon - Wildwood Ecology Ltd				BBS survey	D1374/005/01	BA SA LE
H535662 (Estimated Centroid of Site))	2005 approx	BASC Recorder (13461753-2)				Shoot Size Range: 0-3km	D0132/001/02	BU W DI
H5298764800	May 2013 - July 2013	Anon - Wildwood Ecology Ltd				BBS survey	D1374/005/01	BA RI W FL
H5298564809	May 2013 - July 2013	Anon - Wildwood Ecology Ltd				BBS survey	D1374/005/01	UL LE

H56	16/11/2006	Chris Wynne	1		Site Name Withheld	Comments Withheld	D1117/001/01	W C G
H56 (Estimated Centroid of Site))	2005 approx	BASC Recorder (13461753-2)			Site Name Withheld	Comments Withheld	D0132/001/02	B R W C G
H56 (Approximate)	Winter 2006	Jim Dustow	1 or 2		Site Name Withheld	Comments Withheld	D0061/010/01	B R W C G

Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	
H5366	25/10/2000	Debbie Evans			Back Bethel road	Bank, hedgerow. Associated Organism: Grass. Substrate: Soil	D1192/001/01	LE
H5366	24/11/2000	Debbie Evans			Back Bethel road	Bank, hedgerow. Associated Organism: Grass. Substrate: Soil	D1192/001/01	LE

Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	
H5266	25/08/1992	Anon		Bat Roost	Site Name Withheld	Comments Withheld	D1486/001/01	S L S
H5165	09/08/1993	Mr Rhodes	1 Adult	Bat Rescue	Site Name Withheld	Comments Withheld	D1486/001/01	S L S
H52156523	May 2008	Mrs. O'Brian	1 Male; 1 Female		Bethel	Garden Wildlife Record version 2. Grid reference supplied.	D1117/001/01	B L G
H529651	2 records, both on 01/06/2003	Huw Jones	1 Juvenile		Bethel	Alive. Pasture; Dead. Pasture	D0108/001/03	B L D
H530660	3 records, all on 23/01/1997	Anon; Debbie Evans; Evans, Ms D.	1		Bethel	Alive; Alive. Seen regularly = Not sure. Pasture	D0108/001/03 , D0116/001/01	B L D
H535662 (Estimated Centroid of Site))	2005 approx	BASC Recorder (13461753-2)				Shoot Size Range: 0-3km	D0132/001/02	B L D
H5365	18/04/1965	Milner, C.			Bethesda, WE of		D1072/001/02	B

H5265	1979	Jones, G.			Site Name Withheld	Comments Withheld	D1072/001/02	BE LE W
H5264	25/03/1967	Hill, G.R.			Bethel		D1072/001/02	BE LE
H5265	24/09/1992	Mike Howe, Liz Howe	1 Adult Male		Site Name Withheld	Comments Withheld	D1486/001/01	BE HI W DI

Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	
H52516564	05/05/2002	Bratton, Mr J.H.			Well field, Bethel	Marshy horse pasture, including a well and seepages.	D1451/001/01	RI

Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	
H5364	June 1974	Hill, M.O.			Llanrug,Afon Seiont		D1075/001/03	LI
H528660 (Estimated From Recorder's Map)	14/07/1992	Dan Guest, Stuart Smith	1 DOMIN (Estimate)	Field record	Wern-bach		D0820/003/02	BA LE
H5364	1974	Hill, M.O.			Llanrug,Afon Seiont		D1075/001/03	RI
H532650	08/07/2005	Harold, J. and Thomas, S.			Tyddyn y Berth, Bethel	Multiple veg crops	D0124/002/01	RI LE
H532650	08/07/2005	Harold, J. and Thomas, S.			Tyddyn y Berth, Bethel	Multiple veg crops	D0124/002/01	RI LE

Grid Reference	Date	Recorder(s)	Abundance	Record Type	Site Name	Comments	Dataset ID	
H52146519	June 2007	Mrs. O'Brian			Bethel	Garden Wildlife Record version 2. Grid reference supplied.	D1117/001/01	BA W C G
H526656	2 records, both on 11/02/1984	Pulford, E.A.; S. Diamond			Port Dinorwic, 1.5km SE	Pond	D1076/001/02 , D1491/001/01	BE LE
H527658 (Supplied	2 records, both on	G. Owen - Hughes:			Bethel	Pond	D1491/001/01	BE LE

0m buffer	None
100m buffer	0874: Rhos-chwilog (South) (0m) , 0876: Pen-yr-orsedd (137m) , 0870: Gwyndy (215m) , 0873: Rhos-chwilog (North) (300m) , 0951: Coed Bolyn Mawr/Wern Fawr (476m) , 0884: Penrhyn Stud (643m)
1000m buffer	None
2000m buffer	None
r	None
1000m buffer	25896: Restored Ancient Woodland Site (746m), 25898: Restored Ancient Woodland Site (840m), 43626: Plantation on Ancient Woodland Site (878m), 24989: Restored A
ffer in red, if found)	A.1.1.1: Semi-natural Broad-leaved Woodland (1.24% / 46,028 sq.m), A.1.2.2: Planted Coniferous Woodland (0.41% / 15,284 sq.m), A.1.3.2: Planted Mixed Woodland (0.1% / 3,267,120 sq.m), B.1.2: Semi-improved Acid Grassland (2.46% / 91,226 sq.m), B.2.2: Semi-improved Neutral Grassland (10.07% / 373,105 sq.m) , B.4.1: Semi-improved Acid Grassland (0.03% / 1,220 sq.m), B.5: Marshy Grassland (13.7% / 507,317 sq.m), C.1.1: Bracken (0.14% / 5,006 sq.m), C.3.1: Tall Ruderal Herb (0.03% / 1,220 sq.m), E.2.1: Acid/Neutral Grassland (0.03% / 1,220 sq.m), G.1: Standing Water (0% / 140 sq.m), J.1.2: Amenity Grassland (0.14% / 5,179 sq.m), J.1.3: Ephemeral/Short Perennial (0.23% / 8,612 sq.m), J.1.5: Gardens (0.33% / 1,220 sq.m), J.4: Buildings (5.59% / 207,110 sq.m), J.4: Bare Ground (0.03% / 1,057 sq.m), NA: Not Accessed Land (0.01% / 525 sq.m)

- PUBLIC VERBODEN

the original recorder.

grid references within the report to view them on an interactive map on Cofnod's website.

and non-statutory Wildlife Sites, NWWT and RSPB reserves are shown. Where they are within 50m of the search location, they are highlighted in red. Where further information is available for a site, you can click on the link to visit an external website. Wildlife Sites which remain unconfirmed by the relevant Local Authority are given 'Candidate' status and are displayed with the (c) suffix. The following reasons for candidate status are identified by survey but have not been formally confirmed. 2. Conwy and Gwynedd Wildlife Sites were identified by survey and air photos and remain candidate until evaluated using selection criteria. Habitats are identified from the Habitat Survey of Wales (1979 to 1997) using the Phase 1 survey methodology. The habitat at the search location is shown in red. Habitats are ordered in descending size order, with the search radius shown in brackets.

Each record within the reports include Dataset ID codes. Click on the link to find the relevant Metadata from the **Data We Hold** page on Cofnod's website (www.cofnod.org.uk/DataWeHold). The number before the record ID code indicates the record quality. Click on this if you need more information on a specific record.

Record Quality Level. The following abbreviations apply: **1**: Unassessed, **2**: Unconfirmed, **3**: Considered Correct by Cofnod, **4**: Considered Correct by Expert. Dataset Categories and Record Verification Level are also available from our website.

Report icon next to a record to send us an email if you think there is a problem with a record, or if you would like more information about it.

Island Sites, **WS** - Wildlife Sites

Gogledd Cymru/North Wales Environmental Information Service

Ynys-y-fryn, Bangor, Gwynedd. LL57 4FG **Tel:** (01248) 672603 **Email:** contactus@cofnod.org.uk **Website:** www.cofnod.org.uk **Facebook:** facebook.com/Cofnod **Twitter:** twitter.com/Cofnod

Appendix IV Additional information



Our Reference: ECO 114/Bethel.

Sent via e-mail

Ms. Sioned Elin Edwards MRTPI
Senior Planner

Cadnant Planning Ltd.

1 Connaught House
Riverside Business Park
Benarth Road
Conwy, LL32 8UB

16th August 2016

Dear Ms. Edwards,

RE: T58 and other proposed development sites Bethel

Further to our recent discussions I can confirm that a visit was made to locations T71 (opposite Stad Rholsan) and T70 (adjacent to the B4366). Although a full ecological survey was not completed due to time constraints we have the following comments on each location.

T71: This site is currently grazed by a small number of horses and appears to support a diverse botanical flora including an unidentified species of Orchid. The site contains a variety of habitats including damp grassland and a spring-fed pool which has been historically used as a well. This has both archeological and ecological potential (amphibians) warranting further investigation. The woodland fringes of the site provide potential refuge for birds and mammals. The location is a potentially high quality foraging site for bats.

T70: This site is heavily grazed by sheep and appears to be of little ecological merit. The grassland is heavily improved and dominated by rank species. Hedgerow surrounding the site is of some wildlife value.

Eco-scope Ltd.

Lowcroft Rowen Conwy LL32 8TP t. 01492 650 001 e. info@eco-scope.co.uk w. www.eco-scope.co.uk

Registered address as above | Company Number: 08916412 | VAT Reg. No. 199 5268 44

We would recommend that a full ecological survey of proposed location T71 is undertaken to determine the ecological and archaeological importance of this site. Photographs of both locations are provided below:



Site T71



Site T70

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Two ecological surveys of the T58 site were undertaken by the county council one in mid-September 2012 as part of a Gwynedd wide land survey and another in December 2015 in direct relation to the proposed LDP. We would make the following observations on these reports. Both surveys were conducted at a time of year which is sub-optimal for botanical survey making the true nature of the habitat difficult to determine from these surveys. The survey undertaken in 2012 recommends that the boundary of the adjacent local wildlife site is expanded to include the T58 site on the basis that it contains rush pasture; this is contrary to the description provided by the county council 2015 report (which identified it as MG5 grassland). Neither report provides a detailed list of species present on the site. The results of our investigations are detailed in section 3.4 of the report. Our initial survey was undertaken in April 2016 with an update visit undertaken in July 2016.

Yours sincerely,

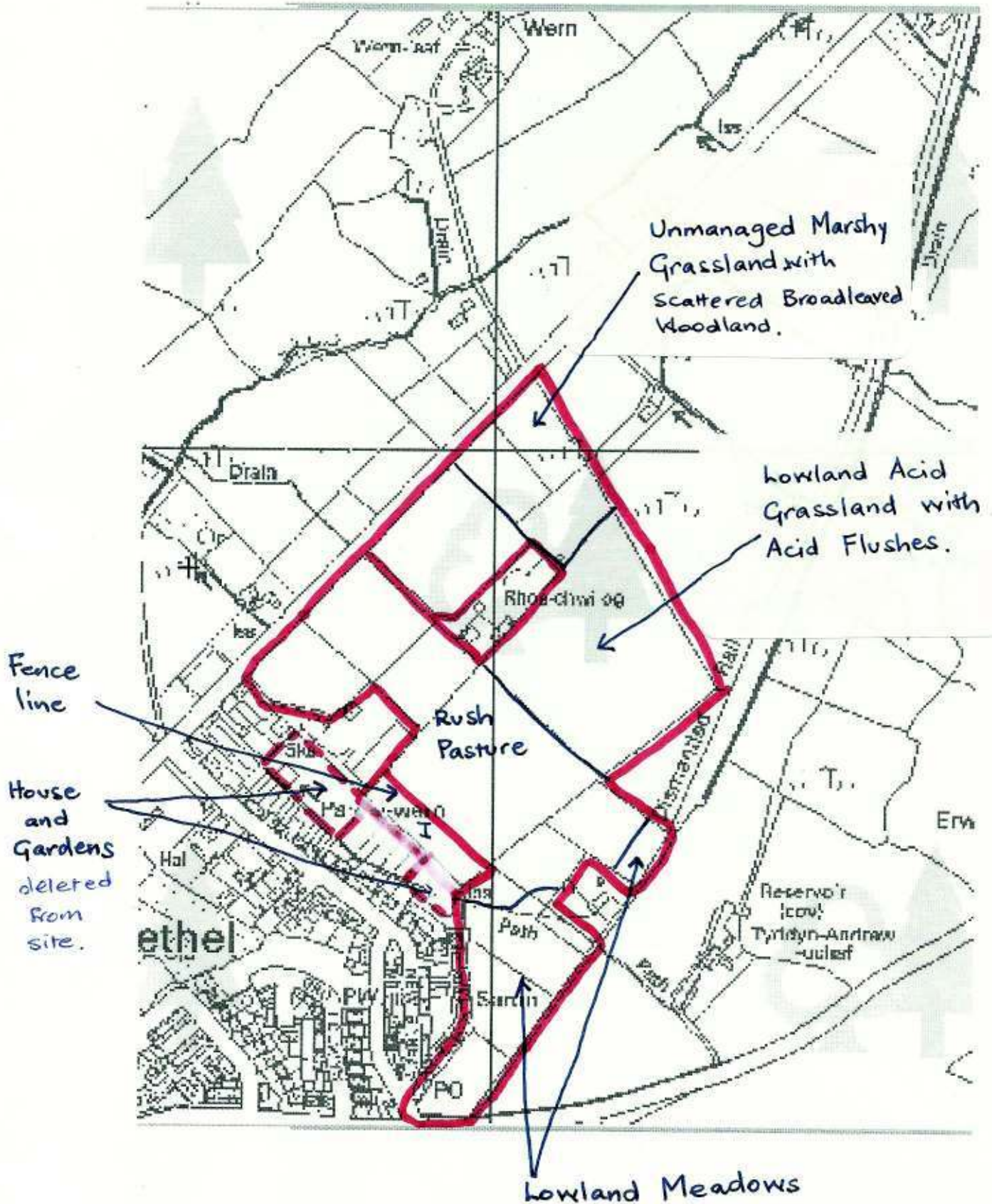
Mr. Stuart Kato M.Sc. MCIEEM
Managing Director of Ecoscope Ltd.

Eco-scope Ltd.

Lowcroft Rowen Conwy LL32 8TP **t.** 01492 650 001 **e.** info@eco-scope.co.uk **w.** www.eco-scope.co.uk
Registered address as above | Company Number: 08916412 VAT Reg. No. 199 5268 44

APPENDIX B

Wildlife Site Record (September 2012) including map



I - Improved Grassland - deleted from site

Wildlife Site Record

Site name	Rhos-chwilog (South)		
Grid ref	SH530657	Area 10.4 ha	ID No.: 0874
Map showing boundary attached	yes	Digital boundary correct No – some areas have been omitted and some added	date digitized :
Site surveyor	Heather Scott		Date: 14/09/2012
Qualifying feature	species and/or habitat Rush Pasture, Lowland Meadow and Lowland Acid Grassland		
Description	<p>The site is located on relatively level ground on the north-western edge of the village of Bethel. Habitats present include horse-grazed rush pasture and lowland meadows, neglected marshy grassland and a field of sheep grazed lowland acid grassland with patches of acid flush. The predominant habitat rush pasture has frequent to locally abundant sharp-flowered rush and sedges including glaucous, common, carnation and oval sedges. There is also locally frequent water mint, purple moor-grass, lesser spearwort and devil's-bit scabious. Common knapweed and common bird's-foot trefoil is frequent in the lowland meadow with occasional yellow-rattle and red clover. The lowland acid grassland is fairly damp and was grazed very short at the time of the survey. There are abundant bryophytes with frequent sheep's fescue, soft and heath rushes, mat-grass and tormentil with locally abundant sedges and bog mosses with locally frequent marsh pennywort and bog pimpernel in the patches of acid flush. The boundary has been changed to incorporate more fields of rush pasture and to omit 2 small areas that have either been built on or are gardens. The neglected marshy grassland fields have remained within the wildlife site because they still contain interesting species such as devil's-bit scabious and have a good potential to become species-rich rush pasture if managed in the future.</p>		

Primary factors		
Habitats present	Rush Pasture, Lowland Meadow and Lowland Acid Grassland	Natur Gwynedd, UKBAP, S42
Species present		Natur Gwynedd, UKBAP, S42, Red Data Book, Notable, Local
Secondary factors		
Size	More than 2 ha of Lowland Acid Grassland, about 1.4 ha of Lowland Meadow and 5.2 ha of Rush Pasture	
Diversity habitats & species	3 priority habitats	
Rarity		
Local significance		
Connectivity in the landscape	There are several other local wildlife sites with similar habitats within 1 kilometre of this site.	
Contributory species		
Tertiary factors		

Potential	
Social value	Public footpath traverses site
Ecological viability, Site condition, fragmentation, long term viability	
Conclusion & Justification	This site is recommended as a local wildlife site because:- There are 3 priority habitats above the threshold size; The diversity of the semi-natural habitats present; It provides connectivity in the landscape; and It has social value.
History & records	

Date assessed		Name of assessor Post held Organization	
---------------	--	---	--

Date designated: