Land at Bronllys

Extended Phase One habitat survey

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For Bernard Eacock Ltd

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1. Summary

An Extended Phase One habitat survey was undertaken over this small field on the southern edge of Bronllys village. The field demonstrated an Improved sward with significant patches of tall ruderal vegetation. With the exception of one fenceline boundary features are hedgerows, however only one of these hedges was of any ecological note and this was mainly with regard to a moderate diversity of woody species and the presence of the relatively uncommon plant moschatel *Adoxa moschatellina.*

Adjacent to the site is an area of roadside verge associated with the Bronllys by-pass (A479) comprising a very large veteran oak *Quercus* sp., a short section of dry culvert and a small area of species-poor unmanaged grassland with some planted trees and scrub.

No evidence of European or UK protected species was recorded during this survey. However it is possible that common reptile species, in particular slow-worms *Anguis fragilis*, could be present within the boundary hedgerows and on the by-pass verge adjacent to the site. It is also likely that badgers *Meles meles*, bats Chiroptera and barn owls *Tyto alba* could forage over the site.

An ecological data search demonstrated that at least six species of bat (including several maternity roosts) have been recorded within a two kilometre radius of the survey site. Watercourses within 200 metres of the site support the nationally endangered white-clawed crayfish *Austropotamobius pallipes*. In addition records of great crested newts *Triturus cristatus* are recorded within the same data search area. The data search also demonstrated that otters *Lutra lutra* and dormice *Muscardinus avellarinus* are present within two kilometres of the site.

No further ecological surveys are required here however consideration must be given to preventing pollution from entering the local watercourses. In addition any works impacting the site's hedgerows must consider the likelihood of common reptile species and breeding birds being present and appropriate mitigation works enacted accordingly. Should works that could damage the site's western boundary hedgerow be required it may be necessary to undertake a Hedgerow Regulations (1997) survey and produce a mitigation plan to minimise disturbance to this feature.

2. Remit

To undertake an extended phase one habitat survey over the site. To identify any ecological constraints that might impact any proposals for this site. To assess the status of habitat on and immediately adjacent to the site and to assess the likely presence or absence of protected species.

To produce a report identifying the ecological value of the survey site; this report to include recommendations, if necessary, and an annotated map.

3. Site description

The site comprises a single small field and its boundary features and lies on the southern edge of Bronllys village (central OS grid reference SO145347) on level ground at approximately 129 metres above sea level and with a gentle southerly aspect. The verge of the A438 (Bronllys by-pass) forms the southern boundary of the site whilst farmland abuts the site on its western sides; to the east is the minor public highway of Church Street with residential properties on the eastern side of the road. To the north of the site are private dwellings and their curtilages.

There were no waterbodies or watercourses on the site. Immediately south of the site, and on the by-pass verge, there is a small length of artificial watercourse associated with a culvert that runs under the by-pass; this channel was dry at the time of survey and would appear to not support water unless under conditions of heavy rainfall. No other watercourses or waterbodies were recorded from adjacent land.

4. Methodology

4.1 Site survey

The site was subject to a one and a half hour ecological survey on 16th May 2014 by Phil Quinn (MCIEEM) an experienced field ecologist with over twenty years experience of botanical survey and ecological site evaluation – primarily in south-west England and south Wales.

Full access was gained to the site with all vascular plant species present at the time of survey recorded to DAFOR level with species lists compiled and habitats described according to the Handbook for Phase 1 habitat survey: A technique for environmental audit (JNCC 2007)

The survey site was assessed for evidence of protected species field signs and an assessment made of the likely value of the site and its immediate surroundings for protected species. The most relevant protected species with potential regard to this site are:

- Breeding birds. Evidence for these species at the time of survey would comprise physical evidence of recent nests. In addition an assessment was made with regard to the likelihood of the site providing nesting opportunities for breeding bird species.

- Bats. Evidence of bats utilising any structures on site as well as any trees with suitable features that could allow bats to roost. Field signs could comprise sightings, accumulations of distinctive droppings, and grease marks or urine stains around potential roost entrances.

- Badgers. Distinctive clusters of large openings to underground chambers would indicate badger activity and the likelihood of a badger sett. Recently-excavated soil would suggest an active sett as would fresh bedding (grass, leaves etc) and fresh paw prints. Well-worn trackways through vegetation and latrines (dung pits used as territorial markers) also suggest badger activity but do not necessarily indicate the presence of a sett in the immediate vicinity.

- Reptiles. Reptiles require a particular suite of habitats, and in particular the edges or borders between taller and shorter vegetation. Dense cover but with easy access to potential basking sites could suggest a probability of reptiles being present. Heaps of stones or rubble are favoured reptile locations. Piles of manure or cut vegetation may be used as nesting and hibernation sites by grass snakes.

- Great crested newts. This species requires access to water bodies for breeding but is terrestrial for at least half the year. It too can be found in

association with piles of rubble or vegetation however it prefers cooler and more humid conditions and does not bask.

- Dormice. A contiguous hedgerow network within the survey area and linking with hedgerows and areas of scrub and /or broadleaved woodland within the adjacent landscape could have the potential to support populations of dormice. Dormouse field signs are largely restricted to distinctively opened hazelnut shells and nests woven with honeysuckle bark. An assessment of the suitability of habitat for dormice both on and adjacent to the site was also made.

The survey was undertaken during overcast conditions and an air temperature of 17 degrees Celsius. Full access was gained to the site.

4.2 Ecological data search

An ecological data search was commissioned from the Biodiversity Information Service for Powys and Brecon Beacons National Park (B-I-S) with regard to all known records of European and UK protected species within a two kilometre radius of the boundaries of the site (hereafter referred to as “the data search area”). In addition information was requested from B-I-S on the statutory and non-statutory designations of any areas of land within the data search area.

5. Caveat

This survey was limited to recording habitats, evidence of protected species at the time of survey and addressing the likelihood of protected species being present at other times of the year or being present but inconspicuous. The lack of any species record from this report can not be taken to automatically infer that species’ absence from the site.

6. Results

6.1 The field

This small rectangular-shaped field was ungrazed at the time of survey but appeared to have been either grazed or cut at some point in the previous six months as the sward was not rank.

Grasses dominate the sward and at the time of survey sweet vernal grass *Anthoxanthum odoratum*, Yorkshire fog *Holcus lanatus*, soft brome *Bromus hordaceus* and common fox-tail *Alopecurus pratensis* were particularly conspicuous. Red fescue *Festuca rubra* and the meadow grasses *Poa trivialis* and *P. pratensis* were also present along with perennial rye-grass *Lolium perenne*, common bent *Agrostis capillaris* and creeping bent *A. stolonifera*, as well as false oat-grass *Arrhenatherum elatius* and cocks-foot *Dactylis glomerata*.

The herb component of the sward was low in diversity with no species of any note recorded. A very small population of field wood-rush *Luzula campestris* is present in the north of the field. Common herb species here are meadow buttercup *Ranunculus acris*, creeping buttercup *Ranunculus repens*, ribwort *Plantago lanceolata*, sorrel *Rumex acetosa*, white clover *Trifolium repens*, red clover *Trifolium pratense*, common mouse-ear *Cerastium fontanum*, and lesser celandine *Ficaria vernus*.

There are significant parts of the field –in particular a line running the length of the field - where tall herbs –dominated by nettle *Urtica dioica* and broadleaved dock *Rumex obtusifolius* - are common. In addition there are a number of young blackthorn *Prunus spinosa* suckers spreading into the field from adjacent hedgerows.

The field –looking north

6.2 Boundaries

B1. This is the eastern boundary of the site and comprises a four metre high and two metre thick hedgerow that would appear to have been planted approximately twenty years ago. Hawthorn *Crataegus monogyna* is the dominant woody species here although there is a small quantity of hazel *Corylus avellana* and wych elm *Ulmus glabra* towards the northern end of the hedge. Bramble *Rubus fruticosus* agg. is occasional. The hedgerow ground flora is poor and dominated by ivy *Hedera helix* and cuckoo-pint *Arum maculatum* however greater stitchwort *Stellaria holostea* is scattered throughout.

Immediately east of the hedgerow is a two metre wide grassy verge that is species-poor semi-improved grassland which had been mown short immediately prior to the survey. The species diversity within the verge sward was slightly greater than that recorded within the field and included self-heal *Prunella vulgaris*, silverweed *Potentilla anserina*, and creeping cinquefoil *Potentilla reptans.*

Field side view of boundary B1 –looking north-east

Roadside view of boundary B1 –looking south-west

B2. The site's southern boundary is a length of post and wire fence demarcating the northern edge of the highway verge.

B3. The site's western boundary this is a section of managed hedgerow with a relatively diverse woody species component. Hazel, hawthorn, blackthorn and ash *Fraxinus excelsior* are common here; holly *Ilex aquifolium*, elder *Sambucus nigra* and dog rose *Rosa canina* agg. are also present but rare. Ivy and nettle are dominant within the hedge base but there is also some dog's mercury *Mercurialis perennis,* greater stitchwort and honeysuckle *Lonicera periclymenum*. The most notable plant recorded here was moschatel –a relatively uncommon herb usually associated with shaded banks and old woodlands.

Boundary B3 –looking south

B4. The site's northern boundary is a managed hedgerow approximately 1.5m metres high and one metre wide and with a section of wooden fencing in the west. Hazel is dominant here although there is also some elder, hawthorn, bramble and dog rose. The hedge base is dominated by nettle and creeping buttercup.

Boundary B4 – looking north-east

6.3 Adjacent road verge (A438)

To the immediate south of the site is a small area of road verge comprising a grassy bank with planted trees and self-sown scrub, a small area of flat ground with rank grasses and much bramble, a dry culvert, and a large veteran oak.

The bank is subject to occasional mowing but no other management was apparent here. Young hawthorn, blackthorn, hazel, silver birch *Betula pendula* and oaks are planted here.

The large mature oak is located in the south of this area and is approximately 250 years old.

Mature oak on verge of A438

6.4 Protected species assessment

There was no evidence of any protected species from within or immediately adjacent to the survey site. However habitat quality within the hedgerow network would suggest that small populations of slow-worms could potentially be present in these features. No evidence of badgers was recorded but the site is likely to be of value to foraging badgers.

The hedgerows are possibly too species-poor to be of even moderate habitat value to dormice. Although dormice are known from locations within the two kilometre data search area these are from the Talgarth area where there is a large deciduous woodland offering optimal habitat for this species. It is not impossible that dormice could be present around Bronllys but habitat quality around the survey site appears poor for them.

The mature oak on the adjacent road verge did not appear to demonstrate any feature that could offer bats roosting opportunities; no other potential bat roosts were identified from the site however adjacent dwellings to the north of the site could have some potential for roosting bats. The paddock however does offer moderate potential foraging opportunities for bats and the hedgerows –in particular B1 - could be used as a commuting route.

No feature on the site or immediately adjacent to it could be of value to breeding great crested newts *Triturus cristatus*, water voles *Arvicola amphibius*, otters or

white-clawed crayfish. However the culvert over the site's southern boundary does drain into a watercourse with proven white-clawed crayfish value.

The field has the potential to be of value to foraging barn owls and the hedgerows are likely to be of value to a range of common breeding bird species.

6.5 Ecological data search

6.5.1 Bats

The ecological data search demonstrated that at least six species of bat have been recorded within a two kilometre radius of the survey site; many of these appear to be activity records -of bats in flight – but a considerable number are records of roosting bats or of field signs indicative of roosting bats.

6.5.2 Great crested newts

There are three records of great crested newt from two locations within two kilometres of the survey site – all from Talgarth and approximately 1.5 kilometres south-east of the survey site. One of the records is from a garden pond in April and may represent a breeding site.

6.5.3 Barn owls

There are numerous records of barn owl from within the data search area, including one less than fifty metres south of the survey site's boundaries. However there are no records of breeding sites.

6.5.4 Badgers

There are many records of badger within the data search area including several records that refer to setts although most records refer to road casualties. None of the badger sett records are within 400m of the survey site boundaries.

6.5.5 Reptiles

There are relatively few reptile records: eight records of slow-worms from the Talgarth area and one record of this species from the Bronllys Castle area (approximately 600m south-east of the survey site); in addition there are two records of common lizard *Zootoca vivipara*.

6.5.6 Dormice

There are three records of dormouse, within the 2 km data search area –all from the area east of Talgarth.

6.4.7 White-clawed crayfish

The watercourses in this area are one of the national strongholds for this species. The rivers Ennig, Llyfni, Dulas and Triffrwd all hold proven populations and the latter three form part of a single catchment which at its closest lies less than 200 metres from the survey site's southern boundary.

6.5.8 Otters and water voles

There are a number of otter records from the watercourses within the survey area, including some of holts (breeding sites). There are no records of water voles from the data search area.

6.5.9 Designated sites

Within the data search area the only designated sites are:

1. The River Wye Special Area of Conservation (SAC) – the river Llyfni is part of this SAC and flows approximately 200 metres south east of the survey site, SAC is an international (European) level designation.

2. A part of a CCW Phase II Grassland Site is located within the two kilometre data search area and lies south-west of the survey site.

7. Discussion

7.1 Protected species –field survey

Reptiles
Although there was no evidence of any protected species from the site the boundary hedgerows have the potential to support common reptile species –in particular slow-worm.

Dormice
Parts of the hedgerow network could potentially be utilised as a dispersal corridor for dormice; however the landscape within a kilometre radius of the survey site has relatively little woodland and scrub cover. This lack of sufficient woodland and scrub cover over such an area suggests dormice are unlikely to be present on or adjacent to the survey site despite their proven presence from the Talgarth area.

Great crested newts
There were no waterbodies or watercourses suitable for breeding great crested newts on or near the site and no such features are shown on the Ordnance Survey 1:25000 map as being within 500 metres of the site. The site offers moderate to low quality terrestrial habitat for this species –mainly with regard to the hedgerows.

Bats
There is the potential for bats to forage over the field and hedgerows and to potentially use the hedgerows as part of a commuting route.

Nesting and foraging birds
It is most probable that the hedgerows will be utilised by common farmland and garden bird species as nesting sites between March and August inclusive. Barn owls are likely to forage over the site, particularly if it is left ungrazed or uncut for extended periods.

Other protected species
There was no evidence of badgers from the site or on immediately adjacent land where visual survey access was possible. However the many records of this species from the area suggest it is highly likely they will forage here and commute across the site.

The lack of watercourses or larger waterbodies on or adjacent to the survey site effectively rules out otters, water voles, and white-clawed crayfish as direct considerations here. However the fact that the adjacent A438 road verge contains a culvert that drains into the Llyfni catchment means that any contaminated or silt-laden drainage from the site could potentially impact that watercourse.

7.2 Habitat -general

The sward within the field is of low botanical interest. The boundary hedgerows are of some habitat value, but only boundary B3 is of any ecological interest; however even here few species of note were recorded.

7.3 Ecological data search

Protected species

The only record of a protected species from either on or very close to the site was that of a barn owl recorded just over the site's southern boundary. However a number of other protected species are recorded within the two kilometre data search area and of these only otter can be completely discounted as not likely to use the site or have the potential to be impacted by any works on this site.

It is unlikely that dormice could be present in the hedgerows and that great crested newts would use the site as terrestrial habitat however these possibilities cannot be entirely excluded but are seen here as sufficiently unlikely as not to warrant further survey work.

Designated sites

The main designated site within the data -the River Llyfni (part of the River Wye SAC) has significant value for white-clawed crayfish. Although not directly adjacent to the site there is a potential for run-off from the site to enter the culvert south of the site's boundary and thus enter the SAC. The other designated site – the Phase II Grassland is of such a distance from the site (800 metres) that no disturbance to this grassland site could be anticipated by any works on the survey site.

8. Recommendations

8.1 Consider likelihood of reptiles in hedges

It is likely that common reptile species –in particular slow-worms –could be present in the hedgerows that comprise the survey site's boundary features. It is not recommended here that reptile surveys be conducted to prove or disprove this possibility however to avoid risk of injury or death to any reptiles that could be present in the boundaries it is recommended that the boundary features be protected as far as possible from disturbance during any clearance or construction works by the erection of barrier fencing. Should any section of hedgerow need to be removed or translocated it will be necessary to have a trained ecologist on site to undertake a watching brief and destructive survey.

8.2 Avoid disturbance of nesting birds

It is recommended that any removal of sections of hedgerow are undertaken between September and mid March inclusive to avoid disturbance to nesting birds (an offence under the Wildlife and Countryside Act (1981) (as amended). Should works have to be undertaken between mid March and August inclusive it is recommended that the section of hedgerow to be impacted should be subject to a detailed survey by an experienced ecologist no less than one week prior to the scheduled works taking place. This shall allow the ecologist to identify locations where nesting birds are proven and as such these areas must not be disturbed until all young have been proven to have flown the nest or the nest proven to have failed.

9. Conclusions

This small site supports a species- poor sward of no botanical value and the site's main ecological interest will lie in the hedgerows where there is potential for some protected species (reptiles and breeding birds are likely, and commuting / foraging bats also possible). Foraging bats, barn owls and badgers are also likely to utilise the site.

Any development of this site should seek to minimise disturbance to the hedgerows; should any section of hedgerow need removing or translocating it is recommended that an ecologist be on site to address potential breeding bird and reptile issues.

No further ecological surveys are recommended here.

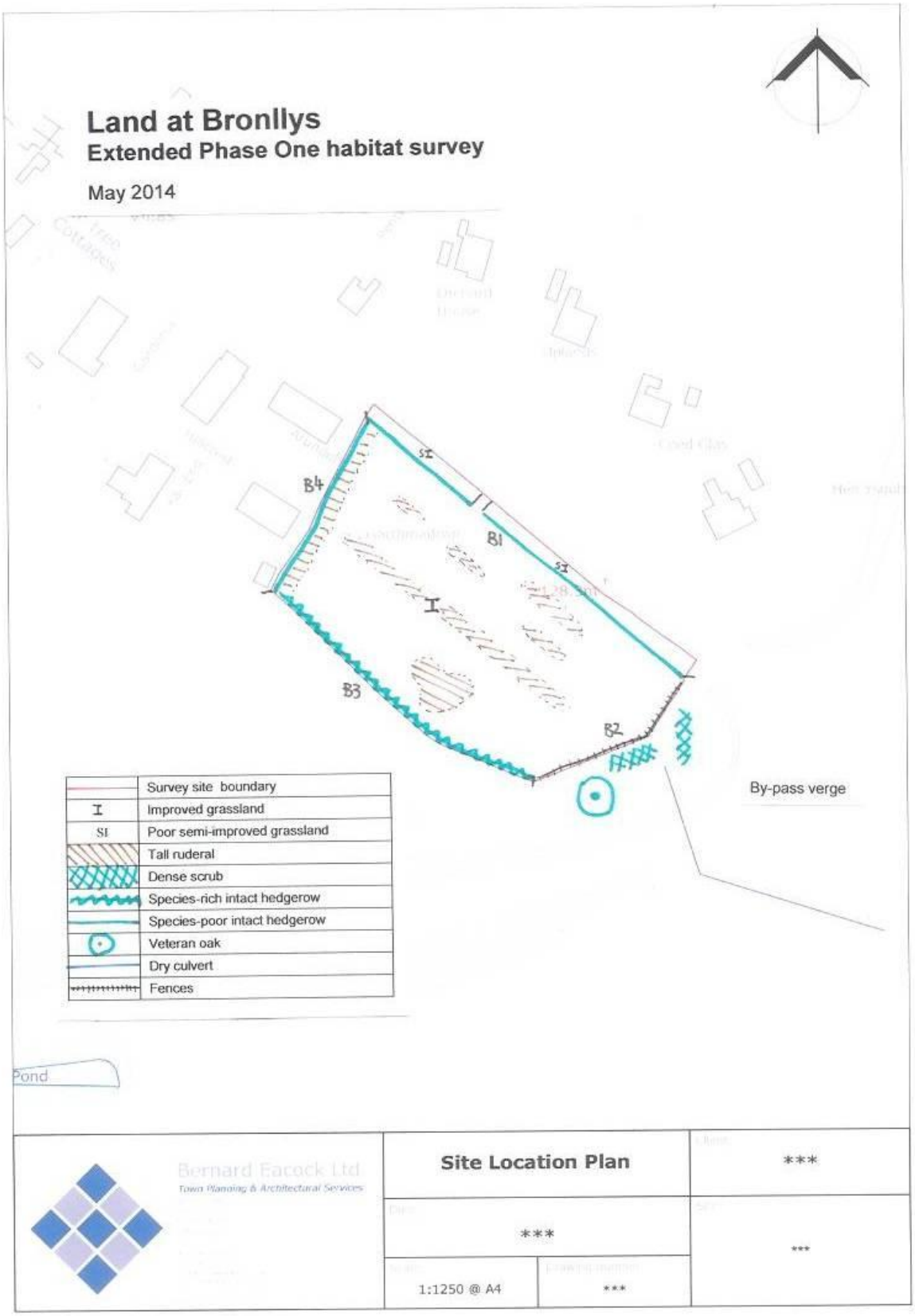
Appendix: Plant species lists (DAFOR)

D =Dominant
A = Abundant
F = Frequent
O = Occasional
R = Rare

Common name	Scientific name	DAFOR				
		Field	B1	B2	B3	B4
Hazel	Corylus avellana		R		F	D
Hawthorn	Crataegus monogyna		D		F	R
Spindle	Euonymus europaeus					
Ash	Fraxinus excelsior				F	
Holly	Ilex aquifolium				R	
Blackthorn	Prunus spinosa				F	
Dog rose	Rosa canina agg.		R		O	R
Bramble	Rubus fruticosus agg.		F	F		F
Elder	Sambucus nigra				O	R
Wych elm	Ulmus glabra		R			
Moschatel	Adoxa moschatellina				O	
Common bent	Agrostis capillaris	F		O	R	
Creeping bent	Agrostis stolonifera	F				
Hedge garlic	Alliaria petiolata		R		O	R
Common foxtail	Alopecurus pratensis	F		O	R	R
Sweet vernal grass	Anthoxanthum odoratum	D		O		R
Cow parsley	Anthriscus sylvestris	R	A	O	F	O
False oat-grass	Arrhenatherum elatius	O		O	O	R
Cuckoo pint	Arum maculatum		F		O	R
Daisy	Bellis perennis		O			
Soft brome	Bromus hordaceus	A	R			
Cuckoo flower	Cardmaine pratensis		R			
Common mouse-ear	Cerastium fontanum	F		R	R	
Sticky mouse-ear	Cerastium glomeratum	O				
Creeping thistle	Cirsium arvense	O	R	R	R	R
Cock’s-foot	Dactylis glomerata	O		O	O	R
Red fescue	Festuca rubra	O		F		
Lesser celandine	Ficaria vernus	F		F	O	R
Meadowsweet	Filipendula ulmaria				O	
Goosegrass	Galium aparine	O	O	F	A	A
Herb robert	Geranium robertianum		O		R	

Ground ivy	Glechoma hederacea				O	
Ivy	Hedera helix		D		D	O
Hogweed	Heracleum sphondylium	R	R	R	O	O
Yorkshire fog	Holcus lanatus	F		O	O	O
Perennial rye-grass	Lolium perenne	O		O		R
Honeysuckle	Lonicera periclymenum				R	
Field wood-rush	Luzula campestris	R				
Dog's mercury	Mercurialis perennis				O	
Cultivated daffodil	Narcissus pseudonarcissus		R			
Ribwort	Plantago lanceolata	O	F	R		R
Annual meadow-grass	Poa annua	R	F			
Smooth meadow-grass	Poa pratensis	O	R			
Rough meadow-grass	Poa trivialis	F	O	O	O	R
Silverweed	Potentilla anserina		R			
Creeping cinquefoil	Potentilla reptans	F	O			
Blackthorn (suckers)	Prunus spinosa	F				
Meadow buttercup	Ranunculus acris	A		F	R	F
Creeping buttercup	Ranunculus repens	F		O	R	O
Sorrel	Rumex acetosa	O		R		
Broad-leaved dock	Rumex obtusifolius	F		O	O	O
Wood dock	Rumex sanguineus		R		O	
Red campion	Silene dioica					R
Greater stitchwort	Stellaria holostea		O		R	
Dandelion	Taraxacum officinale agg.	F	O	R	R	R
Red clover	Trifolium pratense	O			O	
White clover	Trifolium repens	F		R	R	
Nettle	Urtica dioica	F	F	O	A	D
Germander speedwell	Veronica chamaedrys	O				
Thyme-leaved speedwell	Veronica serpyllifolia	R	R			
Common vetch	Vicia sativa	R	R		R	
Bush vetch	Vicia sepium	O	O	R	O	R

Site Plan


Land at Bronllys
Extended Phase One habitat survey
May 2014
B4
SI
B1
SI
I
B3
B2
By-pass verge
Survey site boundary
Improved grassland
Poor semi-improved grassland
Tall ruderal
Dense scrub
Species-rich intact hedgerow
Species-poor intact hedgerow
Veteran oak
Dry culvert
Fences
Pond
Bernard Eacock Ltd
Town Planning & Architectural Services
Site Location Plan
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1:1250 @ A4
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