

ECOLOLOCATION

Protected Species Surveys for Development

Ryton Organic Gardens Wolston Lane Ryton-on-Dunsmore Warwickshire CV8 3LG 02476 217727 www.gbae.co.uk ecolocation@gbae.co.uk

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Ecological Appraisal and HSI

of

Land South of Thyme House
Lichfield Road
Abbots Bromley
Staffordshire
WS15 3DL

For

CT Planning

(27th March 2014)

2014-02(06)

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Report Author: Rebecca Golder, ACIEEM
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Quality checked by: Anna Swift, MCIEEM
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Summary

- An Ecological Appraisal of an area of land and an assessment of one nearby pond was carried out at land south of Thyme House, Abbots Bromley on 11th March 2014, by suitably experienced ecologist Rebecca Golder.
- No plans were available to **ECOLOLOCATION** at the time of writing the report. The Site was in current use as a garden extension to Thyme House.
- The Site was used as amenity grassland and appeared to have previously been an improved grassland before change of use. It was managed by mowing, with limited botanical and structural diversity. Botanical species present were common and widespread throughout the UK. The grassland was considered to be ecologically low in value.
- A managed ash hedgerow was present on the eastern boundary. A number of birds were recorded using the hedgerow, indicating it could be used for nest building during the upcoming nesting season. The hedgerow was considered to be of medium ecological value.
- An area of tall ruderal vegetation was present in the south of the Site with garden debris and grass clippings present. This area could offer limited shelter for the common and widespread amphibians as well as hedgehog. This habitat was considered to be low-medium in ecological value.
- Pond 2 (115m south of the Site) held very little water at the time of the survey even with the high recent rainfall. With the great crested newt breeding season commencing soon after the survey it was unlikely this pond would hold enough water to offer suitable habitat to breeding great crested newts.
- Pond 1 was present some 215m west of the Site, however it was not clear who owned the pond and therefore it was not accessible to the surveyor. Due to its separation from the Site by grazed unsuitable grassland offering limited shelter for dispersing great crested newts, it was considered unlikely this species would be present within the Site even if present within the pond.
- No further surveys are considered necessary, however retention of the eastern hedgerow to offer continued nesting bird opportunities is recommended as well as sensitive working practices during vegetation removal to avoid potential injury to hedgehog and amphibians.

1. Introduction

Purpose of Study

ECOLOLOCATION were commissioned by CT Planning on behalf of Mr. M. Pretrouis to undertake an ecological assessment of land south of Thyme House, Abbots Bromley which is understood will be subject to a future planning application for the erection of residential properties.

No proposed plans were available to ECOLOLOCATION at the time of writing this report.

Survey Aims

The aims of the survey were to:

- provide a description of the habitats present on Site
- identify the potential for the presence of protected species on Site
- determine the need for further ecological surveys
- assess the ecological impact of the proposals
- identify any ecological constraints/opportunities on Site

Scope

The survey sought to identify the potential for protected species on Site including:

- **Reptiles** - areas that could be used for insolation, shelter, foraging and breeding.
- **Bats** – suitable trees and natural features for roosting together with suitable roosting opportunities within buildings on Site.
- **Birds** - areas of habitat/structures that may be used for constructing a nest or for foraging.
- **Hedgehog** (*Erinaceus europaeus*) – evidence including droppings and suitable foraging and sheltering habitat.
- **Brown Hare** (*Lepus europaeus*) - suitable habitat such as arable fields and rough field margins together with individual animals.
- **Polecat** (*Mustela putorius*) - evidence of the presence of suitable habitat such as woodland, riverbank and surrounding farmland mosaic.
- **Harvest mouse** (*Micromys minutus*) – evidence of the presence of suitable habitat such as arable fields and stiff-grassed meadows or the presence of nests.
- **Great crested newt** (*Triturus cristatus*) - waterbodies were scored for their suitability for use by breeding newts (assessed using the Habitat Suitability Index). Terrestrial habitat was also assessed for suitability to support newts

The lack of suitable watercourses within or adjacent to the Site resulted in the Site being unsuitable for otter, water vole, white-clawed crayfish and fish therefore these species were not included in the survey.

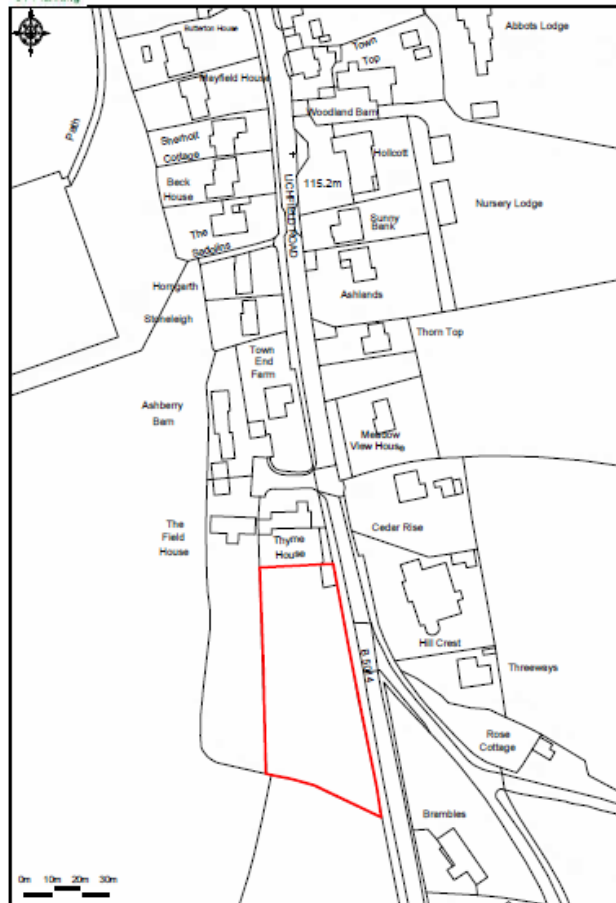
The lack of suitable hedgerows connected to suitable structured woodland with flowering and fruiting species resulted in the Site being unsuitable for dormice, therefore this species was not included in the survey.

2. Site

Site Location

The Site (grid ref. SK 08423 24013) indicated by the red line boundary below, was located on the outskirts of the village of Abbots Bromley, Staffordshire.

Site Location and survey boundary



3. Legislation

Bats, otter, white-clawed crayfish and great crested newts

All species of British bat and their roosts (places of shelter or rest), otter, white-clawed crayfish and great crested newts are protected by law from intentional and reckless disturbance under The Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Acts 2000, and the Conservation of Habitats and Species Regulations 2010 to incorporate the European Habitats directive.

Birds

The majority of species of nesting bird are protected under the Wildlife & Countryside Act 1981 and as amended by the Countryside & Rights of Way Act 2000.

Herpetofauna

The following species are protected against sale under Section 9(5) of The Wildlife and Countryside Act 1981 which limits the animals being offered for sale, transported for sale or advertised for sale however capture, keeping or killing are not prohibited subject to other animal welfare regulations - smooth or common newt (*Triturus vulgaris*), palmate newt (*Triturus helveticus*), common frog (*Rana temporaria*) and common toad (*Bufo bufo*). Grass snakes (*Natrix natrix*) are however protected from killing, injuring and sale under Sections 9(1) and 9(5) of the same legislation.

Hedgehog, polecat, harvest mouse and brown hare

UK Biological Action Plan (BAP) Priority Species.

4. Desktop Study Results

Desktop Study

Prior to the ecological survey of the Site, a desk-top data gathering exercise was undertaken. The Nature On The Map website was accessed and the Local Wildlife Trust were also contacted for information on statutory and non-statutory sites and protected/notable species records within a 1km radius.

Habitat connectivity and barriers

- Habitat connectivity from the Site was above average, though dispersing animals would likely have been deterred by the Lichfield road bordering the Site to the immediate east as well as the increased human influences within the village of Abbots Bromley to the north.
- Bordering the Site to the immediate west lay pastoral land with a network of hedgerows providing good connectivity between the Site and the wider landscape to the west.
- There were a number of traditional orchards scattered throughout the 1km search radius.
- Radmore Farm, a designated Local Wildlife Site for its undetermined grassland and fen bog was located to the north-east beyond the village of Abbots Bromley.
- Just outside the 1km search radius lay Blithfield Reservoir, designated a SSSI for supporting an abundance of wildfowl.
- It was unlikely that the SSSI or the Local Wildlife Site would be adversely impacted by any proposals at the Site due to their distance from the Site and separation by roads.



Species

The Local Biological Record Centre provided the following *site specific* records within a 1km radius. Only species scoped *in* to the survey, where records exist, are commented on within the species section.

Terrestrial Mammals

Pipistrelle (*Pipistrellus spp.*), soprano pipistrelle (*Pipistrellus pygmaeus*), indeterminate bat (*Chiroptera*) indeterminate myotis (*Myotis spp.*), polecat (*Mustela putorius*), brown hare (*Lepus europaeus*).

Amphibians

Great crested newt (*Triturus cristatus*),

5. Results and evaluation

Phase 1 habitat survey

On the 11th March a walkover survey of the Site was carried out in accordance with standard methodology for Phase 1 habitat assessment (Joint Nature Conservation Committee, 1993) by suitably experienced surveyor, Rebecca Golder.

Timing and Conditions

The site was visited on Tuesday 11th March 2014 commencing at 14:30 hrs

| Parameter | Recorded Figure |
|-----------------------------------|-----------------|
| Temperature | 12°C |
| Cloud cover | 0% |
| Precipitation | 0 |
| Wind speed (Beaufort Scale) | 1 - Light air |

An annotated Phase 1 habitat survey map is provided in this section. This illustrates the location of all habitat types recorded at the Site together with target notes depicting features of ecological interest. habitats were classified using Phase 1 methodology (JNCC, 1993) and were then evaluated against the IEEM EIA evaluating habitats and species guidelines (2006) in order to give them a scale of importance. Such criteria included size, species diversity, presence of Local BAP or UK BAP habitats and species together with presence of other notable species.

Habitats

- Amenity grassland
- Hedgerow
- Scrub
- Boundaries
- Buildings
- Tall ruderal



Amenity grassland

The Site comprised an area of grassland which appeared to have previously been improved grassland now in use as amenity with a sward height of around 5cm. Species included white clover, perennial ryegrass and common chickweed. It appeared the grassland was cut regularly by mowing and was used as a garden extension of the adjacent property.

Agriculturally improved grassland, which can be permanent or part of an arable rotation, is subject to regular fertilizer and herbicide use. The sward is usually made up of a fast growing and productive seed mix for grazing or silage/hay production. This habitat is generally common on intensive agricultural land used for livestock production and consequently tends to be botanically poor.

LOW ecological value



View of Site from east

Hedgerow

A managed ash hedgerow was present on the east of the Site separating the Site from the road. The hedgerow was well managed and around 2m in height. Holly and hornbeam were also rarely recorded in the southern section of the hedgerow.

Hedgerows are not only a UK BAP priority habitat but they can also provide valuable connectivity through the landscape and between other habitats, making them a valuable resource for a range of wildlife including, hazel dormice, bats and many invertebrates. Traditionally hedgerows were maintained as a means of containing livestock however as this need has in some cases been replaced by fencing, some hedgerows have been allowed to become defunct or outgrown. However with corrective management such as laying, planting and or coppicing these can frequently be restored. In this instance the hedgerow was largely well managed and provided a good corridor through the landscape, although it was lacking in species diversity.

LOW-MEDIUM ecological value



Eastern hedgerow

Scrub

Scattered bramble scrub, together with occasional rose was present in the south of the Site.

This habitat type is generally widespread and common and is usually associated with areas of unmanaged/unmaintained land. Consisting of multi-stemmed shrubs and bushes between 0.5m and 5m in height this habitat can be an important component of a habitat mosaic. Scrub can provide good foraging and nesting habitat for many bird species as well as provide valued shelter and foraging for many other species. In this instance, the scrub had very limited botanical or structural diversity offering only limited sheltering opportunities to birds and small mammals.

LOW ecological value



Scattered scrub

Buildings

One timber-clad shed type building was present in the north of the Site, adjacent to the hedgerow. The roof was flat and finished in bituminous felt.

LOW ecological value



Shed

Tall ruderal vegetation

An area of tall ruderal vegetation was present in the south of the Site;, species included rosebay willowherb, creeping thistle and cow parsley. This area was small and there were a small number of piles of grass clippings and other garden debris here.

This type of habitat is typically described as “weedy” vegetation growing on disturbed soil. It is not an uncommon habitat, it is easily recreated and it is usually dominated by one or two common plant species. It may provide a moderately good habitat and food source for some invertebrates, moreso when part of a habitat mosaic.

LOW-MEDIUM ecological value



Tall ruderal vegetation

Boundaries

Please see Phase 1 map

LOW ecological value

Species

The potential for protected species to be present on Site was given a value evaluated by the habitat suitability, records within the 1km radius and any evidence found on Site.

Great crested newts and other amphibians

There were two records of great crested newt some 394m from the Site, recorded in 2007 and 2008.

Two ponds were present within a 1km radius of the Site (not separated by barriers such as roads or rivers). Pond 1 was some 215m west of the Site, however it was not clear who owned this pond. Pond 2 was some 115m south of the Site.



It was considered that the grazed grassland between the Site and pond 1 lacked the structural diversity great crested newts would use for dispersal and shelter and therefore would likely act as a barrier to movement onto the Site. Coupled with the lack of suitable habitat within the Site for great crested newts, it was considered unlikely this species would disperse into the Site from pond 1, should they be present, therefore an HSI was not carried out on this pond.

Pond 2 held very little water at the time of survey. Given the recent heavy rainfall it was considered that the lack of water indicated this pond would not hold enough water at the right time of year (March-June) to offer suitable opportunities to breeding great crested newts, therefore an HSI was not carried out on this pond.



Pond 2

However, it was possible that more common and tolerant species of amphibians, including common frog and common toad, could be present within the tall ruderal area of the Site.

Likelihood of amphibian presence: LOW

Bats

There are 18 species of bats found in the UK all of which are protected by European law and are considered priorities under the UK BAP, as they have been in decline over recent years. Bats use a range of different habitats depending on species and time of the year. However all bats found in the UK are reliant on invertebrates as a food source, so therefore habitats that are known to be beneficial to invertebrates can be considered as beneficial to bats, such as pasture, woodland and waterbodies.

Most bats rely on good connective habitat such as hedgerows to ensure they can travel safely between roosts and foraging areas.

There were a number of bat records within a 1km radius of the site with two indeterminate pipistrelle roosts recorded in 1988 and 1989. The closest of these roosts was 551m from the Site. There were no trees on Site and the shed type building did not have a roof void or suitable crevices for roosting bats. However, it was considered that bats could use the eastern hedgerow as a dispersal route.

Likelihood of bat roosting: LOW

Likelihood of bat commuting: LOW-MEDIUM

Reptiles

There are a number of reptiles which are found in the UK including common lizard, sand lizard, slow worm, grass snake and adder. All reptiles native to the UK are priority species under the UK BAP. As cold blooded creatures, basking makes up a very important part of their life cycle, because of this all reptiles will use areas that are exposed to the sun in the morning and late afternoon to ensure they maintain a regulated body temperature.

There were no reptile records within the 1km search radius. The grassland lacked the structural diversity to offer sheltering opportunities to reptiles and its regular use and cutting by the neighbouring residential property would likely deter these species. The tall ruderal vegetation was unlikely to be used by these species due its small size and disconnection from additional suitable habitats.

Likelihood of reptile presence: LOW

Birds

The hedgerow on the eastern boundary offered suitable habitat to nesting birds and a number of birds were recorded within it during the walkover survey. No nests were recorded at the time of survey, however the presence of birds within the hedgerows could indicate nest building in the coming season.

Birds recorded on Site during survey:

Great tit x 2
Robin x 1
Woodpigeon x 2
Blue tit x 1

Nesting bird presence: MEDIUM

Hedgehog

Hedgehogs have been in decline recently due to increased pressures from a number of factors possibly including increased pesticide use. They are now considered a priority species under the UK BAP. Hedgehogs rely on habitats that are high in invertebrate numbers and have safe areas for nesting and good connectivity.

There were no hedgehogs recorded within a 1km radius of the Site. No evidence of this species was recorded during the Site visit. The tall ruderal vegetation and hedgerow could offer sheltering and dispersal routes to this species, however the small size of these habitats and their disconnection from additional suitable habitat resulted in their presence being unlikely.

Likelihood of hedgehog presence: LOW-MEDIUM

Brown Hare

Although brown hare are considered to be widespread in the lowlands of mainland Britain recent declines in numbers have highlighted this species as a priority under the UK Biodiversity Action Plan. This species inhabits arable farmland where they feed on grasses, herbs and bark.

There were two brown hare records within 1km of the Site, both recorded in 2005 within the village of Abbots Bromley. However, it was unlikely brown hare would be using the Site due to its high disturbance by the adjacent residential property.

Likelihood of brown hare presence: LOW

Harvest mouse

Harvest mice have declined as a result of agriculture intensification. They are now limited to southern and eastern parts of England. This species are typically found in fields of cereal crops such as wheat and oats, in reed beds and in other tall ground vegetation, such as long grass and hedgerows.

There were no records for harvest mouse within the 1km search radius. The tall ruderal area in the south of the Site could offer suitable stiff-stemmed grasses for nest building but the Site was disconnected from additional suitable habitat needed for foraging and dispersal purposes, therefore it was considered unlikely this species would be present.

Likelihood of harvest mouse presence: LOW

Polecat

Polecats are protected in the UK and have slightly increased in numbers recently however they are still scarce in England and are considered a priority under the UK BAP. Polecats inhabit a mosaic of habitat including woodland, grassland and riverbanks. They have large territories (though are not particularly territorial) and tend to move between habitats quite freely following seasonal food sources, with main diet comprised of rabbits and rats.

There was one record of polecat within a 1km radius of the Site. The regular use of this Site and lack of sheltering opportunities would likely deter this species from entering the Site.

Likelihood of polecat presence: LOW

Limitations

It was not clear who owned Pond 1 to the west of the Site so the pond could not be accessed. However due to the lack of dispersal routes to the Site coupled with the lack of suitable habitat on Site it was not considered great crested newts would be impacted (should they be present in this pond) by the development.

6. Conclusion

The Site as a whole offered limited opportunities to protected and notable species and had little botanical diversity. The grassland was regularly mown with no structural diversity lacking opportunities for shelter or foraging.

The most valuable habitat on Site was that of the hedgerow, offering opportunities to nesting birds and a dispersal route to bats. To a lesser extent the hedgerow offered sheltering opportunities to hedgehog and common amphibians, as did the tall ruderal vegetation, however the small size of these habitats and their disconnection from additional habitat resulted in the presence of these species being unlikely.

It was not possible to survey pond 1, however the lack of suitable habitat within the Site and the pond's separation from the Site by grazed grassland resulted in it being unlikely that great crested newts, should they be present in pond 1, would disperse onto the Site.

No further survey is recommended, however the hedgerow should be retained, where possible; any vegetation works and the removal of the shed should be carried out carefully to avoid injury to amphibians and hedgehog. Sensitive working practices and potential ecological enhancements are outlined within the recommendations section.

7. Recommendations

Avoidance, mitigation and legal obligation

In order to progress the development proposals for the Site, *ECOLOLOCATION* recommend the developer follow the advice set out in the "Avoidance, mitigation and legal obligations" section, to avoid harm or impact to legally protected and notable species as well as to ensure no net biodiversity loss as encouraged by The National Planning Policy Framework.

The National Planning Policy Framework para 117 states that "To minimise impacts on biodiversity and geodiversity, planning policies should...promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations". In order to

ensure no net loss of biodiversity in accordance with NPPF & Circular 06/2005 recommendations are made below:

- **The hedgerow should be retained and protected in accordance with BS5837:2005** 'Trees in relation to construction' for the purposes of ensuring that potential bird nesting habitat and a source of food and shelter for possible hedgehog and amphibians is maintained as well as connectivity through the landscape.
- Lighting during works and permanent lighting once the development has been completed should **face towards the ground and away from potential bat commuting routes such as the eastern hedgerow. Lighting should be turned off when not in use and not left illuminated over night.**
- **The grass clippings and garden debris should be carefully dismantled by hand** as there is a low-medium potential for these features to be used as shelter by amphibians or hedgehogs.
- The builders' compound to be located at least **5m from vegetation and all storage must be on pallets to avoid the possibility of amphibians using these areas for shelter.**
- **Areas of tall ruderal vegetation should be trimmed to a height of no less than 5cm** as this should deter species from entering the Site.
- Should the shed be required to be removed to facilitate the development, this should be done so carefully by hand and any such features should be temporarily stacked on pallets to discourage any animals from using them for shelter.
- The grassland should continue to be close mown to discourage access into the Site by amphibians or any other small animals, which may risk being trapped in excavations.
- Any deep excavations, which will be left open overnight, will need to have sloping wooden boards placed in them to provide exit ramps for amphibians and any other animals to escape.
- Should any non-protected species be discovered on Site these should be carefully moved from the development Site, unharmed, to an area to be left undisturbed by the works.
- Should any protected species be discovered before or during the works, **ECOLOLOCATION** or the local office of Natural England should be contacted for advice.

Suggested enhancements and compensation

If avoidance and mitigation measures are not achievable within the scheme, compensation should be sought. In addition to this, the Site could be enhanced post development as encouraged by The National Planning Policy Framework:

The National Planning Policy Framework para 118 states that "Opportunities to incorporate biodiversity in and around developments should be encouraged". Therefore, additional recommendations for biodiversity enhancements across the site are provided below:

- If some soft landscaping will be included as part of the scheme this could represent an ecological enhancement if **native tree and shrub** species are used that typically bear fruits, seeds or nuts which could be eaten by native birds and invertebrates. The addition of hedgerows along the remaining boundaries would also be welcome as this would enhance the Site's boundary features and act as connective corridors with the surrounding landscape.

- Nest boxes for great tit, blue tit and robin could be provided on Site to maintain and enhance the existing breeding possibilities for various bird species known to be using the Site. All such nesting facilities should be sited away from roads and erected on any suitable proposed buildings or existing trees on a north-east orientation.

8. References

Bat Workers Manual, JNCC, 2004 3rd edition

BSI (2005) *Trees in Relation to Construction. BS 5837:2005*

The Conservation of Habitats and Species Regulations (2012)

JNCC (1993) *Handbook for Phase 1 Habitat Survey: A technique for environmental audit.* Joint Nature Conservation Committee, Peterborough.

IEA (1995) *Guidelines for Baseline Ecological Assessment.* Institute of Environmental Assessment, E & FN Spon.

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Birds of Northern Europe (2010) Birdguides iPhone App

Stace, C (1997) *New flora of the British Isles.* Cambridge University Press

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Bristol Regional Environmental Records Centre

Rose, Francis (2006) *The Wildflower Key – How to identify wild flowers trees and shrubs in Britain and Ireland*

APPENDIX - SPECIES LIST

| Common Name | Scientific Name |
|---|----------------------------------|
| DAFOR scale: D – dominant, A – abundant, F – frequent, O – occasional, R - rare | |
| Trees/Shrubs | |
| Holly | <i>Ilex aquifolium</i> R |
| Ash | <i>Fraxinus excelsior</i> A |
| Hornbeam | <i>Carpinus betulus</i> R |
| Rose | <i>Rosa</i> spp. R |
| Elder | <i>Sambucus nigra</i> O |
| Herbs | |
| Willowherb | <i>Lamium</i> spp. F |
| Dandelion | <i>Taraxacum</i> spp. O |
| Common nettle | <i>Urtica dioica</i> O |
| Common ragwort | <i>Jacobaea vulgaris</i> R |
| Creeping buttercup | <i>Ranunculus repens</i> F |
| Broadleaved dock | <i>Rumex obtusifolius</i> R |
| Creeping thistle | <i>Cirsium arvense</i> F |
| Smooth sow thistle | <i>Sonchus oleraceus</i> R |
| Red dead nettle | <i>Lamium purpureum</i> O |
| Lawn daisy | <i>Bellis perennis</i> F |
| Bittercress | <i>Cardamine hirsute</i> O |
| Common thistle | <i>Cirsium vulgare</i> R |
| Bramble | <i>Rubus fruticosus</i> F |
| White clover | <i>Trifolium repens</i> F |
| Rosebay willowherb | <i>Chamerion angustifolium</i> O |
| Cow parsley | <i>Anthriscus sylvestris</i> O |
| Common chickweed | <i>Stellaria media</i> O |
| Grasses | |
| Perennial rye grass | <i>Lolium perenne</i> A |