# Habitat Survey for Land at Marsh Lane, Hayle, Cornwall

22nd May 2009

REPORT CONTROL

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|---|---|
| Document: | Habitat Survey for Land at Hayle, Cornwall |
| Project: | Hayle |
| Client: | WYG Planning |
| Job Number: | A039340 |
| File Origin: | P:\Administration\Environmental\Projects\2008\A039340 Hayle |

Document Checking:

| | | | |
|---|---|---|---|
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| Review By | Nancy Davies | Initialled: | ND |

| Issue | Date | Status | Checked for Issue |
|---|---|---|---|
| 1 | 22/05/09 | V1 | ND |
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**Contents**

## 1.0 INTRODUCTION

1.1 In April 2009, WYG EPT were commissioned to undertake a habitat survey of an area of land at Marsh Lane Hayle, Cornwall. The purpose of the survey was to map the habitats present and assess the value of the habitats. Where the site coincided with a designated nature conservation site, the habitats were assessed against the reasons for its designation.

1.2 The common name only of flora and fauna species is given in the main text of this report; however, Latin names are used for species where no common name is available. A full species list with Latin names is listed in Appendix B.

## 2.0 BACKGROUND

2.1 The application site comprises approximately 16 ha of land at Hayle, Cornwall (NGR SW 579 383; refer to Figure 1 for location). Part of the site coincides with Marsh Lane Marshes County Wildlife Site (CWS) (refer to Figure 1 for CWS boundary), which has been designated for its mosaic of habitats, including unimproved grassland, wet woodland, running water, standing water, semi-improved meadows and hedgerows. Of these habitats, wet woodland, water and hedgerows occur in the area of interest. The site also has value for rare birds, particularly migrants[1].

2.2 A new Sainsbury's supermarket and car park is being proposed for the south western corner of the site to the south of the railway embankment which coincides with Fields 1 and 2 (Figure 1) and this is within the area covered by the CWS designation.

2.3 The south western corner of the site coincides with Marsh Lane Marshes CWS. CWSs are a local designation. In Cornwall, the Cornwall Wildlife Trust designates areas as CWSs if they represent important areas of natural and semi-natural habitats such as heathlands, wetlands, open water, dunes and woodland and are indicative of the sites of countywide importance intended to be protected by Policy ENV 5 of the Structure Plan (Policy 2, 2004)[2].

## 3.0 RESULTS

3.1 The following habitats, which are listed in order of extent, are present on site:

- Semi-improved grassland
- Tall ruderal
- Marshy grassland
- Hedgerows
- Bare ground
- Wet woodland
- Continuous scrub
- Standing water

The locations of the habitats are presented on Figure 1 and any notable features are shown as Target Notes.

3.2 *Semi-improved grassland*: Semi-improved grassland is the most prevalent habitat on the site. Fields 3, 4 and 5 comprised semi-improved grassland (Plate 1). The field cores were well drained and had a moderate diversity of species. The grassland comprised a sward of Yorkshire fog, cock's-foot, Italian ryegrass, sweet vernal grass, soft brome, smooth meadow grass, hairy brome with southern marsh orchid, dandelion, broad-leaved dock, creeping buttercup, common cats-ear, daisy and white clover. The species composition is characteristic of grassland which has been partially modified by management such as fertilisers, herbicides, drainage and grazing. Wet ditches abut part of the field margins and these are colonised by

[1] Cornwall Wildlife Trust. Pers. Comm.
[2] Penwith Local Plan 2004. Local Plan Policies and Proposals. Penwith District Council. Revised Sept 2007.

fool's watercress and various species of rush.

3.2.1 The grassland falls outside of the area which has been designated as a CWS and is not a Cornwall Biodiversity Action Plan Priority Habitat. However, the grassland has some value to wildlife and carrion crow, jackdaw, rooks and magpies were recorded foraging here. The grassland may also be used by other birds and by foraging badgers amphibians and reptiles.

3.2.2 The semi-improved grassland is of **local** value.

Plate 1. Grassland in Field 3

3.3 *Tall ruderal*: A large block of tall ruderal habitat occurs in Field 1 and 2. The substrate on this part of the site appears to be artificially made ground which comprises of crushed rubble. This area is poorly drained and where it is bisected by vehicle tracks the ruts have become flooded creating areas of standing water. The flora here comprises a matrix of tall ruderal with some marshy grassland plants (sedges and rushes), bare ground and scattered scrub. The dominant species are rosebay willow-herb, hogweed, fool's watercress, hard rush, soft rush, common horsetail, cuckoo flower, wild mint, common horsetail, lesser celandine, yellow flag, broad-leaved dock, common nettle and red campion and larger stands of hawthorn and willow. The habitat grades into scrub towards the field edges and eventually hedgerows along the boundaries.

3.3.1 Japanese knotweed was noted on the southern boundary of Field 2 (TN1) in addition to a patch of fly-tipping in the same area (TN2).

3.3.2 The area of tall ruderal is of moderate size and is likely to provide habitat for birds such as sedge warblers and chiffchaffs, which were noted here during the survey. The area is also likely to be used by common species of amphibians and reptiles. The area also falls within the Marsh Lane Marshes CWS. However, the majority of the plant species present are common ruderal species which are characteristic of recently disturbed land and do not qualify as any of the habitats for which the CWS was designated. The plant communities here are early succession assemblages that are common and widespread in the UK and are easily re-creatable. Furthermore, without management this habitat is likely to revert to scrub.

3.3.3 The tall ruderal habitat is of **value within the zone of influence only**.

Plate 2. Tall ruderal/marshy grassland in Field 1

Plate 3. Made ground substrate in Field 1

Plate 4. Ruts with standing water in Field 1

Plate 5. Fly-tipping in Field 2

3.4 *Marshy grassland:* An area of marshy grassland occurs in Field 2. The dominant plant species are fool's watercress, common horse-tail, yellow iris, creeping buttercup, common spike rush, hard rush, false fox sedge, glaucous sedge and hairy sedge. Forget-me-knot, columbine and oxlip were noted the drier areas.

3.4.1 Marshy grassland is one of the habitats for which the CWS is designated for, but it is not a BAP Priority Habitat. The marshy grassland is likely to support common species of reptiles and amphibians. Chiffchaff, whitethroat and sedge warbler were recorded here. The marshy grassland is connected to a larger area of marsh, reedbeds, streams and wet woodland to the north and this increases its ecological value. However, the habitat is transitional and there is evidence of encroachment by bramble and bracken particularly in the east. Without management this habitat is likely to become scrub. The marshy grassland is of **local** to **district** value.

3.5 *Hedgerows*: Hedgerows form the boundaries of most of the fields. The hedgerows comprise hawthorn, gorse, bramble, willow, dog rose, ivy, hedge bindweed and honeysuckle. The hedgerows along the north and east boundary of Field 1 are outgrown (Plate 5) and have substantially encroached the field core where they grade into scrub. Three further hedgerows around Fields 3 and 4 have been managed and are mature, species-poor, intact and contain some mature standard trees (Plate 6).

3.5.1 Several of the hedgerows, including the hedgerow which abuts Marsh Lane, are defunct. However, they contain woodland species in the ground flora including bluebells, hart's tongue fern, and lords and ladies. Teasel, creeping buttercup and common field-speedwell were also present (Plate 7).

3.5.2 Numerous birds were noted using the hedgerows including dunnock, robin, blackbird, chiffchaff, chaffinch and greenfinch, all of which are likely to nest here. Bats may also use the hedgerows for commuting and foraging. The hedgerows form an extensive network of corridors though the site into the wider landscape. Some of the hedgerows are mature and complex in structure and others have diverse understorey vegetation and are associated with Cornwall banks or wet ditches. This diversity adds to the value of the hedgerows. The hedgerows on the site are of **district** value.

Plate 6. Outgrown hedge in Field 1

Plate 7. Mature hedge in Field 4

Plate 8. Cornwall bank along Marsh Lane

Plate 9. Wet woodland in Field 2

3.6 *Bare ground*: Several areas of bare ground, including made ground, occur in Field 1. These areas are gradually becoming encroached by ruderal plants. Whilst the plants offer opportunities for foraging animals, the made ground itself is unlikely to be used by any wildlife.

3.6.1 An area of hard standing is located between Fields 3 and 4. This area is concrete and functions as a storage area for vehicles including buses, lorries and caravans. The hard standing is intact and provides no opportunities for wildlife. The bare ground/hard standing is of **negligible** value.

3.7 *Wet woodland*: A small block of wet woodland was present along the boundary of Field 2. The woodland was dominated by willow with a sparse understorey of hawthorn, bramble, lords and ladies, hart's tongue fern and ivy. The woodland is likely to provide nest sites for a range of species of birds and may also provide refuge for reptiles and amphibians. Furthermore an active badger sett was noted in this area.

3.7.1 The wet woodland is within the CWS and is one of the habitats for which the CWS was designated it is also a Local Biodiversity Action Plan Priority Habitat. This habitat is uncommon in the UK and difficult to recreate. Whilst the area of wet woodland is small, it forms part of a complex of wetland habitats with land to the north which supports marshy grassland and reedbeds and this increases its value. The wet woodland is of **district** value.

3.8 *Continuous scrub*: Large areas of scrub are present in Fields 2, 5 and 6. The scrub comprised bramble, ivy and bracken as well as an understorey of lords and ladies and hart's tongue fern. The continuous scrub provides foraging and refuge opportunities to a range of wildlife, including nesting birds, badgers, reptiles and amphibians. However, the scrub is outside of the areas designated as a CWS and is not a Priority Habitat. Scrub is widespread and common in the area and in the UK and is easily re-creatable. The scrub is therefore of **value within the zone of influence.**

3.9 *Open water*: Several areas of open water occur on the site; these include the small pools of water within Fields 1 and 2 which occur where ruts in the soil have flooded (Plate 3). These pools were common in Fields 1 and 2, but not recorded elsewhere. Whilst in total the pools make up a moderate area of open water, no aquatic plants were noted and furthermore, no amphibians (including spawn and tadpoles) were recorded which suggests that they are temporary water bodies and not of high value to wildlife. Furthermore, a film of oil was noted on the water surface in Field 1.

3.9.1 A wet ditch abuted part of the southern site boundary near Field 1. The wet ditch was encroached by scrub and ruderals; consequently the water was heavily shaded and very little open water was present (Plate 10). No aquatic plants or amphibians were recorded here. Several other wet ditches occur around the boundaries of Fields 3, 4,and 5. These ditches are generally shaded by the hedgerows and encroached with scrub, however, they do support wetland plants such as sedges and rushes in more open areas.

3.9.2 A second wet ditch was present near the northern boundary of the hardstanding between Fields 3 and 4. The ditch contained common duckweed, but no amphibians were recorded during the survey. Fly-tipped material was present in the ditch. Two other areas of standing water were present on the hardstanding. These waterbodies supported a range of aquatic and marsh plants including common duckweed, hard rush and Canadian waterweed. Again, no amphibians were recorded.

3.9.3 Some of the standing water falls within the CWS and it is one of the habitats that the CWS was designated for. The waterbodies do not appear to support amphibians and they are not a Priority Habitat. Furthermore, otters and bats, which are known to occur in the area, may use the waterbodies as foraging and commuting habitats. Whilst some of the wet ditches do support wetland plants, many are heavily shaded and encroached by scrub. The open water is of **local** value to wildlife.

3.10 *Standard trees:* Numerous semi-mature standard trees occur within the hedgerows on the site. Low numbers of mature sycamore and elm trees occur towards the east of the site.

3.10.1 Several of the mature trees supported arboreal ivy which could support roosting bats. The trees may also be used by nesting and foraging birds. The trees add to the structural diversity of the site. Whilst mature trees are not easily replaced, the majority of the trees are semi-mature and these are more easily replaceable. The standard trees are of **local** value.

Plate 10. Wet ditch next to Field 1

Plate 11. Aquatic and wetland plants in Field 4

3.11 *Adjacent habitats*: The site is bounded to the south and west by Marsh Lane, beyond which lies a retail park. The retail park itself is modern and contains few features which would provide opportunities for wildlife and is of **negligible** value. However, a number of mature trees along Marsh Lane support dense ivy, which may provide roost sites for bats (Plate 12, located at TN3 on Figure 1). These trees are of **local** value. To the north lies a large area of marshy grassland, reed beds, wet ditches and streams. These habitats are of **County** value to wildlife.

Plate 12. Trees on Marsh Lane which could support bats

3.12 *Protected Species:* A number of common species of birds were noted on site during the survey. Furthermore, the site has the potential to support a range of reptiles and amphibians. Several trees in Fields 4 and 5 supported ivy which may provide roost sites for bats, however these are outside of the proposed development footprint. Bats may also forage along the field boundaries and watercourses. Otters, which are known to occur in the area, may use the site.

3.13 Further studies are currently underway for reptiles, breeding birds, otters and bats and the

value of the habitats will need to be reassessed once these surveys are complete.

## 4.0 CONCLUSIONS

4.1 The habitats on the site range from negligible to district value based on the habitat survey, but these values could change due to the presence or absence of protected species surveys. It is understood that majority of the proposed development will occur on the tall ruderal habitat which is of lower value to wildlife. However, it is also likely to encroach into the marshy grassland and wet woodland for which the site has been designated a CWS. It is recommended that impacts on these habitats should be reduced as far as possible. Furthermore, the hedgerows are considered to have value to wildlife and should be retained as far as possible. Where habitats of value are impacted, planning policy dictates that mitigation/ compensation will be required.

4.2 A detailed mitigation strategy, habitat management plan and construction ecological management plan should prepared for the site.

4.3 The Japanese knotweed should be removed in line with Environment Agency guidelines[3].

4.4 Species specific recommendations will be made once the protected species surveys have been completed.

## 5.0 CONSTRAINTS TO SURVEY

5.1 This report records wildlife found during the surveys and anecdotal evidence of sightings. It does not record any animals that may appear at other times of the year and not evident at the time of the visit. Some species that might use the site or be apparent at other times of the year, or only in certain years, would not have been detected.

5.2 The behaviour of animals can be unpredictable and may not conform to the standard patterns reported in the scientific literature. For these reasons this report cannot predict with absolute certainty that animals will occur in apparently suitable locations or habitats or that they will not occur in locations or habitats that appear unsuitable.

[3] Environment Agency. (2006). *Managing Japanese knotweed on development sites.* Environment Agency, Bristol

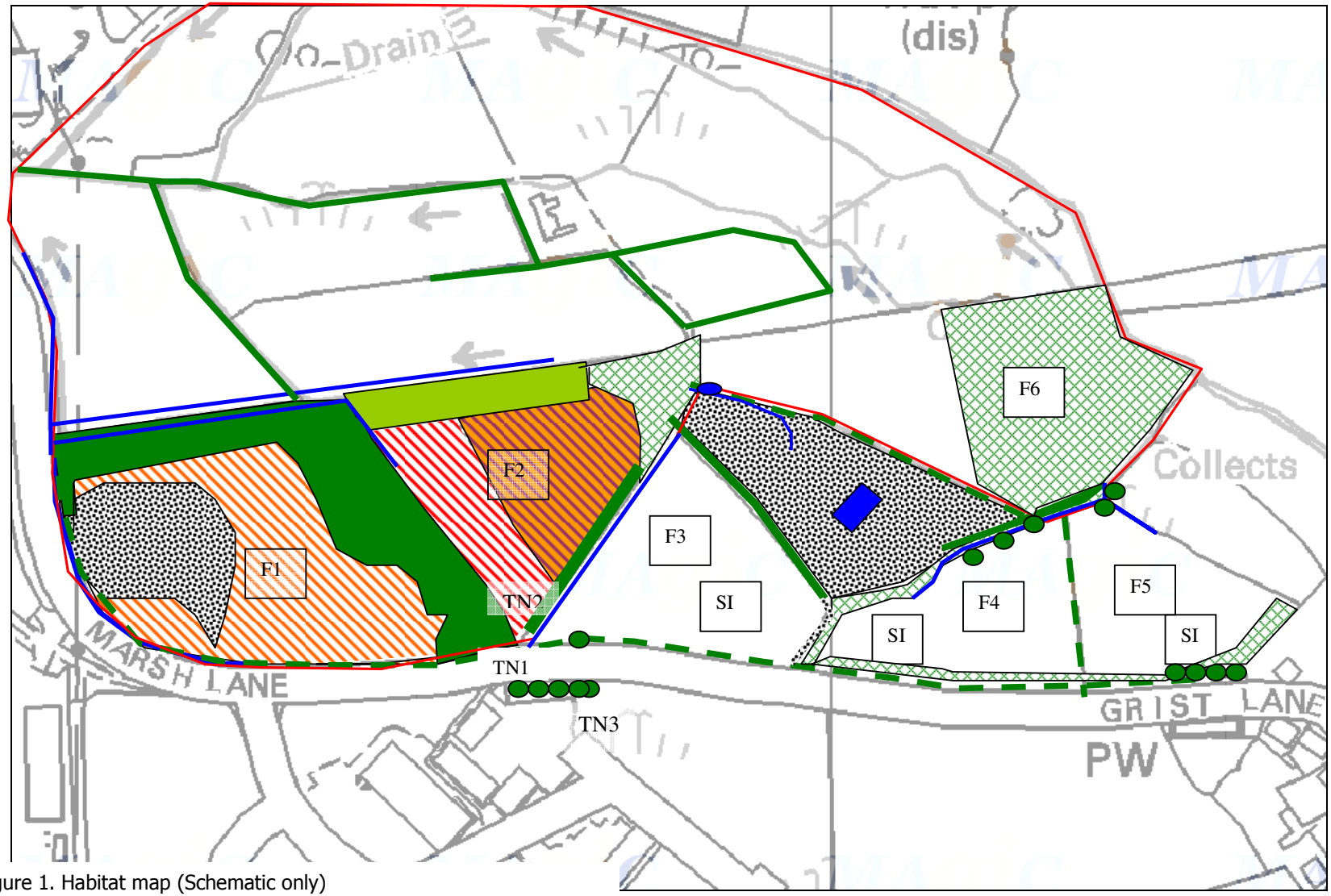
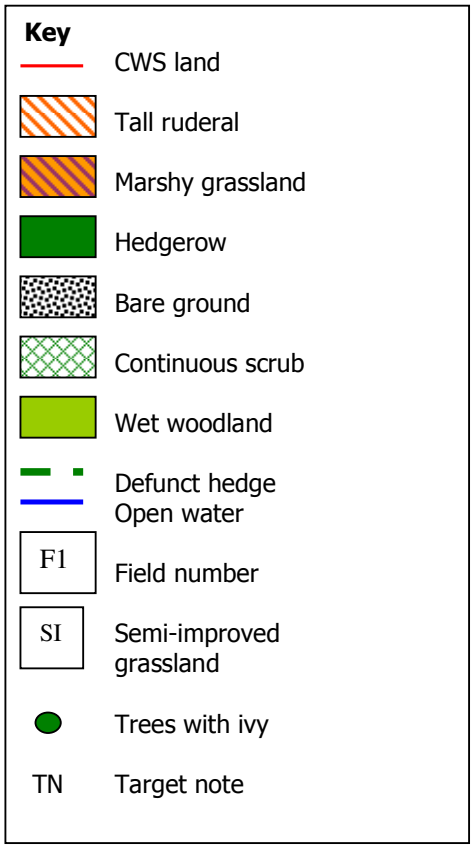



Figure 1. Habitat map (Schematic only)



## APPENDIX A: REPORT CONDITIONS

***WYG ENVIRONMENT PLANNING TRANSPORT***

### REPORT CONDITIONS

*This report is produced solely for the benefit of WYG EPT, Sainsbury's Supermarkets Ltd and* Cranford (Hayle) LLP (OC 326623) *and no liability is accepted for any reliance placed on it by any other party unless specifically agreed in writing otherwise.*

*This report refers, within the limitations stated, to the condition of the site and the recorded proposals at the time of the inspections and study. No warranty is given as to the possibility of future changes in the condition of the site.*

*This report is based solely on the referenced data, inspections, discussions with Statutory Authorities and assessment by WYG EPT. Some of the opinions are based on unconfirmed data and information and are presented as the best that can be obtained at this stage without further extensive research.*

*The report is prepared for the objectives, scope and proposed uses stated in the report and should not be used in a different context without consent of WYG EPT. The report is limited to those aspects specifically reported on and is necessarily restricted. No liability is accepted for any other aspect. The opinions expressed cannot be absolute due to the limitations of time and resources imposed by the agreed brief.*

*Whilst the findings detailed within this report reflect our best assessment, because there are no exact UK definitions of these matters, being subject to risk analysis and interpretation, we are unable to give categoric assurances that they will be accepted by authorities or interested parties without question as such bodies have their own interpretation of regulations and standard.*

**APPENDIX B: SPECIES LIST**

| | |
|---|---|
| Alexanders | *Smyrnium olusatrum* |
| Bluebell | *Hyacinthoides non-scripta* |
| Bracken | *Pteridium aquilinum* |
| Bramble | *Rubus fruticosus* |
| Broad-leaved dock | *Rumex obtusifolius* |
| Canadian waterweed | *Elodea canadensis* |
| Cat's-ear | *Hypochaeris radicata* |
| Cock's-foot | *Dactylis glomerata* |
| Columbine | *Aguilega vulgaris* |
| Common duckweed | *Lemna minor* |
| Common field speedwell | *Veronica persica* |
| Common horsetail | *Equisetum arvense* |
| Common nettle | *Urtica dioica* |
| Common spike rush | *Eleocharis palustris* |
| Common spotted orchid | *Dactylorhiza fuchsii* |
| Creeping buttercup | *Ranunculus repens* |
| Cuckooflower | *Cardamine pratensis* |
| Dandelion | *Taraxacum agg.* |
| Dog rose | *Rosa canina* |
| English elm | *Ulmus minor* |
| False fox sedge | *Carex otrubae* |
| Fool's watercress | *Apium nodiflorum* |
| Forget-me-not | *Myosotis arvensis* |
| Glaucous sedge | *Carex flacca* |
| Gorse | *Ulex europaeus* |
| Hairy brome | *Bromus ramosus* |
| Hairy sedge | *Carex hirta* |
| Hard rush | *Juncus inflexus* |
| Hart's tongue fern | *Asplenium scolopendrium* |
| Hawthorn | *crataegus mongyna* |
| Hedge bindweed | *Calystegia sepium* |
| Hogweed | *Heracleum sphondylium* |
| Honeysuckle | *Lonicera periclymenum* |
| Italian ryegrass | *Lolium multiflorum* |
| Ivy | *Hedera helix* |
| Japanese knotweed | *Fallopia japonica* |
| Lesser celendine | *Ranunculus ficaria* |

| | |
|---|---|
| Lords-and-Ladies | *Arum maculatum* |
| Marsh thistle | *Cirsium palustre* |
| Mint | *Menthe sp.* |
| Oxlip | *Primula elatior* |
| Pale flax | *Linum bienne* |
| Red campion | *Silene dioica* |
| Red fescue | *Festuca rubra* |
| Rosebay willowherb | *Chamerion angustifolium* |
| Smooth meadow grass | *Poa pratensis* |
| Soft brome | *Bromus mollis* |
| Soft rush | *Juncus effusus* |
| Southern marsh orchid | *Dactylorhiza praetermissa* |
| Sweet vernal grass | *Anthoxanthum odoratum* |
| Teasel | *Dipsacus fullonum* |
| Watercress | *Rorippa nasturtium-aquaticum* |
| White clover | *Trifolium repens* |
| Wild angelica | *Angelica sylvestris* |
| Willow | *Salix sp.* |
| Yellow flag | *Iris pseudacorus* |
| Yorkshire fog | *Holcu lanatus* |

| | |
|---|---|
| Blackbird | Turdus merula |
| Carrion crow | Corvus corone |
| Chaffinch | Fringilla coelebs |
| Chiffchaff | Phylloscopus collybita |
| Dunnock | Prunella modularis |
| Greenfinch | Carduelis chloris |
| Jackdaw | Corvus monedula |
| Magpie | Pica pica |
| Robin | Erithacus rubecula |
| Rook | Corvus frugilegus |
| Sedge warbler | Acrocephalus schoenobaenus |
| Whitethroat | Sylvia communis |

| | |
|---|---|
| Badger | Meles meles |
| Otter | Lutra lutra |