

Ems Botanical Corridor Survey



Photo 1 *Hildenbrandia rivularis*

Site: Westbourne Parish

Client: Chichester District Council

Version 001

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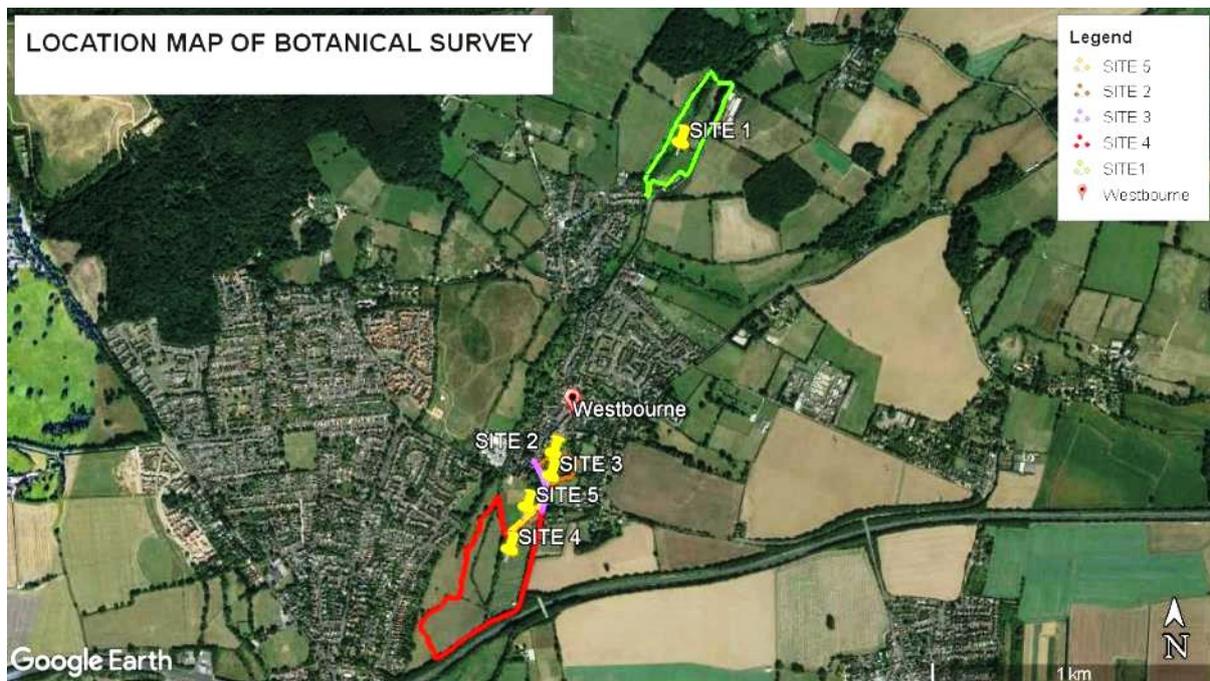
1. Summary

This is a brief summary of findings of the site survey carried out at along sections of the River Ems.

- Middleton Ecology was commissioned by Chichester District Council to undertake a botanical survey of accessible areas along the River Ems and highlight the species of conservation concern.
- The areas that were surveyed were outside the South Downs National Park.
- Three areas were surveyed on 12/08/2020 and are to be known as site 1, site 2 and site 3. Then a further two sites were surveyed on the 31/08/2020 and are to be known as site 4 and site 5.
- During the extended botanical survey, the sites were found to comprise of chalk stream, broad-leaved hedgerows and tall ruderal and at times they interspersed with broad-leaved wet woodland, meadow, semi-improved grassland and open water. See figure 1 for the location of the sites relevant to the position of Westbourne.
- There is potential for the tall Ruderal habitat to support slow worm and grass snake, which are protected against killing and injury under the Wildlife and Countryside Act, 1981 (as amended). Note - a Slow worm was seen on site 4 in this habitat.
- The hedgerow and wet woodland habitats found within these sites are likely to support breeding birds. Under the Wildlife and Countryside Act 1981 (as amended), it is illegal to take, damage or destroy the nests of wild birds whilst being built or when in use. The breeding bird season is generally accepted to be from March to August inclusive, although some species will breed outside this period.

- There are a number of dead trees and mature trees covered in ivy - that have the potential to support summer roosting bats. Bats are fully protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations, 2017.
- During the survey evidence of water vole droppings were found in site 3 and are protected in accordance with the duty placed on Local Planning Authorities to have due regard for biodiversity under the NERC Act, 2006.
- The habitats on site have the potential to support the European hedgehog. The European hedgehog is a species of principal importance, listed under Section 41 of the NERC Act, 2006.
- Winter Heliotrope which is a non-native invasive species was found growing beside the stream (site 3). Holm Oak was found growing beside the footpath on site 4.
- See Appendix 1 for the records for the Botanical Survey carried out on the 12/08/2020 and 31/08/2020.

Figure 1. Map showing geographical location of the sites



Site Location (Google Earth Pro, 2020).

2. Brief and Objectives

The purpose of the survey was to:

- Map and identify the existing habitats within the sites along the Ems.
- Check for evidence of protected species and assess the potential for protected species to be present in the sites along the Ems.
- Check for evidence of invasive species.

3. Chalk Indicator Species

There are a number of chalk-stream indicator plants to be found in West Sussex and the Ems is one of the better streams. The surveys that took place on the 12/08/2020 and the 31/08/2020 were late in the season. However, because the Ems flows all year round and does not dry up completely like many of the other chalk streams in West Sussex - a good number of plant species were found. The list of species found is not a definitive list and a survey in the spring would increase the list. There is always the potential that other species can be found within these five sites and certainly along other stretches of the Ems.

The problems that affect chalk streams are:

- Ditching, straightening and removal of natural features
- Weirs, concrete training walls and man-made obstructions to flow
- Urbanisation and gardenisation
- Non-native invasive species
- Water abstraction
- pollution

The botanical chalk-stream Indicator species found were as follows: -

<i>Ranunculus pencillatus subsp pseudofluitans</i>	Brook Water Crowfoot
<i>Veronica anagalis aquatica</i>	Blue Water Speedwell
<i>Rorippa-nasturtium-aquaticum</i>	Water-cress
<i>Callitriche obtusangula</i>	Blunt-fruited Water Starwort
<i>Glyceria fluitans</i>	Floating Sweet-grass
<i>Hildenbrandia rivularis</i>	(red algae on stones)
<i>Hygroamblystegium tenax</i>	Fountain Feather-moss
<i>Platyhypnidium ripariodes</i>	Long-beaked Water Feather-moss
<i>Cratoneuron filicinum</i>	Fern-leaved Hook-moss
<i>Pellia endiviifolia</i>	Endive Pelia

4. Other plants of note

If any of these sites came under threat from development in the future? The NPPF 2019 sets out government policy on biodiversity in planning decisions. Under the NPPF 2019, the presence of a protected species is a material consideration when a planning authority is considering a development proposal. A number of plants recorded are of conservation concern usually due to their habitat disappearing like the Pepper Saxifrage and Corky-fruited Water Dropwort which are

indicators of old meadow sites. The one plant of Spurge Laurel is a chalk woodland indicator. See also the list of chalk-stream species above.

5. Non-native Invasive Species

Two non-native invasive species were recorded during the survey. On site 3, during the survey the plant species known as Winter Heliotrope was found and on site 4, a single sapling of Holm Oak was found. These species are regulated by Schedule 9, Section 2 of the Wildlife and Countryside Act, 1981 (as amended), which lists non-native species that are already established in the wild, but which continue to pose a conservation threat to native biodiversity and habitats, such that species management and further releases should be regulated. Luckily, both these species are in small patches and are not so invasive to the chalk stream.

Site 1



Wet woodland and tall ruderal



Stream



Field with meadow species



Pike



Brook Water Crowfoot



Water Mint

Site one comprises of the slow running chalk stream, some open water at the source of a spring, wet woodland, meadow, semi-improved field and lots of tall ruderal habitat. There were a number of good chalk-stream indicators found on the site including Brook Water Crowfoot. Blue Water Speedwell, Water-cress, Floating Sweet-grass, *Hildenbrandia rivularis*, Fern-leaved Hook-moss, Fountain Feather-moss, Long-beaked Water Feather-moss and Endive pellia. Other plants of note were the Corky-fruited Water Dropwort and Jointed Rush which are good meadow indicator plants.

Site 2

Site two comprises of open water in the form of a large pond. There is an area of field that is presently a large area of tall ruderal habitat. There is also a thin broad-leaved woodland (shore) running around the edge of part of the pond and there are areas of aquatic vegetation growing within the pond that have Water Vole potential. The plant of note was the Common Club-rush which is not so common in Sussex nowadays.



Pond



Fleabane and Tufted Vetch



Roesel's Bush Cricket

Site 3



Stream



Skullcap



Wild Honey bees

Site three comprises of open water running along a tarmac pathway. There is a line of tall ruderal habitat running along the edge and a line of thin broad-leaved woodland (shore). Then within the stream there is a line of aquatic vegetation which is presently supporting Water Vole as the droppings found provided evidence. The chalk-stream indicator plants found were Brook Water Crowfoot, Water-cress and Blue Water Speedwell. The skullcap is not a common plant to see nowadays and is on the plants of concern list. Winter Heliotrope was found on site and is an invasive non-native species and it would be good if it could be removed before it spreads any further.

Site 4



semi improved grassland/ Tall ruderal



Hedgerow



Stream



Hornet Hoverfly



Monkey Flower



Yellow-necked Mouse

Site four comprises of the slow running chalk streams, some open water, wet woodland, meadow, semi-improved fields and some tall ruderal habitat. The plants of note were Pepper Saxifrage, Corky-fruited Water Dropwort and Spurge Laurel. The chalk-stream indicators were Water-cress, Brook River Crowfoot, Blue Water Speedwell, Floating Sweet-grass and some *Hildenbrandia rivularis*. There was a small sapling of Holm Oak growing near the footpath which is a non-native invasive species and it would be good to pull it up because, once mature, it tends to shed its acorns and spread rapidly.

Site 5



Tall Ruderal habitat



Centre of Site 5



Water-cress

Site five comprises of the slow running chalk stream (artificial channel), wet woodland, and some tall ruderal habitat. The Chalk-stream indicator plants found were Water-cress and Floating Sweet-grass.

6. Conclusion

The survey found that there are a good number of chalk-stream species along the Ems. Areas of the stream would benefit with some opening up of the canopy to increase the areas of *Hildenbrandia* algae that need the sunlight. However, a balance is needed because some shade is essential for a number of species such as the trout that live along the river. There were some areas of green algae that have taken over parts of the stream and some algae species indicate some pollution/eutrophication and so it would be a benefit to have these identified in order to ascertain whether the pollution may be harmful to the stream. In addition to the chalk-stream plant species found - there is the old historical evidence of the water-cress bed system down towards the A27, which is part of the heritage of the river and should be preserved. The tall ruderal habitats are beneficial for reptiles and many species of insect and mammals. The hedges and small wooded areas are beneficial for bats and birds. Also, the presence of Redstart, Spotted Flycatcher and Willow Warbler all feeding together on the last survey day - highlight that this is a very important migration route for birds at this time of year. The non-native invasive species should be removed if possible?

7. Appendix 1

1.1

Ems River Corridor Survey Site 1

Parish	Westbourne					
Scale	Cover-abundance					
Dominant = D	(91 - 100%)	Dominant	Abundant	Frequent	Occasional	Rare
Abundant = A	(51 - 90%)					
Frequent = F	(21 - 50%)					
Occasional = O	(6 - 20%)					
Rare = R	(0 - 5%)					
Latin Name	Common Name	Dominant	Abundant	Frequent	Occasional	Rare
TREES						
<i>Acer campestre</i>	Field Maple				Occasional	
<i>Acer pseudoplatanus</i>	Sycamore					Rare
<i>Crataegus monogyna</i>	Hawthorn				Occasional	
<i>Euonymus europaea</i>	Spindle					Rare
<i>Fraxinus excelsior</i>	Ash				Occasional	
<i>Prunus spinosa</i>	Blackthorn				Occasional	
<i>Quercus robur</i>	Pedunculate Oak				Occasional	
<i>Salix cinerea</i>	Sallow			Frequent		
<i>Salix fragilis</i>	Crack Willow				Occasional	
<i>Salix x sepulcralis</i>	Weeping Willow					Rare
<i>Sambucus nigra</i>	Elder				Occasional	
<i>Taxus baccata</i>	Yew					Rare
SHRUBS						
<i>Hedera helix</i>	Ivy				Occasional	
<i>Ligustrum vulgare</i>	Wild Privet					Rare
<i>Lonicera periclymenum</i>	Honeysuckle					Rare
<i>Ribes rubrum</i>	Red Currant					Rare
<i>Rosa canina</i>	Dog Rose					Rare

FLOWERS

<i>Achillea millefolium</i>	Yarrow	Occasional	
<i>Aethusa cynapium</i>	Fool's Parsley		Rare
<i>Agrimonia eupatoria</i>	Agrimony	Occasional	
<i>Alisma plantago-aquatica</i>	Water Plantain		Rare
<i>Angelica sylvestris</i>	Angelica	Occasional	
<i>Anthriscus sylvestris</i>	Cow Parsley		Rare
<i>Apium nodiflorum</i>	Fool's Water-cress	Occasional	
<i>Arctium minor</i>	Lesser Burdock		Rare
<i>Arum maculatum</i>	Lords and Ladies		Rare
<i>Calystegia sepium</i>	Hedge Bindweed	Occasional	
<i>Centaurea nigra</i>	Knapweed	Occasional	
<i>Cerastium fontanum</i>	Common Mouse-ear		Rare
<i>Chaerophyllum temulum</i>	Rough Chervil	Occasional	
<i>Circaea lutetiana</i>	Enchanter's Nightshade	Occasional	
<i>Cirsium arvense</i>	Creeping Thistle	Frequent	
<i>Cirsium vulgare</i>	Spear Thistle	Occasional	
<i>Crepis capillaris</i>	Smooth Hawk's-beard		Rare
<i>Dipsacus fullonum</i>	Teasel	Occasional	
<i>Epilobium adenocaulon</i>	American Willow-herb	Occasional	
<i>Epilobium hirsutum</i>	Great Willow-herb	Occasional	
<i>Filipendula ulmaria</i>	Meadow Sweet		Rare
<i>Galium aparine</i>	Cleavers	Frequent	
<i>Geranium dissectum</i>	Cut-leaved Crane's-bill		Rare
<i>Geranium robertianum</i>	Herb Robert		Rare
<i>Geum urbanum</i>	Wood Avens	Occasional	
<i>Glechoma hederacea</i>	Ground Ivy	Occasional	
<i>Helminthotheca echioides</i>	Bristly Ox-tongue	Occasional	
<i>Heracleum sphondylium</i>	Hogweed	Occasional	
<i>Hypericum tetrapterum</i>	Square-stalked St John's-wort	Occasional	
<i>Iris pseudacorus</i>	Yellow Iris	Occasional	
<i>Lathyrus pratensis</i>	Meadow Vetchling	Occasional	
<i>Lycopus europaeus</i>	Gypsywort	Occasional	
<i>Matricaria chamomilla</i>	Scented Mayweed		Rare
<i>Mentha aquatica</i>	Water Mint	Occasional	
<i>Myotis arvensis</i>	Field Forget-me-not		Rare
<i>Odontites vernus</i>	Red Bartsia	Occasional	
<i>Oenanthe crocata</i>	Hemlock Water Hemlock	Occasional	
<i>Persicaria lapathifolia</i>	Pale Persicaria	Occasional	
<i>Plantago lanceolata</i>	Ribwort Plantain	Occasional	
<i>Plantago major</i>	Greater Plantain		Rare
<i>Potentilla anserina</i>	Silverweed	Occasional	
<i>Potentilla reptans</i>	Creeping Cinquefoil	Occasional	
<i>Prunella vulgaris</i>	Selfheal	Occasional	
<i>Pulicaria dysenterica</i>	Common Fleabane	Occasional	
<i>Ranunculus pencillatus subsp pseudofluitans</i>	Brook Water Crowfoot	Occasional	

<i>Ranunculus repens</i>	Creeping Buttercup		Occasional
<i>Rorippa-nasturtium-aquaticum</i>	Water-cress		Occasional
<i>Rubus caesius</i>	Dewberry		Occasional
<i>Rubus fruticosus agg</i>	Bramble	Frequent	
<i>Rumex crispus</i>	Curled Dock		Occasional
<i>Rumex obtusifolius</i>	Broad-leaved Dock		Rare
<i>Rumex sanguineus</i>	Wood Dock		Occasional
<i>Scrophularia auriculata</i>	Water Figwort		Occasional
<i>Senecio jacobea</i>	Common Ragwort		Occasional
<i>Senecio squalidis</i>	Oxford Ragwort		Occasional
<i>Solanum dulcamara</i>	Bittersweet		Occasional
<i>Sonchus asper</i>	Prickly Sow-thistle		Rare
<i>Sonchus oleraceus</i>	Smooth Sow-thistle		Occasional
<i>Sparganium erectum</i>	Branched Bur-reed		Occasional
<i>Stachys sylvatica</i>	Hedge Woundwort		Occasional
<i>Tamus communis</i>	Black Bryony		Occasional
<i>Taraxacum officinale agg</i>	Dandelion		Occasional
<i>Trifolium pratense</i>	Red Clover		Occasional
<i>Trifolium repens</i>	White Clover		Occasional
<i>Urtica dioica</i>	Stinging Nettle	Frequent	
<i>Veronica anagallis- aquatica</i>	Blue Water Speedwell		Occasional
<i>Veronica montana</i>	Wood Speedwell		Rare
GRASSES			
<i>Agrostis stolonifera</i>	Creeping Bent		Occasional
<i>Alopecurus myosuroides</i>	Meadow Foxtail		Occasional
<i>Arrhenatherum elatius</i>	False Oat-grass	Frequent	
<i>Brachipodium sylvaticum</i>	False Brome		Occasional
<i>Bromus hordeaceus</i>	Soft Brome		Occasional
<i>Dactylis glomerata</i>	Cock's-foot		Occasional
<i>Festuca arundinacea</i>	Tall Fescue		Rare
<i>Festuca rubra</i>	Red Fescue		Rare
<i>Glyceria fluitans</i>	Floating Sweet-grass		Rare
<i>Holcus lanatus</i>	Yorkshire Fog	Frequent	
<i>Holcus mollis</i>	Soft creeping-grass		Occasional
<i>Hordeum murinum</i>	Wall Barley		Rare
<i>Lolium perenne</i>	Perennial Rye-grass		Occasional
<i>Phalaris arundinacea</i>	Canary Reed		Occasional
<i>Phleum pratense</i>	Timothy		Occasional
<i>Poa annua</i>	Annual Meadow-grass		Rare
<i>Poa pratensis</i>	Smooth Meadow-grass		Rare
<i>Poa trivialis</i>	Rough Meadow-grass		Occasional
SEDGES			
<i>Carex acutiformis</i>	Lesser Pond Sedge		Occasional
<i>Carex divulsa</i>	Grey Sedge		Rare
<i>Carex hirta</i>	Hairy Sedge		Occasional
<i>Carex pendula</i>	Pendulous Sedge		Rare

<i>Carex remota</i>	Remote Sedge		Rare
<i>Carex sylvatica</i>	Wood Sedge	Occasional	
HORSETAILS			
<i>Equisetum arvensis</i>	Field Horsetail	Occasional	
<i>Equisetum palustre</i>	Marsh Horsetail	Occasional	
RUSHES			
<i>Juncus articulatus</i>	Jointed Rush		Rare
<i>Juncus effusus</i>	Soft Rush		Rare
<i>Juncus inflexus</i>	Hard Rush	Occasional	
MOSSES			
<i>Brachythecium rivulare</i>	River Feather-moss		Rare
<i>Brachythecium rutabulum</i>	Rough-stalked Feather-moss	Occasional	
<i>Bryum capillare</i>	Capillary Thread-moss		Rare
<i>Campylopus introflexus</i>	Heath Star-moss		Rare
<i>Cratoneuron filicinum</i>	Fern-leaved Hook-moss	Occasional	
<i>Cryphaea heteromalla</i>	Lateral Cryphea	Occasional	
<i>Dicranoweisia cirrata</i>	Common Pincushion		Rare
<i>Fissidens taxifolius</i>	Common Pocket-moss	Occasional	
<i>Hygroamblystegium tenax</i>	Fountain Feather-moss		Rare
<i>Hypnum cupressiforme</i>	Cypress-leaved Plait-moss	Occasional	
<i>Kindbergia praelonga</i>	Common Feather-moss	Occasional	
<i>Orthotrichum affine</i>	Wood Bristle-moss	Occasional	
<i>Oxyrrhynchium hians</i>	Swartz's Feather-moss		Rare
<i>Platyhypnidium ripariodes</i>	Long-beaked Water Feather-moss	Occasional	
LIVERWORTS			
<i>Frullania dilatata</i>	Dilated Scalewort	Occasional	
<i>Metzgeria furcata</i>	Forked Veilwort	Occasional	
<i>Microlejeunea ulicina</i>	Fairy Beads		Rare
<i>Pellia endiviifolia</i>	Endive Pellia	Occasional	
LICHENS			
<i>Evernia prunastri</i>		Occasional	
<i>Flavoparmelia caperata</i>		Occasional	
<i>Lecanora chlorotera</i>			Rare
<i>Parmelia saxatilis</i>	Crottle	Frequent	
<i>Parmelia sulcata</i>		Occasional	
<i>Physcia adscendens</i>		Occasional	
<i>Physcia tenella</i>		Occasional	
<i>Ramalina farinacea</i>		Occasional	
<i>Ramalina fastigiata</i>			Rare
<i>Xanthoria parietina</i>		Frequent	
ALGAE			
<i>Hildenbrandia rivularis</i>		Occasional	
FUNGI			
<i>Daedaleopsis confragosa</i>	Blushing Bracket		Rare
BIRDS			
<i>Buteo buteo</i>	Buzzard	2	

<i>Carduelis carduelis</i>	Goldfinch	3	
<i>Columba palumbus</i>	Wood Pigeon	2	
<i>Corvus corone</i>	Carrion Crow	1	
<i>Cyanistes caeruleus</i>	Blue Tit	2	
<i>Hirundo rustica</i>	Barn Swallow	1	
<i>Parus major</i>	Great Tit	2	
<i>Sylvia communis</i>	Whitethroat	2	
<i>Streptopelia decaocto</i>	Collard Dove	2	
<i>Troglodytes troglodytes</i>	Wren	1	
<i>Turdus merula</i>	Blackbird	1	
MAMMALS			
<i>Capreolus capreolus</i>	Roe		slot prints in mud
<i>Meles meles</i>	Badger		Droppings
BUTTERFLIES			
<i>Aglais io</i>	Peacock	2	
<i>Maniota jurtina</i>	Meadow Brown	10	
<i>Pararge aegeria</i>	Speckled Wood	2	
<i>Pieris brassicae</i>	Large White	5	
<i>Pieris rapae</i>	Small White	6	
<i>Polymmatius icarus</i>	Common Blue	4	
<i>Vanessa atalanta</i>	Red Admiral	3	
MOTHS			
<i>Timandra comae</i>	Blood-vein	1	
DRAGONFLIES			
<i>Aeshna cyanea</i>	Southern Hawker	1	
<i>Calopteryx splendens</i>	Banded Demoiselle	1	
<i>Ischnura elegans</i>	Blue-tailed Damselfly	4	
CRICKETS			
<i>Metrioptera roeselii</i>	Roesel's Bush Cricket	1	
BEEES			
<i>Apis mellifera</i>	Honey Bee	100+	
FISH			
<i>Esox lucius</i>	Pike	1	
<i>Salmo trutta</i>	Trout	12	

1.2

Ems River Corridor Survey site 2

Parish	Westbourne				
Scale	Cover-abundance				
Dominant = D	(91 - 100%)				
Abundant = A	(51 - 90%)				
Frequent = F	(21 - 50%)				
Occasional = O	(6 - 20%)				
Rare = R	(0 - 5%)				
Latin Name	Common Name	Dominant	Abundant	Frequent	Occasional Rare

TREES

<i>Acer pseudoplatanus</i>	Sycamore		Rare
<i>Betula pendula</i>	Silver Birch		Rare
<i>Cornus sanguinea</i>	Dogwood		Rare
<i>Corylus avellana</i>	Hazel		Rare
<i>Crataegus monogyna</i>	Hawthorn		Rare
<i>Cupressus macrocarpa</i>	Monterey Cypress		Rare
<i>Fraxinus excelsior</i>	Ash		Rare
<i>Malus domestica</i>	Apple		Rare
<i>Salix cinerea</i>	Sallow	Occasional	
<i>Salix fragilis</i>	Crack Willow	Occasional	
<i>Salix x sepulcralis</i>	Weeping Willow		Rare
<i>Sambucus nigra</i>	Elder	Occasional	

SHRUBS

<i>Hedera helix</i>	Ivy		Rare
<i>Lonicera periclymenum</i>	Honeysuckle		Rare

FLOWERS

<i>Achillea millefolium</i>	Yarrow	Occasional	
<i>Aethusa cynapium</i>	Fool's Parsley		Rare
<i>Agrimonia eupatoria</i>	Agrimony	Occasional	
<i>Anagalis arvensis</i>	Scarlet Pimpernel		Rare
<i>Angelica sylvestris</i>	Angelica		Rare
<i>Anthriscus sylvestris</i>	Cow Parsley		Rare
<i>Arctium minor</i>	Lesser Burdock		Rare
<i>Arum maculatum</i>	Lords and Ladies		Rare
<i>Bellis perennis</i>	Daisy	Occasional	
<i>Borago officinalis</i>	Borage		Rare
<i>Bryonia dioica</i>	White Bryony		Rare
<i>Calystegia sepium</i>	Hedge Bindweed	Occasional	
<i>Chenopodium album</i>	Fathen		Rare
<i>Circaea lutetiana</i>	Enchanter's Nightshade		Rare
<i>Cirsium arvense</i>	Creeping Thistle	Frequent	
<i>Cirsium vulgare</i>	Spear Thistle	Occasional	
<i>Coronopus didymus</i>	Lesser Swine-cress		Rare
<i>Epilobium adenocaulon</i>	American Willow-herb	Occasional	
<i>Epilobium hirsutum</i>	Great Willow-herb	Occasional	
<i>Eupatorium cannabinum</i>	Hemp Agrimony		Rare
<i>Filipendula ulmaria</i>	Meadow Sweet	Occasional	
<i>Galium aparine</i>	Cleavers	Frequent	
<i>Geranium dissectum</i>	Cut-leaved Crane's-bill	Occasional	
<i>Geranium robertianum</i>	Herb Robert		Rare
<i>Geum urbanum</i>	Wood Avens		Rare
<i>Glechoma hederacea</i>	Ground Ivy	Occasional	
<i>Helminthotheca echiodes</i>	Bristly Ox-tongue	Occasional	
<i>Heracleum sphondylium</i>	Hogweed	Occasional	
<i>Hypericum tetrapterum</i>	Square-stalked St John's-wort	Occasional	

<i>Hypochaeris radicata</i>	Common Cat's-ear		Rare
<i>Iris pseudacorus</i>	Yellow Iris	Occasional	
<i>Lamium album</i>	White Dead Nettle		Rare
<i>Lamium purpureum</i>	Red Nettle		Rare
<i>Lathyrus latifolius</i>	Broad-leaved Everlasting Pea		Rare
<i>Lapsana communis</i>	Nipplewort		Rare
<i>Lycopus europaeus</i>	Gypsywort		Rare
<i>Malva neglecta</i>	Dwarf Mallow		Rare
<i>Malva sylvestris</i>	Common Mallow		Rare
<i>Matricaria discoidea</i>	Pineappleweed		Rare
<i>Mentha aquatica</i>	Water Mint	Occasional	
<i>Nymphaea alba</i>	White Water Lily	Occasional	
<i>Origanum vulgare</i>	Marjoram		Rare
<i>Persicaria maculosa</i>	Redshank	Occasional	
<i>Phaseolus coccineus</i>	Runner Bean		Rare
<i>Plantago lanceolata</i>	Ribwort Plantain	Occasional	
<i>Plantago major</i>	Greater Plantain		Rare
<i>Potentilla reptans</i>	Creeping Cinquefoil		Rare
<i>Prunella vulgaris</i>	Selfheal	Occasional	
<i>Pulicaria dysenterica</i>	Common Fleabane	Occasional	
<i>Ranunculus acris</i>	Meadow Buttercup	Occasional	
<i>Ranunculus repens</i>	Creeping Buttercup	Occasional	
<i>Rubus fruticosus agg</i>	Bramble	Frequent	
<i>Rumex crispus</i>	Curled Dock	Occasional	
<i>Rumex obtusifolius</i>	Broad-leaved Dock	Occasional	
<i>Scrophularia auriculata</i>	Water Figwort	Occasional	
<i>Senecio jacobea</i>	Common Ragwort	Occasional	
<i>Senecio vulgaris</i>	Groundsel		Rare
<i>Solanum dulcamara</i>	Bittersweet	Occasional	
<i>Solidago canadensis</i>	Canadian Goldenrod		Rare
<i>Sonchus asper</i>	Prickly Sow-thistle		Rare
<i>Sonchus oleraceus</i>	Smooth Sow-thistle		Rare
<i>Sparganium erectum</i>	Branched Bur-reed	Occasional	
<i>Stachys sylvatica</i>	Hedge Woundwort	Occasional	
<i>Symphytum officinale</i>	Common Comfrey		Rare
<i>Taraxacum officinale agg</i>	Dandelion	Occasional	
<i>Trifolium pratense</i>	Red Clover	Occasional	
<i>Trifolium repens</i>	White Clover	Occasional	
<i>Typha latifolia</i>	Greater Reedmace	Occasional	
<i>Urtica dioica</i>	Stinging Nettle	Frequent	
<i>Verbascum thapsus</i>	Common Mullein		Rare
GRASSES			
<i>Agrostis stolonifera</i>	Creeping Bent	Occasional	
<i>Arrhenatherum elatius</i>	False Oat-grass	Frequent	
<i>Dactylis glomerata</i>	Cock's-foot	Occasional	
<i>Glyceria fluitans</i>	Floating Sweet-grass		Rare

<i>Holcus lanatus</i>	Yorkshire Fog	Frequent	
<i>Lolium perenne</i>	Perennial Rye-grass		Occasional
<i>Phalaris arundinacea</i>	Canary Reed		Rare
<i>Poa annua</i>	Annual Meadow-grass		Rare
<i>Poa pratensis</i>	Smooth Meadow-grass		Rare
<i>Poa trivialis</i>	Rough Meadow-grass		Occasional
SEDGES			
<i>Carex hirta</i>	Hairy Sedge	Frequent	
<i>Carex pendula</i>	Pendulous Sedge		Rare
HORSETAILS			
<i>Equisetum arvensis</i>	Field Horsetail		Occasional
RUSHES			
<i>Juncus acutiflorus</i>	Sharp-flowered Rush		Rare
<i>Juncus conglomeratus</i>	Compact Rush		Rare
<i>Juncus effusus</i>	Soft Rush		Occasional
<i>Juncus inflexus</i>	Hard Rush		Rare
CLUB-RUSHES			
<i>Schoenoplectus lacustris</i>	Common Club-rush		Occasional
MOSSES			
<i>Brachythecium rutabulum</i>	Rough-stalked Feather-moss		Occasional
<i>Funaria hygrometrica</i>	Bonfire-moss		Rare
<i>Hypnum cupressiforme</i>	Cypress-leaved Plait-moss		Occasional
<i>Kindbergia praelonga</i>	Common Feather-moss		Occasional
<i>Orthotrichum affine</i>	Wood Bristle-moss		Occasional
LIVERWORTS			
<i>Metzgeria furcata</i>	Forked Veilwort		Occasional
LICHENS			
<i>Evernia prunastri</i>			Occasional
<i>Flavoparmelia caperata</i>			Occasional
<i>Lecanora chlorotera</i>			Rare
<i>Parmelia saxatilis</i>	Crottle	Frequent	
<i>Physcia adscendens</i>			Occasional
<i>Physcia tenella</i>			Occasional
<i>Xanthoria parietina</i>		Frequent	
BIRDS			
		Numbers	
<i>Alcedo atthis</i>	Kingfisher	1	
<i>Columba palumbus</i>	Wood Pigeon	2	
<i>Corvus corone</i>	Carrion Crow	1	
<i>Hirundo rustica</i>	Barn Swallow	3	
<i>Muscicapa striata</i>	Spotted Flycatcher	1	
<i>Parus major</i>	Great Tit	2	
<i>Phasianus colchicus</i>	Pheasant	1	
MAMMALS			
<i>Arvicola amphibius</i>	Water Vole		Droppings found

BUTTERFLIES

<i>Maniota jurtina</i>	Meadow Brown	4
<i>Pieris brassicae</i>	Large White	2
<i>Pieris rapae</i>	Small White	2
<i>Polymmatius icarus</i>	Common Blue	6
<i>Vanessa atalanta</i>	Red Admiral	1

MOTHS

<i>Autographa gamma</i>	Silver Y	1
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DRAGONFLIES

<i>Anax imperator</i>	Emperor Dragonfly	1
<i>Ischnura elegans</i>	Blue-tailed Damselfly	2
<i>Sympetrum sanguineum</i>	Ruddy Darter	1

BEEES

<i>Apis mellifera</i>	Honey Bee	100+
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1.3**Ems River Corridor Survey site 3****Parish****Westbourne****Scale****Cover-abundance**

Dominant = D	(91 - 100%)
Abundant = A	(51 - 90%)
Frequent = F	(21 - 50%)
Occasional = O	(6 - 20%)
Rare = R	(0 - 5%)

Latin Name**Common Name****Dominant****Abundant****Frequent****Occasional****Rare****TREES**

<i>Crataegus monogyna</i>	Hawthorn					Rare
<i>Fraxinus excelsior</i>	Ash					Rare
<i>Salix alba</i>	White Willow					Rare
<i>Salix cinerea</i>	Sallow					Rare
<i>Salix fragilis</i>	Crack Willow				Occasional	

SHRUBS

<i>Hedera helix</i>	Ivy					Rare
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FLOWERS

<i>Anthriscus sylvestris</i>	Cow Parsley					Rare
<i>Apium nodiflorum</i>	Fool's Water-cress				Occasional	
<i>Callitriche sp</i>	Starwort sp					Rare
<i>Calystegia sepium</i>	Hedge Bindweed					Rare
<i>Cirsium vulgare</i>	Spear Thistle				Occasional	
<i>Coronopus didymus</i>	Lesser Swine-cress					Rare
<i>Crepis capillaris</i>	Smooth Hawk's-beard					Rare
<i>Epilobium adenocaulon</i>	American Willowherb				Occasional	
<i>Epilobium hirsutum</i>	Great Willowherb				Occasional	
<i>Filipendula ulmaria</i>	Meadow Sweet				Occasional	
<i>Galium aparine</i>	Cleavers				Occasional	

<i>Geranium dissectum</i>	Cut-leaved Crane's-bill	Occasional	
<i>Geum urbanum</i>	Wood Avens		Rare
<i>Glechoma hederacea</i>	Ground Ivy		Rare
<i>Heracleum sphondylium</i>	Hogweed		Rare
<i>Hypericum tetrapterum</i>	Square-stalked St John's-wort		Rare
<i>Iris pseudacorus</i>	Yellow Iris	Occasional	
<i>Lycopus europaeus</i>	Gypsywort		Rare
<i>Matricaria chamomilla</i>	Scented Mayweed		Rare
<i>Matricaria discoidea</i>	Pineappleweed		Rare
<i>Mentha aquatica</i>	Water Mint	Occasional	
<i>Parietaria judaica</i>	Pellitory of the wall		Rare
<i>Persicaria lapathifolia</i>	Pale Persicaria		Rare
<i>Petasites fragrans</i>	Winter Heliotrope		Rare
<i>Plantago major</i>	Greater Plantain		Rare
<i>Potentilla reptans</i>	Creeping Cinquefoil		Rare
<i>Prunella vulgaris</i>	Selfheal		Rare
<i>Ranunculus pencillatus subsp pseudofluitans</i>	Brook Water Crowfoot	Occasional	
<i>Rorippa-nasturtium-aquaticum</i>	Water-cress	Occasional	
<i>Rubus fruticosus agg</i>	Bramble	Occasional	
<i>Rumex crispus</i>	Curled Dock	Occasional	
<i>Rumex obtusifolius</i>	Broad-leaved Dock	Occasional	
<i>Senecio jacobea</i>	Ragwort		Rare
<i>Scrophularia auriculata</i>	Water Figwort	Occasional	
<i>Solanum dulcamara</i>	Bittersweet		Rare
<i>Sparganium erectum</i>	Branched Bur-reed	Frequent	
<i>Taraxacum officinale agg</i>	Dandelion		Rare
<i>Urtica dioica</i>	Stinging Nettle	Occasional	
<i>Veronica anagalis aquatica</i>	Blue Water Speedwell	Occasional	
GRASSES			
<i>Agrostis stolonifera</i>	Creeping Bent		Rare
<i>Arrhenatherum elatius</i>	False Oat-grass	Occasional	
<i>Dactylis glomerata</i>	Cock's-foot	Occasional	
<i>Holcus lanatus</i>	Yorkshire Fog	Frequent	Rare
<i>Lolium perenne</i>	Perennial Rye-grass		Rare
<i>Phalaris arundinacea</i>	Canary Reed		Rare
<i>Poa annua</i>	Annual Meadow-grass		Rare
<i>Poa trivialis</i>	Rough Meadow-grass		Rare
SEDGES			
<i>Carex pendula</i>	Pendulous Sedge		Rare
<i>Carex remota</i>	Remote Sedge		Rare
MOSSES			
<i>Hypnum cupressiforme</i>	Cypress-leaved Plait-moss		Rare
<i>Kindbergia praelonga</i>	Common Feather-moss		Rare
LIVERWORTS			
<i>Metzgeria furcata</i>	Forked Veilwort		Rare
LICHENS			

<i>Evernia prunastri</i>		Occasional
<i>Flavoparmelia caperata</i>		Occasional
<i>Parmelia saxatilis</i>	Crottle	Frequent
<i>Physcia adscendens</i>		Occasional
<i>Physcia tenella</i>		Occasional
<i>Xanthoria parietina</i>		Frequent
BIRDS	Numbers	
<i>Columba oenas</i>	Stock Dove	2
<i>Columba palumbus</i>	Wood Pigeon	2
<i>Hirundo rustica</i>	Barn Swallow	1
BUTTERFLIES		
<i>Pieris rapae</i>	Small White	1
<i>Polygonum c album</i>	Comma	1
<i>Polymmatius icarus</i>	Common Blue	1
DRAGONFLIES		
<i>Calopteryx splendens</i>	Banded Demoiselle	1
BEES		
<i>Apis mellifera</i>	Honey Bee	100+

1.4

Ems River Corridor Survey Site 4

Parish	Westbourne					
Scale	Cover-abundance					
Dominant = D	(91 - 100%)					
Abundant = A	(51 - 90%)					
Frequent = F	(21 -50%)					
Occasional = O	(6 -20%)					
Rare = R	(0 -5%)					
Latin Name	Common Name	Dominant	Abundant	Frequent	Occasional	Rare
TREES						
<i>Acer campestre</i>	Field Maple				Occasional	
<i>Acer pseudoplatanus</i>	Sycamore					Rare
<i>Aesculus hippocastanum</i>	Horse Chestnut					Rare
<i>Alnus glutinosa</i>	Alder					Rare
<i>Cornus sanguinea</i>	Dogwood				Occasional	
<i>Corylus avellana</i>	Hazel				Occasional	
<i>Crataegus monogyna</i>	Hawthorn				Occasional	
<i>Euonymus europaea</i>	Spindle					Rare
<i>Fraxinus excelsior</i>	Ash				Occasional	
<i>Populus alba</i>	White Poplar					Rare
<i>Prunus cerasifera var</i>	Purple-leaved Plum					Rare
<i>Prunus spinosa</i>	Blackthorn				Occasional	
<i>Quercus ilex</i>	Holm Oak					Rare
<i>Quercus robur</i>	Pedunculate Oak				Occasional	
<i>Salix alba</i>	White Willow					Rare

<i>Salix cinerea</i>	Sallow	Frequent	
<i>Salix fragilis</i>	Crack Willow		Occasional
<i>Sambucus nigra</i>	Elder		Occasional
<i>Sorbus aucuparia</i>	Rowan		Rare
<i>Ulmus procera</i>	Common Elm		Rare
SHRUBS			
<i>Daphne laureola</i>	Spurge Laurel		Rare
<i>Hedera helix</i>	Ivy		Occasional
<i>Ligustrum vulgare</i>	Wild Privet		Rare
<i>Lonicera periclymenum</i>	Honeysuckle		Rare
<i>Rosa canina</i>	Dog Rose		Rare
<i>Ulex europaeus</i>	Common Gorse		Rare
FLOWERS			
<i>Achillea millefolium</i>	Yarrow		Occasional
<i>Aegopodium podagraria</i>	Ground Elder		Rare
<i>Aethusa cynapium</i>	Fool's Parsley		Rare
<i>Agrimonia eupatoria</i>	Agrimony		Occasional
<i>Alisma plantago-aquatica</i>	Water Plantain		Rare
<i>Alliaria petiolata</i>	Garlic Mustard		Occasional
<i>Angelica sylvestris</i>	Angelica		Occasional
<i>Anthriscus sylvestris</i>	Cow Parsley		Occasional
<i>Apium nodiflorum</i>	Fool's Water-cress		Occasional
<i>Arctium minor</i>	Lesser Burdock		Rare
<i>Barbarea vulgaris</i>	Winter-cress		Rare
<i>Bellis perennis</i>	Daisy		Occasional
<i>Callitriche stagnalis</i>	Water Starwort		Rare
<i>Caltha palustris</i>	Marsh Marigold		Rare
<i>Calystegia sepium</i>	Hedge Bindweed		Occasional
<i>Capsella bursa-pastoris</i>	Shepherds Purse		Occasional
<i>Centaurea nigra</i>	Knapweed		Occasional
<i>Cerastium fontanum</i>	Common Mouse-ear		Occasional
<i>Chaerophyllum temulum</i>	Rough Chervil		Occasional
<i>Chenopodium album</i>	Fathen		Rare
<i>Cirsium arvense</i>	Creeping Thistle	Frequent	
<i>Cirsium vulgare</i>	Spear Thistle		Occasional
<i>Crepis capillaris</i>	Smooth Hawk's-beard		Rare
<i>Epilobium adenocaulon</i>	American Willowherb		Occasional
<i>Epilobium hirsutum</i>	Great Willowherb		Occasional
<i>Erigeron canadensis</i>	Canadian Fleabane		Rare
<i>Erythranthe guttata</i>	Monkey Flower		Rare
<i>Eupatorium cannabinum</i>	Hemp Agrimony		Occasional
<i>Filipendula ulmaria</i>	Meadow Sweet		Rare
<i>Galium aparine</i>	Cleavers	Frequent	
<i>Galium molle</i>	Hedge Bedstraw		Rare
<i>Geranium dissectum</i>	Cut-leaved Crane's-bill		Rare
<i>Geranium molle</i>	Dove's-foot Cranes-bill		Occasional

<i>Geranium robertianum</i>	Herb Robert		Rare
<i>Geum urbanum</i>	Wood Avens	Occasional	
<i>Glechoma hederacea</i>	Ground Ivy	Occasional	
<i>Helminthotheca echioides</i>	Bristly Ox-tongue	Occasional	
<i>Heracleum sphondylium</i>	Hogweed	Occasional	
<i>Humulus lupulus</i>	Hop		Rare
<i>Hypericum tetrapterum</i>	Square-stalked St John's-wort	Occasional	
<i>Hypochaeris radicata</i>	Common Cat's-ear	Occasional	
<i>Iris pseudacorus</i>	Yellow Iris	Occasional	
<i>Lamium album</i>	White Dead-nettle		Rare
<i>Lamium purpureum</i>	Red Dead-nettle		Rare
<i>Lapsana communis</i>	Nipplewort	Occasional	
<i>Lemna minor</i>	Common Duckweed	Occasional	
<i>Lepidium didymum</i>	Lesser Swine-cress	Occasional	
<i>Lotus corniculatus</i>	Bird's-foot Trefoil		Rare
<i>Lycopus europaeus</i>	Gypsywort	Occasional	
<i>Lythrum salicaria</i>	Purple Loosestrife		Rare
<i>Malva sylvestris</i>	Common Mallow		Rare
<i>Matricaria chamomilla</i>	Scented Mayweed		Rare
<i>Matricaria discoidea</i>	Pineappleweed	Occasional	
<i>Medicago lupulina</i>	Black Medick		Rare
<i>Mentha aquatica</i>	Water Mint	Occasional	
<i>Myotis scorpioides</i>	Water Forget-me-not		Rare
<i>Nymphaea sp</i>	Ornamental Water-lily		Rare
<i>Oenanthe crocata</i>	Hemlock Water-dropwort	Occasional	
<i>Oenanthe pimpinelloides</i>	Corky-fruited Water-dropwort	Occasional	
<i>Persicaria maculosa</i>	Redshanks	Occasional	
<i>Plantago lanceolata</i>	Ribwort Plantain	Occasional	
<i>Plantago major</i>	Greater Plantain		Rare
<i>Polygonum aviculare</i>	Common Knotgrass	Occasional	
<i>Potentilla anserina</i>	Silverweed	Occasional	
<i>Potentilla reptans</i>	Creeping Cinquefoil	Occasional	
<i>Prunella vulgaris</i>	Selfheal	Occasional	
<i>Pulicaria dysenterica</i>	Common Fleabane	Occasional	
<i>Ranunculus acris</i>	Meadow Buttercup	Occasional	
<i>Ranunculus pencillatus subsp pseudofluitans</i>	Brook Water Crowfoot	Occasional	
<i>Ranunculus repens</i>	Creeping Buttercup	Occasional	
<i>Rorippa-nasturtium-aquaticum</i>	Water-cress	Occasional	
<i>Rubus fruticosus agg</i>	Bramble	Frequent	
<i>Rumex acetosa</i>	Common Sorrel		Rare
<i>Rumex crispus</i>	Curled Dock	Occasional	
<i>Rumex obtusifolius</i>	Broad-leaved Dock		Rare
<i>Rumex sanguineus</i>	Wood Dock	Occasional	
<i>Scrophularia auriculata</i>	Water Figwort	Occasional	
<i>Senecio jacobea</i>	Common Ragwort	Occasional	
<i>Senecio squalidis</i>	Oxford Ragwort	Occasional	

<i>Senecio vulgaris</i>	Groundsel		Rare
<i>Silaum silaus</i>	Pepper Saxifrage	Occasional	
<i>Sisymbrium officinale</i>	Hedge Mustard	Occasional	
<i>Solanum dulcamara</i>	Bittersweet	Occasional	
<i>Solanum nigrum</i>	Black Nightshade	Occasional	
<i>Sonchus asper</i>	Prickly Sow-thistle	Occasional	
<i>Sonchus oleraceus</i>	Smooth Sow-thistle	Occasional	
<i>Sparganium erectum</i>	Branched Bur-reed	Occasional	
<i>Stachys palustris</i>	Marsh Woundwort		Rare
<i>Stellaria media</i>	Common Chickweed	Occasional	
<i>Symphyotrichum sp</i>	Michaelmas Daisy		Rare
<i>Symphytum officinale</i>	Common Comfrey		Rare
<i>Tamus communis</i>	Black Bryony	Occasional	
<i>Taraxacum officinale agg</i>	Dandelion	Occasional	
<i>Torilis japonica</i>	Upright Hedge Parsley		Rare
<i>Trifolium pratense</i>	Red Clover	Occasional	
<i>Trifolium repens</i>	White Clover	Occasional	
<i>Urtica dioica</i>	Stinging Nettle	Frequent	
<i>Veronica anagallis- aquatica</i>	Blue Water Speedwell	Occasional	
<i>Veronica becca bunga</i>	Brooklime	Occasional	
<i>Veronica montana</i>	Wood Speedwell		Rare
<i>Veronica serpyllifolia</i>	Thyme-leaved Speedwell		Rare
<i>Vicia cracca</i>	Tufted Vetch		Rare
GRASSES			
<i>Agrostis capillaris</i>	Common Bent	Occasional	
<i>Alopecurus geniculatus</i>	Marsh Foxtail	Occasional	
<i>Arrhenatherum elatius</i>	False Oat-grass	Occasional	
<i>Brachipodium sylvaticum</i>	False Brome	Occasional	
<i>Bromus hordeaceus</i>	Soft Brome		Rare
<i>Cynosurus cristatus</i>	Crested Dog's-tail-grass	Occasional	
<i>Dactylis glomerata</i>	Cock's-foot	Occasional	
<i>Festuca rubra</i>	Red Fescue		Rare
<i>Glyceria fluitans</i>	Floating Sweet-grass		Rare
<i>Holcus lanatus</i>	Yorkshire Fog	Frequent	
<i>Holcus mollis</i>	Soft creeping-grass	Occasional	
<i>Hordeum brachyantherum</i>	Meadow Barley		Rare
<i>Hordeum murinum</i>	Wall Barley		Rare
<i>Lolium perenne</i>	Perennial Rye-grass	Frequent	
<i>Melica uniflora</i>	Wood Melick		Rare
<i>Phalloris arundinacea</i>	Canary Reed	Occasional	
<i>Phleum pratense</i>	Timothy	Occasional	
<i>Poa annua</i>	Annual Meadow-grass		Rare
<i>Poa pratensis</i>	Smooth Meadow-grass		Rare
<i>Poa trivialis</i>	Rough Meadow-grass	Occasional	
SEDGES			
<i>Carex divulsa</i>	Grey Sedge		Rare

<i>Carex hirta</i>	Hairy Sedge		Occasional
<i>Carex remota</i>	Remote Sedge		Rare
HORSETAILS			
<i>Equisetum arvensis</i>	Field Horsetail		Occasional
<i>Equisetum fluviatile</i>	Water Horsetail		Rare
RUSHES			
<i>Juncus articulatus</i>	Jointed Rush		Occasional
<i>Juncus bufonius</i>	Toad Rush		Occasional
<i>Juncus effusus</i>	Soft Rush		Rare
<i>Juncus inflexus</i>	Hard Rush		Occasional
MOSSES			
<i>Brachythecium rutabulum</i>	Rough-stalked Feather-moss		Occasional
<i>Bryum capillare</i>	Capillary Thread-moss		Rare
<i>Cryphaea heteromalla</i>	Lateral Cryphea		Occasional
<i>Dicranoweisia cirrata</i>	Common Pincushion		Rare
<i>Fissidens taxifolius</i>	Common Pocket-moss		Occasional
<i>Hypnum cupressiforme</i>	Cypress-leaved Plait-moss		Occasional
<i>Kindbergia praelonga</i>	Common Feather-moss		Occasional
<i>Orthotrichum affine</i>	Wood Bristle-moss		Occasional
<i>Oxyrrhynchium hians</i>	Swartz's Feather-moss		Rare
LIVERWORTS			
<i>Conocephalum conicum</i>	Great Scented Liverwort		Rare
<i>Frullania dilatata</i>	Dilated Scalewort		Occasional
<i>Metzgeria furcata</i>	Forked Veilwort		Occasional
LICHENS			
<i>Evernia prunastri</i>			Occasional
<i>Flavoparmelia caperata</i>			Occasional
<i>Lecanora chlarotera</i>			Rare
<i>Parmelia saxatilis</i>	Crottle		Occasional
<i>Parmelia sulcata</i>			Occasional
<i>Physcia adscendens</i>			Occasional
<i>Physcia tenella</i>			Occasional
<i>Ramalina farinacea</i>			Occasional
<i>Ramalina fastigiata</i>			Rare
<i>Xanthoria parietina</i>		Frequent	
ALGAE			
<i>Hildenbrandtia rivularis</i>			Rare
FUNGI			
<i>Daedaleopsis confragosa</i>	Blushing Bracket		Rare
<i>Daelinia concentrica</i>	King Alfred's Cake		Rare
BIRDS			
	Numbers		
<i>Aegithalos caudatus</i>	Long-tailed Tit	2	
<i>Anas platyrhynchos</i>	Mallard	1	
<i>Ardea cinerea</i>	Grey Heron	1	
<i>Buteo buteo</i>	Buzzard	1	
<i>Carduelis carduelis</i>	Goldfinch	6	

<i>Chroicocephalus ridibundus</i>	Black-headed Gull	1
<i>Columba oenas</i>	Stock Dove	2
<i>Columba palumbus</i>	Wood Pigeon	30
<i>Corvus corone</i>	Carrion Crow	6
<i>Corvus monedula</i>	Jackdaw	8
<i>Cyanistes caeruleus</i>	Blue Tit	2
<i>Dendroopos major</i>	Great Spotted Woodpecker	1
<i>Erithacus rubecula</i>	Robin	3
<i>Fringilla coelebs</i>	Chaffinch	1
<i>Hirundo rustica</i>	Barn Swallow	20
<i>Larus argentatus</i>	Herring Gull	1
<i>Muscicapa striata</i>	Spotted Fly-catcher	2
<i>Parus major</i>	Great Tit	2
<i>Passer domesticus</i>	House Sparrow	20
<i>Phoenicurus phoenicurus</i>	Redstart	1
<i>Phylloscopus trochilus</i>	Willow Warbler	1
<i>Pica pica</i>	Magpie	2
<i>Picus viridis</i>	Green Woodpecker	1
<i>Prunella modularis</i>	Dunnock	2
<i>Sturnus vulgaris</i>	Starling	7
<i>Sylvia communis</i>	Whitethroat	1
<i>Troglodytes troglodytes</i>	Wren	1
<i>Turdus merula</i>	Blackbird	7
MAMMALS		
<i>Sciurus carolinensis</i>	Grey Squirrel	1
BUTTERFLIES		
<i>Celastrina argiolus</i>	Holly Blue	1
<i>Pieris rapae</i>	Small White	6
MOTHS		
<i>Campaea margaritata</i>	Light Emerald Moth	1
DRAGONFLIES		
<i>Aeshna cyanea</i>	Southern Hawker	2
<i>Anax imperator</i>	Emperor Dragonfly	1
<i>Ischnura elegans</i>	Blue-tailed Damselfly	4
<i>Sympetrum sanguineum</i>	Ruddy Darter	2
BEEES		
<i>Apis mellifera</i>	Honey Bee	100+
WASPS		
<i>Vespula vulgaris</i>	Common Wasp	100+
HOVERFLIES		
<i>Volucella zonaria</i>	Hornet Hoverfly	1

1.5

Ems River Corridor Survey Site 5

Parish

Westbourne

Scale	Cover-abundance					
Dominant = D	(91 - 100%)					
Abundant = A	(51 - 90%)					
Frequent = F	(21 - 50%)					
Occasional = O	(6 - 20%)					
Rare = R	(0 - 5%)					
Latin Name	Common Name	Dominant	Abundant	Frequent	Occasional	Rare
TREES						
<i>Alnus glutinosa</i>	Alder					Rare
<i>Crataegus monogyna</i>	Hawthorn				Occasional	
<i>Salix cinerea</i>	Sallow				Occasional	
<i>Salix fragilis</i>	Crack Willow					Rare
<i>Sambucus nigra</i>	Elder				Occasional	
SHRUBS						
<i>Hedera helix</i>	Ivy				Occasional	
<i>Lonicera periclymenum</i>	Honeysuckle					Rare
<i>Rosa canina</i>	Dog Rose					Rare
FLOWERS						
<i>Achillea millefolium</i>	Yarrow				Occasional	
<i>Angelica sylvestris</i>	Angelica					Rare
<i>Apium nodiflorum</i>	Fool's Water-cress				Occasional	
<i>Calystegia sepium</i>	Hedge Bindweed				Occasional	
<i>Cirsium arvense</i>	Creeping Thistle			Frequent		
<i>Cirsium vulgare</i>	Spear Thistle				Occasional	
<i>Crepis capillaris</i>	Smooth Hawk's-beard					Rare
<i>Epilobium adenocaulon</i>	American Willowherb					Rare
<i>Epilobium hirsutum</i>	Great Willowherb				Occasional	
<i>Filipendula ulmaria</i>	Meadow Sweet				Occasional	
<i>Galium aparine</i>	Cleavers				Occasional	
<i>Glechoma hederacea</i>	Ground Ivy				Occasional	
<i>Iris pseudacorus</i>	Yellow Iris				Occasional	
<i>Lamium album</i>	White Dead-nettle					Rare
<i>Lycopus europaeus</i>	Gypsywort				Occasional	
<i>Mentha aquatica</i>	Water Mint				Occasional	
<i>Oenanthe crocata</i>	Hemlock Water-dropwort				Occasional	
<i>Pulicaria dysenterica</i>	Common Fleabane				Occasional	
<i>Ranunculus acris</i>	Meadow Buttercup				Occasional	
<i>Rorippa-nasturtium-aquaticum</i>	Water-cress				Occasional	
<i>Rubus fruticosus agg</i>	Bramble			Frequent		
<i>Rumex crispus</i>	Curled Dock				Occasional	
<i>Solanum dulcamara</i>	Bittersweet				Occasional	
<i>Sonchus oleraceus</i>	Smooth Sow-thistle					Rare
<i>Symphytum officinale</i>	Common Comfrey					Rare
<i>Tamus communis</i>	Black Bryony				Occasional	
<i>Urtica dioica</i>	Stinging Nettle			Frequent		
GRASSES						

<i>Agrostis capillaris</i>	Common Bent	Occasional	
<i>Arrhenatherum elatius</i>	False Oat-grass		Rare
<i>Dactylis glomerata</i>	Cock's-foot	Occasional	
<i>Glyceria fluitans</i>	Floating Sweet-grass		Rare
<i>Holcus lanatus</i>	Yorkshire Fog	Occasional	
<i>Phallosis arundinacea</i>	Canary Reed	Occasional	
SEDGES			
<i>Carex remota</i>	Remote Sedge		Rare
HORSETAILS			
<i>Equisetum arvensis</i>	Field Horsetail		Rare
RUSHES			
<i>Juncus effusus</i>	Soft Rush		Rare
MOSSES			
<i>Brachythecium rutabulum</i>	Rough-stalked Feather-moss		Rare
<i>Bryum capillare</i>	Capillary Thread-moss		Rare
<i>Dicranoweisia cirrata</i>	Common Pincushion		Rare
<i>Fissidens taxifolius</i>	Common Pocket-moss		Rare
<i>Hypnum cupressiforme</i>	Cypress-leaved Plait-moss	Occasional	
<i>Kindbergia praelonga</i>	Common Feather-moss	Occasional	
<i>Orthotrichum affine</i>	Wood Bristle-moss		Rare
<i>Oxyrrhynchium hians</i>	Swartz's Feather-moss		Rare
LIVERWORTS			
<i>Metzgeria furcata</i>	Forked Veilwort	Occasional	
LICHENS			
<i>Evernia prunastri</i>			Rare
<i>Flavoparmelia caperata</i>			Rare
<i>Physcia adscendens</i>		Occasional	
<i>Physcia tenella</i>		Occasional	
<i>Xanthoria parietina</i>		Frequent	
FUNGI			
<i>Daedaleopsis confragosa</i>	Blushing Bracket		Rare
BIRDS			
	Numbers		
<i>Carduelis carduelis</i>	Goldfinch	2	
<i>Columba palumbus</i>	Wood Pigeon	4	
<i>Corvus corone</i>	Carrion Crow	2	
<i>Corvus monedula</i>	Jackdaw	2	
<i>Cyanistes caeruleus</i>	Blue Tit	2	
<i>Erithacus rubecula</i>	Robin	3	
<i>Hirundo rustica</i>	Barn Swallow	2	
<i>Parus major</i>	Great Tit	1	
<i>Passer domesticus</i>	House Sparrow	10	
<i>Pica pica</i>	Magpie	2	
<i>Sturnus vulgaris</i>	Starling	5	
<i>Turdus merula</i>	Blackbird	2	
BUTTERFLIES			
<i>Lycaena phlaeas</i>	Small Copper	1	

<i>Pieris rapae</i>	Small White	2
BEEES		
<i>Apis mellifera</i>	Honey Bee	10
WASPS		
<i>Vespula vulgaris</i>	Common Wasp	100+