

# Langley Village Hall Project Site 3; The Old Ley

## Ecology Report

**Location : (OSGB36)**

TL 44815, 34665

Postcode = CB11 4RU

**Geology:** The entire area is within the mass of the Lowestoft Formation, formerly Glacial Boulder Clay. This deposit, probably laid down during the Anglian Glacial period, c. 450,000 years B.P., lies above the Lewes Nodular Chalk formerly the lower part of the Upper Chalk.

**Area 1** The area of tall, uncut vegetation immediately to the left of the entrance. Although close to the pond it is unrelated to that habitat.



1. *Arrhenatherum elatius* False Oat-Grass

2. *Calystegia sepium* Hedge Bindweed
3. *Heracleum sphondylium* Hogweed
4. *Urtica dioica sensu stricto* Common Stinging Nettle
5. *Dactylis glomerata* Cock'sfoot Grass
6. *Vicia cracca* Tufted Vetch
7. *Elytrigia repens* Couch Grass
8. *Rumex obtusifolius* Broad Leafed Dock
9. *Holcus lanatus* Yorkshire Fog Grass
10. *Cirsium arvense* Creeping Thistle
11. *Rumex sanguineus* Wood Dock

Nothing Rare or Nationally Scarce.

**Area 2** From Entrance up to Cultivation; improved grassland plus Footpath.

1. *Trifolium repens* White Clover
2. *Plantago lanceolata* Ribwort Plantain
3. *Arrhenatherum elatius* False Oat-Grass
4. *Ranunculus repens* Creeping Buttercup
5. *Achillea millifolium* Yarrow
6. *Poa trivialis* Rough Meadow Grass
7. *Poa annua* Annual Meadow Grass
8. *Holcus lanatus* Yorkshire Fog Grass
9. *Lolium perenne* Perennial Ryegrass
10. *Crepis capillaris* Smooth Hawk'sbeard
11. *Taraxacum officinale* agg Dandelion

Nothing Rare or Nationally Scarce

**Area3** Pond and Ditch





1. *Salix cinerea* Grey Willow, (no rust coloured hairs so not ssp. *oleifolia* and leaves quite broad, so possibly not 100% ssp. *cinerea*), this the largest willow tree around the pond may well be a hybrid between the Grey Willow and *Salix caprea* the Goat Willow. I didn't have time to collect specimens to take to the Lab. It should still support all the native invertebrates that feed on *Salix cinerea*.
2. *Epilobium hirsutum* Great Hairy Willowherb, no evidence of Elephant Hawk-moth, *Deilephila elpenor*, larvae usually present from July to September
3. *Rubus fruticosus* agg Bramble
4. *Holcus lanatus* Yorkshire Fog Grass
5. *Ranunculus acris* Meadow Buttercup
6. *Rubus caesius* Dewberry
7. *Juncus inflexus* Hard Rush
8. *Cirsium arvense* Creeping Thistle
9. *Ranunculus repens* Creeping Buttercup
10. *Pulicaria dysenterica* Common Fleabane
11. *Carex sylvatica* Wood Sedge
12. *Mentha aquatica* Water Mint
13. *Veronica beccabunga* Brooklime
14. *Rumex conglomeratus* Clustered Dock
15. *Epilobium montanum* Broad Leaved Willowherb; in shade, relic of cultivated land
16. *Lysimachia nummularia* Creeping Jenny



*Lysimachia nummularia* with its typical creeping habit

17. *Cirsium vulgare* Spear Thistle

18. *Solanum dulcamara* Bittersweet
19. *Fraxinus excelsior* Ash
20. *Crateagus monogyna* Hawthorn
21. *Taraxacum officinale* agg Dandelion

This Pond and its marginal habitat can potentially support a huge biodiversity. Management at the moment would appear to be irregular and water levels obviously fluctuate, thus severely compromising both the number of species recorded and the carrying capacity of those species that are present. In short, there appears to be no current management plan for this pond to cut down the vegetation and allow more light to penetrate the water, (The same is true of the small pond on Site 2 'The Kangel's').

#### Area 4 Meadow



1. *Picris echioides* Bristly Ox-Tongue
2. *Cirsium arvense* Creeping Thistle
3. *Holcus lanatus* Yorkshire Fog Grass
4. *Ranunculus acris* Meadow Buttercup
5. *Rumex crispus* Curly Leafed Dock
6. *Calystegia sepium* Hedge Bindweed
7. *Elytrigia repens* Couch Grass
8. *Rubus caesius* Dewberry
9. *Centaurea nigra* Black Knapweed
10. *Ranunculus repens* Creeping Buttercup
11. *Geranium dissectum* Cut Leafed Crane's-bill
12. *Pulicaria dysenterica* Common Fleabane
13. *Poa trivialis* Rough Meadow Grass
14. *Lotus corniculatus* Bird's-foot Trefoil; food plant of *Zygaena fillipendula*, Six Spotted Burnet Moth, present on site but too quick to photograph





Day flying, *Zygaena filipendulae*, Six Spotted Burnet Moth; Internet photograph.

15. *Trifolium repens* White Clover
16. *Crepis capillaris* Smooth Hawk's-beard
17. *Dactylis glomerata* Cock's-foot Grass
18. *Rosa canina* agg Dog Rose
19. *Cerastium fontanum* Common Mouse Ear
20. *Senecio jacobea* Common Ragwort
21. *Alopecurus myosuroides* Blackgrass
22. *Plantago lanceolata* Ribwort Plantain
23. *Prunella vulgaris* Common Self-Heal
24. *Senecio erucifolius* Hoary Ragwort
25. *Taraxacum officinalis* agg Dandelion
26. *Heracleum sphondylium* Hogweed
27. *Agrostis capillaris* Common Bent Grass
28. *Silene latifolia* White Campion
29. *Lolium perenne* Perennial Ryegrass
30. *Carex pendula* PendulusSedge
31. *Poa annua* Annual Meadow Grass
32. *Vicia tetrasperma* Smooth Tare
33. *Festuca rubra sensu lato* Red Fescue
34. *Agrostis stolonifera* Creeping Bent Grass
35. *Trifolium pratense* Red Clover
36. *Cirsium vulgare* Spaer Thistle
37. *Phleum pratense* Large Timothy Grass
38. *Agrimonia eupatorium* Agrimony

Although there was nothing Rare, Nationally Scarce or even uncommon recorded in the plant list for this site, collectively, these plants do provide a good range of food plants, pollen and nectar for native invertebrates over a long period during the growing season. One suspects that a night flying Moth count would produce a good number of species.

**Area 5** Hedge Meadow Side



Tall mature hedge on the Meadow side.

1. *Fraxinus excelsior* Ash
2. *Crateagus monogyna* Hawthorn
3. *Prunus spinosa* Blackthorn
4. *Urtica dioica sensu stricto* Common Stinging Nettle
5. *Convolvulus arvensis* Field Bindweed
6. *Hedera helix* Ivy
7. *Schedonorus arundinacea* Tall Fescue
8. *Galium aparine* Common Cleavers
9. *Salix caprea* Goat Willow
10. *Acer campestre var campestre* Field Maple
11. *Agrimonia eupatorium* Agrimony
12. *Rubus fruticosus* agg Bramble
13. *Prunus cerasifera* Cherry Plum
14. *Ulmus glabra* Wych Elm
15. *Rumex sanguineus* Wood Dock
16. *Rosa canina* agg Dog Rose
17. *Cornus sanguinea* Common Dogwood
18. *Corylus avellana* Hazel
19. *Elytrigia repens* Couch Grass
20. *Carex pendula* Pendulous Sedge
21. *Epilobium hirsutum* Great Hairy Willowherb

Again, nothing rare or Nationally Scarce but a substantial list of native species that can potentially support a good biodiversity.

**Area 5** Hedge by Pond and Ditch on road side





1. *Prunus spinosa* Blackthorn
2. *Urtica dioica* sensu stricto Common Stinging Nettle
3. *Holcus lanatus* Yorkshire Fog Grass
4. *Salix caprea* Goat Willow
5. *Calystegia sepium* Hedge Bindweed
6. *Rubus fruticosus* agg Bramble
7. *Urtica dioica* subspecies *galeopsifolia* Fen Nettle or hybrid with *Urtica dioica* Common Stinging Nettle



*Urtica dioica* subspecies *galeopsifolia*, growing to over 2.2 metres, the leaves are long and thin and have very few, if any, stinging hairs, sub-inermis, (almost unarmed); growing very near the Ditch.

8. *Cirsium arvense* Creeping Thistle
9. *Deschampsia cespitosa* Tufted Hair Grass
10. *Arrhenatherum elatius* False Oat-Grass
11. *Bromus hordeaceus* Soft Brome Grass
12. *Dactylis glomerata* Cock's-foot Grass
13. *Ulmus procera* type? English Elm
14. *Rubus caesius* Dewberry

Nothing Rare or Nationally Scarce

**Area 6** proposed roadway across Common Land Hay Field





**Area 6** Possible site for new access road; the area surveyed for this possible entrance was 10 metres wide from the road to the hedge.

1. *Centaurea nigra* Black Knapweed
2. *Holcus lanatus* Yorkshire Fog Grass
3. *Arrhenatherum elatius* False Oat-Grass
4. *Poa trivialis* Rough Meadow Grass
5. *Plantago lanceolata* Ribwort Plantain
6. *Taraxacum officinale* agg Dandelion
7. *Silene latifolia* White Champion
8. *Phleum pratense* Large Timothy Grass
9. *Convolvulus arvensis* Field Bindweed
10. *Dactylis glomerata* Cock's-foot Grass
11. *Alopecurus pratense* Meadow Fox-Tail Grass

Nothing Rare or Nationally Scarce.

**Area 7** Uncut Road Verge plus Small Ditch

No doubt a bell opening to main road will need to be constructed; dimensions unknown. Any watercourse that may be affected should be examined. Consequently, a one metre wide section of verge, including the narrow ditch, 25 metres either side of proposed entrance was surveyed.



1. *Rumex obtusifolius* Broad Leafed Dock
2. *Holcus lanatus* Yorkshire Fog Grass
3. *Plantago lanceolata* Ribwort Plantain
4. *Trifolium pratense* Red Clover
5. *Lolium perenne* Perennial Ryegrass
6. *Crepis capillaris* Smooth Hawk's-beard
7. *Ranunculus repens* Creeping Buttercup
8. *Potentilla reptans* Creeping Cinquefoil
9. *Achillea millifolium* Yarrow
10. *Poa trivialis* Rough Meadow Grass
11. *Anthriscus sylvestris* Cow Parsley
12. *Centaurea nigra* Black Knapweed
13. *Pulicaria dysenterica* Common Fleabane
14. *Arrhenatherum elatius* False Oat-Grass
15. *Ranunculus acris* Meadow Buttercup
16. *Sonchus arvensis* Perennial Sow-Thistle
17. *Epilobium hirsutum* Great Hairy Willowherb
18. *Rumex crispus* Curly Leafed Dock
19. *Geranium dissectum* Cut Leafed Crane's-bill
20. *Lotus corniculatus* Bird's-foot Trefoil
21. *Galium verum* Lady's Bedstraw
22. *Agrimonia eupatorium* Agrimony
23. *Plantago major* Greater Plantain
24. *Matricaria discoidea* Pineapple Weed

Nothing Rare or Nationally Scarce but a good biodiversity for such a small area

## Invertebrates

Roesel's Bush Cricket *Metrioptera roeselii*



Roesel's Bush Cricket, *Metrioptera roeselii* photographed on site 3 The Old Ley, on 29<sup>th</sup> July 2014; this is an uncommon species but not Rare or Nationally Scarce.



*Chorthippus brunneus*, The Common Field Grasshopper 29<sup>th</sup> July 2014 Site 3 The Old Ley

Very common and widespread.



## Amphibians

### Newts



By late July the pond had dried up considerably. There were no aquatics recorded with the exception of *Veronica beccabunga*, Brooklime which can also survive and fruit in damp earth. This was the only plant that either *Triturus cristatus* or *Lissotriton vulgaris* could sensibly use to lay their eggs. Newts are quite adaptable and will fold over dead leaves at the bottom of a pond to lay their single eggs in the absence of proper aquatic plants. If they had used this pond, the adults would have left after breeding and become terrestrial animals. The larvae, however don't usually leave until August or September, or sometimes later if the iodine concentration in the water is low. All parts of the pond were examined for Newts of any stage in their development but none were recorded.

I presume that those concerned are familiar with the lifecycle and habitat requirements of these two species of Newt. The third reasonably common species in the U.K., *Lissotriton helveticus*, the Palmate Newt, Britain's smallest native Amphibian, is rarely recorded if at all in this part of North Essex.

**No Amphibians were recorded on the site despite a thorough search of all the likely places**

A short note on Great crested and Smooth Newts.



The Pond House, Whittlesford. The pond had a very small population of *Triturus cristatus* and *Lissotriton vulgaris* recorded from this pond before the house was built in 1996. This very large house was built less than 6 metres from the pond. It has a mostly formal garden but the newts still have good terrestrial habitat for foraging after breeding between August and the first air frost and several hibernacula. Subsequently, with good management and knowledgeable owners, (thanks to guidance offered by Natural England et al.), the population has thrived and is now well over 200. A figure which used to qualify a site for SSSI status.

The ponds across the road look to be permanent and of a good size to support *Triturus cristatus* and *Lissotriton vulgaris*.

At this time of year, some ecologists would perform a Habitat Suitability Index survey designed by Oldham et al. in the year 2000. I am afraid I do not hold with this approach as it gives a probability of newts existing at a site. The truth of the matter is that newts are either there or they are not there so the true probability is either 1 or Zero. This exercise is however, good for educating those who wish to learn about the habitat requirements of newts and how best to improve a site for them. For that reason I have copied the following for your and the Village's information. Hopefully it will explain to some degree why newts have possibly not bred on the site in question in 2014. See additional note.

## **Reptiles**

The most likely reptile to record on this site would be *Natrix natrix* ssp. *helvetica*, Grass Snake, none were recorded.

*Zootoca vivipera*, the Common Lizard requires basking areas and a loose sward for ease of movement. It is not inconceivable that this species exists on the site; the invertebrate population, low flying flies and other insects, present on this property would seem more than adequate. Recording needs to be done in May or September with the placing of artificial refugia.

There seem to be no recent records for *Anguis fragilis*, Slow Worm or *Vipera berus*, Adder in this village or this small corner of Essex.

## **Barn Owls *Tyto alba***

This increasingly uncommon species favours this sort of grassland habitat for hunting but there are no structures on the site that are suitable for breeding; the grassland is also limited in size.

## **Bats *Chiroptera*,**

Whilst this survey was conducted during daylight hours, the native vegetation in the long hedges and rough grassland is sure to produce a night flying invertebrate population that is attractive to several species of Bat. There are a few places in the wooded area, e.g. cracks in the bark of trees or hollowed braches, which could provide good roosting sites, so a proper bat survey would need to be carried out between May and the end of July to assess this aspect of the ecology further.

**I have just copied the piece I wrote for The Kangels here on Bats, Reptiles and Barn Owls as it applies equally here.**

## Conclusion

Although there has been nothing recorded on this site that is Rare or Nationally Scarce, the common native plants in the meadow, the hedge and around the pond area can and do support a good number of native invertebrates that then provide food for other fauna higher up the food chain. During the summer, there are no damp or waterlogged areas offering a differing habitat within the meadow which looks to be discreet from the pond and ditch with no connecting drainage channels. That being so I am of the opinion that house building could be completed without disturbing the integrity of the pond. It is self evident that with at least two ponds across the road, a full Amphibian survey needs to be undertaken in the spring to properly assess that vital part of the ecology of the site and its immediate environment. Regrettably, I did not seek permission to survey these two ponds and add it to this report. If house building does take place on this site, perhaps the pond and ditch on Site 3 could be subject to a proper management program so that it can achieve more of its obvious potential.

I cannot see any ecological reason why an access road shouldn't be built across the Common land that has recently been cut for hay. The ditch will need to be traversed by a bridge but a very short section of culvert need not have a significantly negative impact. The hedge is mature and quite high; again removing a short '5 metre?' section for a new entrance should not interrupt any ecological connectivity to any great degree.

A. R. Arbon MBE  
Consultant Ecologist,  
1, Wren Park,  
Whittlesford,  
Cambridge.  
CB22 4LY

12<sup>th</sup> August 2014