

Site No. 7517

COUNTY WILDLIFE SITE FULL RECORD SHEET

NAME: Shingay Lake Nature Reserve

File code: S/26.2.04

Parish(es): Shingay cum Wendy

County: Cambridgeshire

Grid ref.: TL314464

Habitat information

Code Habitat type

B322 Grassland: calcareous, semi-improved, lowland

G123 Open water: mesotrophic lakes 0.5-5ha

A213 Scrub: dense/continuous, basic/calcareous

F21 Marginal/inundation: marginal

Site description

This small 4ha site is managed as a private nature reserve. The lake was created as an agricultural storage reservoir in the 1970s. It has since naturally colonized. The lake is steep sided and has a narrow fringe of *Phragmites australis*. The waters, being over calcareous clay, are base-rich and nutrient poor and this has allowed 4 species of Stoneworts to colonize, including *Chara aspera*, *Chara hispida*, *Chara vulgaris* and *Chara virgata*. As the lake matures however, the waters are becoming more nutrient rich and other aquatic plants such as *Myriophyllum spicatum*, *Elodea nuttallii* and emergent species such as *Phragmites australis* will increase at the expense of the Stoneworts. The base-rich waters are also home to the last known population of *Austroptamobius pallipes* (White-clawed Crayfish) in Cambridgeshire. It is likely that these colonized the lake naturally from the adjacent Bassingbourn Well-head Stream, which runs south-north, past the southern and eastern edges of the site. Droughts, habitat deterioration and the spread of non-native crayfish and crayfish plague probably resulted in the loss of the original stream population, but the separation of the lake has allowed a population to continue to flourish. In addition to the open water, the site supports a variety of other habitats including naturally developing calcareous grassland, dense scrub, planted trees and a line of mature pollard willows along the Bassingbourn Wellhead Stream. The grassland is mainly situated south of the lake, managed by cutting with some rabbit grazing and is quite diverse, containing a very strong component of species normally associated with well-drained calcareous swards. These include *Trisetum flavescens*, *Daucus carota*, *Sanguisorba minor*, *Lotus corniculatus* and *Leucanthemum vulgare*. There are also a number of species associated with disturbed soils, including *Malva moschata*, *Melilotus officinalis*, *Calamagrostis epigejos* and *Sonchus arvensis*. In recent years, with cutting, the cover of grasses has increased including *Festuca rubra*, *Agrostis stolonifera*, *Dactylis glomerata*, *Phleum pratense* and *Arrhenatherum elatius*. Other typical chalk grassland species such as *Origanum vulgare* and *Thymus pulegioides*, have appeared in the sward, but their low frequency indicates the relatively recent nature of the grassland. Between the grassland, lake and stream, on the banks of the lake, dense scrub has developed including *Crataegus monogyna*, *Prunus spinosa*, *Rosa canina*, *Sambucus nigra*, *Salix capraea* and *Salix cinerea*. Along the banks of the stream are a line of mature pollard willows (hybrids between *Salix fragilis* and *Salix alba*). In addition, *Alnus glutinosa* and *Populus alba* have been planted, amongst naturally developing scrub. The understorey is dominated by *Urtica dioica*. The Bassingbourn Wellhead Stream has been over-deepened in the past but does retain a good flow and occasional natural pool and riffle features.

Site assessment

The site qualifies as a County Wildlife Site because it supports a breeding population of White-clawed Crayfish and it supports over 5 mature pollarded willows.

Site status

County Wildlife Site

Shingay Nature Reserve Grid Ref.TL 314 464

Morning site visit by Graham Bellamy BSc, PhD,MIEEM. and John Green 25 April 2003

Other reports. Ecological Report and survey of Shingay Nature Reserve and surrounding habitats. Feb 2001 ELMAW consulting and appended subsequent list of data post 1998 Bugle report.

Shingay Lake and Nature Reserve. Survey and assessment of wildlife interest. Bugle Ecological Services 1998 (7th and 14th September)

The site. 1ha water. 3ha grassland, scrub, planted woodland and stream edge with mature willows. Present use of site is based on fishing activities by family and friends.

BIRDS

1 Great crested Grebe present. Three pairs of breeding coot, one pair with eggs, two pairs with young.

5 singing wrens

6 singing willow warblers

1 singing white throat

1 singing blackcap

1 singing chaffinch

1 singing sedge warbler

1 singing blackbird but more seen.

1 dunnock in song

Blue tit in song

wood pigeon

Pheasant

Reed bunting

Little grebe on stream

Moorhen on stream

Cuckoo nearby

Greater spotted woodpecker drumming nearby

Skylark in song nearby

Linnet flock nearby

Heron pellet found on site

Butterflies

Peacock

Small white

speckled Wood

Mammals

Otter spraint under bridge

Muntjac, bank vole, fox, rabbit, water vole, brown rat all from droppings.

Mole hills.

Plants

Additional records to Bugle and Elmaw reports.

<i>Acer campestre</i>	field maple, planted
<i>Arum maculatum</i>	lords and ladies
<i>Anthriscus sylvestris</i>	Cow-parsley
<i>Alliaria petiolata</i>	garlic mustard
<i>Ballota nigra</i>	black horehound
<i>Bellis perennis</i>	daisy
<i>Brachypodium sylvaticum</i>	wood false brome grass
<i>Callitriche species</i>	Starwort, in ditch
<i>Capsella bursa-pastoris</i>	shepherds purse
<i>Cerastium fontanum</i>	common mouse-ear
<i>Clinopodium vulgare</i>	basil, could be confused with marjoram
<i>Coronopus didymus</i>	swinecress, car park area
<i>Cornus sanguinea</i>	dogwood, planted and by ditch
<i>Dactylis glomerata</i>	cocksfoot
<i>Fillipendula ulmaria</i>	meadowsweet, by ditch
<i>Galium aparine</i>	cleavers
<i>Geranium robertianum</i>	herb robert, close to bridge
<i>Geum urbanum</i>	herb bennet
<i>Humulus lupulus</i>	hop
<i>Juncus articulatus</i>	jointed rush
<i>Lamium album</i>	white dead-nettle, car park
<i>Lamium purpureum</i>	red dead-nettle
<i>Lathyrus pratensis</i>	meadow vetchling
<i>Ligustrum vulgare</i>	privet, by ditch
<i>Petasites species</i>	butterburr...looks like <i>Gunnera</i>
<i>Prunus avium</i>	cherry, sapling
<i>Prunella vulgaris</i>	self-heal
<i>Primula vulgaris</i>	primrose variation - blue in colour. note cowslip is <i>P. veris</i>
<i>Rorippa nasturtium-aquaticum</i>	watercress in ditch
<i>Rosa rubiginosa?</i>	sweet-briar, planted
<i>Scrophularia nodosa</i>	figwort
<i>Senecio erucifolius</i>	hoary ragwort
<i>Sison amomum</i>	stone parsley
<i>Stellaria media</i>	chickweed
<i>Stachys sylvatica</i>	woundwort
<i>Symphytum species</i>	comfrey
<i>Tamus communis</i>	black bryony
<i>Tilia species</i>	lime, planted
<i>Veronica persica</i>	common field speedwell

Other observations

Frogspawn

Limnea stagnalis

water snail

Planorbis species

two types curled water snail

Potamopyrgus jenkinsii

small water snail

Gerris species

pond skater

Gasterosteus aculeatus

three spined-stickleback, reservoir and stream

Austropotamobious pallipes

White clawed crayfish, moulted shells found. **This is a**

priority species for protection and action to conserve in Great Britain, there being only a handful of colonies left in the whole east of England. Protected on schedule 5 of the Wildlife and Countryside Act from taking from the wild or sale. Included in IUCN (International Union for the Conservation of Nature) Red data list; appendix 111 of the Bern convention and Annexes 11 and V of the European Habitats Directive.

This all sounds scary but demonstrates the importance given to the crayfish in conservation terms. The colony here is of considerable interest presumably being of local stock when the reservoir was filled from the nearby stream some years ago. Elsewhere locally native crayfish have become extinct probably due to crayfish plague fungus introduced with American crayfish.

Comments

The large willows alongside the ditch and stream have mostly been pollarded in the past and we suggest that they be re-cut within the next five years. Wood arising from the pollarding could be used to make artificial otter holts at the base of the trees or in the adjacent scrub.

We suggest that reed cutting be done rotationally perhaps in at three year cycle removing one third a year. Cutting the reed will increase stem density and benefit reed and sedge warblers and reed bunting, as well as controlling any woody growth within the reed beds. The cut reed could be burnt or left to compost down perhaps using the existing heap of vegetation on the grassland. A large composting heap in this situation close to water is likely to be attractive to grasssnakes that need heaps like this to lay their eggs in.

Suggest enhance the vegetation margin at the river bank by the removal of shading scrub growth in winter (avoids bird breeding) to encourage grassy and herb rich vegetation preferred by water vole. Cleared bare ground could be re-sown with sweepings from hay bales, perhaps from hay from M. Jones` horses at zero cost.

Suggest erect kestrel box on post or tree at the far end of the site close to the grassy area, and provide a variety of small bird and small mammal nest boxes. (John can advise further).

The white-clawed crayfish seems to be doing well, although it would be useful to know how big the population is and its distribution within the reservoir. A survey every three years and an annual check may be a good idea and the Environment Agency should be able to assist with this and give advice, as could English Nature (01733 405850) at their Peterborough Office. We can help in making contact with the Environment Agency and English Nature if you wish, and helping with survey if needed.

Care should be taken not to introduce the crayfish plague fungus on waders, fishing tackle and nets that may have recently been used in other waters that hold American Crayfish. The fungus is killed by thorough drying of such kit, or the dipping of nets and boots in

bleach solution such as Napisan (from Boots!), but ensure the chemical is not disposed of anywhere near the reservoir. On no account introduce any other crayfish.

The key features of the site for the crayfish is the clean water, an abundance of crevices provided by the cobbles and gravel in the bankside in which they live, and sufficient food, probably provided by naturally occurring water life and uneaten fish food. An absence of foreign crayfish and their associated diseases.

Graham Bellamy/John Green April 2003