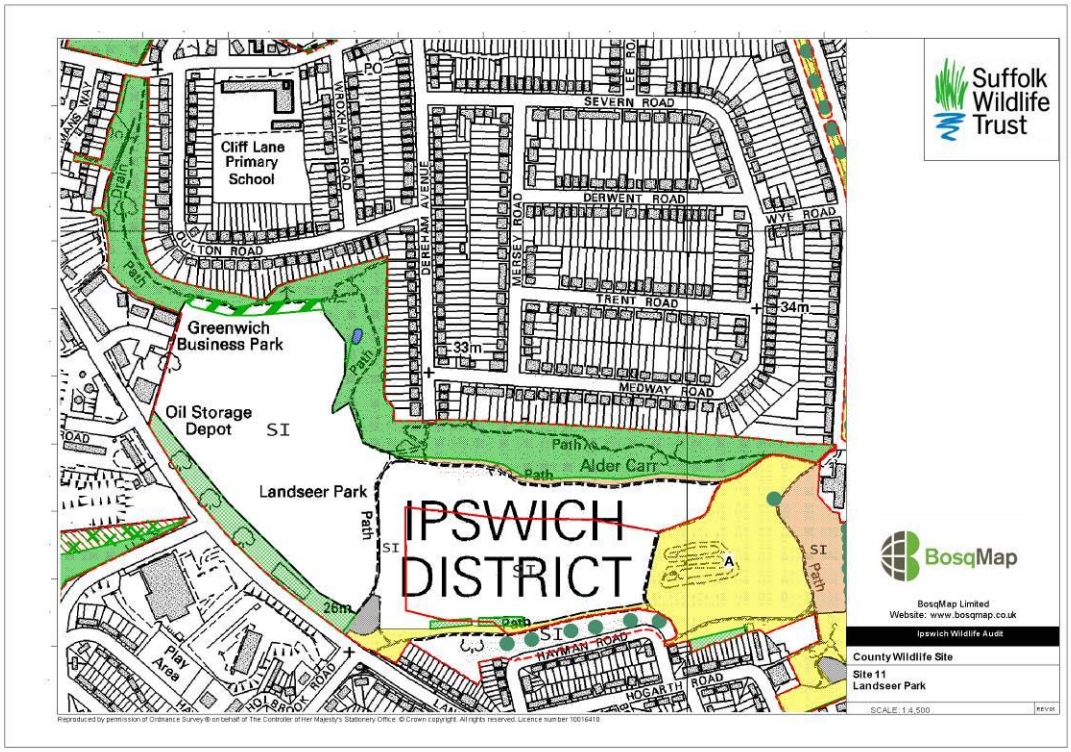
Site name: Site reference 11 - Landseer Park CWS

IBC ref: W12
Site status: County Wildlife Site
Grid ref: TM 17621 42743
Area: 17.32 hectares
Date: 7 September 2012
Recorder: M Wright
Weather conditions: Hot and sunny, 25°C
Ranking: 2
Biodiversity value: High

Map:



Photos:

Part of the northern tree belt, rough grassland and the tall fen of the boggy area

More of the northern tree belt, amenity grassland and semi-improved rough grassland

The pond area

Trees, scrub and semi-improved rough grassland along Landseer Road

Amenity grassland and semi-improved grassland adjacent to Hayman Road

Habitat type(s):
Amenity grassland, rough grassland, semi-natural woodland, scrub, fen and pond

Subsidiary habitats
Deadwood and trees with holes and splits

Site description:
Landseer Park is situated to the north of Landseer Road in a large area of housing. Fifty years ago there was a diverse mixture of habitats with mature trees, woodland, scrub, wet meadows, fen, streams and ponds, which covered the whole of the valley. However, during the 1950's and 1960's much of the valley was in-filled with domestic refuse. All that remains now of the original habitat is the wooded area on the high ground on the northern edge between Clapgate Lane and Cliff Lane.

The belt of semi-natural woodland comprises a number of mature species, which include sweet chestnut, horse chestnut, oak, beech, lime, ash and honey-locust trees with sycamore dominating the western end of the wood. There is a very good understory of elm scrub, holly and bramble. There is also an abundance of bushy ivy. Where ivy is not dominant the ground flora is sparse. Bluebell used to be abundant but now only remnants remain due to trampling.

The slopes are well covered by trees and scrub, which include sallow and alder. A wet, boggy area is situated at the base of the wooded slope where a stream was previously culverted and buried during the landfill operations. A new wet area has developed with a pond and this now supports an interesting tall fen meadow type flora and rough grassland, which includes southern marsh orchid, hairy sedge and fleabane.

A large area of the park is undulating, open, regularly mown amenity grassland with large areas of rough grassland, some of which is more herb-rich. Overall this has developed into a lovely mosaic of grassland types. There are a number of scrub areas planted on the perimeter slopes some of which are maturing into wonderful habitats. More recently in a particular location trees and shrubs have been planted to improve the woodland edge.

Protected species:
Grass snake, slow worm, common lizard (2012)

Protected species potential:
Various bats

BAP habitats present:
Lowland meadow, lowland fen, wet woodland, pond, lowland mixed deciduous woodland

BAP species seen:
Dunnock

BAP species known:
Stag beetle, grass snake, slow worm, cinnabar moth, white-letter hairstreak, heath fritillary, cuckoo

BAP species potential:
Hedgehog, bullfinch, starling, house sparrow, song thrush, spotted flycatcher, common lizard, toad and bats

Connectivity:
This site is an important part of the overall ecological network of this area. It is of considerable conservation value in connecting the wildlife corridor between the Orwell hinterland of Pipers Vale, industrial sites at Sandy Hill Lane, Hog Highland and the old Fison's site with the Holywells Park complex to the north.

Structural diversity:
The structural diversity of the whole site is extremely good due to age class and the variety of tree and shrub species found throughout the tree belt. The mosaic of grassland types in conjunction with the scrub, wet and fen areas of the woodland areas improves the structural diversity still further.

Flora:
There is a wide variety of tree and scrub species to be found at this site; together they provide a mosaic of habitats that supports a diverse assemblage of wildlife. Species include ash, alder, beech, blackthorn, bramble, broom, buckthorn, cherry, copper beech, gorse, elder, elm, hawthorn, hazel, holly, hornbeam, horse chestnut, honey locust, ivy, lime, lombardy poplar, mountain ash, oak, sallow, Scots pine, snowberry, spindle, sweet chestnut, sycamore, weeping willow and white poplar.

Due to the timing of the survey most plants had 'gone over', consequently only the following were noted: birds-foot trefoil, black horehound, black knapweed, black medick, bristly oxtongue, broad-leaved dock, bracken, Canadian fleabane, cock's foot, common bent, common poppy, creeping cinquefoil, common duckweed, common sorrel, common storksbill, dittander (nationally scarce), false oat-grass, field bindweed, field horsetail, fleabane, great lettuce, great willowherb, ground ivy, hard rush, hedge bindweed, hedge mustard, hemlock, herb robert, horseradish, knotgrass, mallow, meadow buttercup, meadowsweet, mugwort, pink clover, purple loosestrife, ragwort, ribwort plantain, smooth hawkweed, smooth sow-thistle, soft brome, soft rush, spear thistle, timothy, wall barley, water dock, woody nightshade, yarrow and Yorkshire fog.

A botanical survey at a more appropriate time of year would produce a much greater species list, however, it is known that bluebells occur in areas of the woodland and southern marsh orchids are abundant in the wet areas at the base of the slope.

Avifauna:
The visit was undertaken at a sub-optimal time of year for recording this group. The rich variety of habitats found at this site will be supporting very important and varied bird communities throughout the year from wintering thrushes and finches to breeding summer migrants. The site will support a number of BAP bird species.

Observations during the site visit included blackbird, blackcap, blue tit, carrion crow, chaffinch, chiffchaff, collared dove, dunnock, great tit, goldfinch, magpie, robin, and wren,

A survey at other times of the year would produce a much greater species list. Nightingales and woodpeckers have been recorded in recent years and in 2010 a single cuckoo was heard calling. There are records for spotted flycatcher and lesser spotted woodpecker dating from 1991, but the latter species is highly unlikely to occur here now, due to its increasing scarcity.

Invertebrates:

The rich variety of habitats, plant and shrub communities found at this site will be supporting a very rich and diverse invertebrate assemblage. A wide range of butterflies have been recorded over the years (SBRC records) including two BAP species (white-letter hairstreak, 2008 and heath fritillary, 2010). Cinnabar moth was recorded in 2010. There are good records for moths and various species of cricket.

Observations during the site visit included comma, large white, meadow brown, red admiral, small copper, small white, speckled wood, common darter, emperor, migrant hawker and ruddy darter.

The site is known to support stag beetles.

Herpetofauna:

No species were seen during the site visit, however grass snake and slow worm are known to occur and it is highly likely that common lizard, toad and frog also occur. A translocation of 232 common lizard to the park from the former airfield and Ravenswood took place in 2012 (R Spring pers. comm.).

Mammals:

The only species seen was grey squirrel; however, foxes are known to occur. The variety of habitats associated with the woodland and grassland are likely to support good numbers of field and bank vole and common shrew. A number of bat species may also use the site and the tree belt will provided excellent foraging habitat. Hedgehog is highly likely to be present.

Comments and recommendations:

Landseer Park, due to its variety of woodland and grassland habitats, is a very important wildlife and amenity site. The recent enhancements to the grassland to extend the tall herb and rough grassland areas will be helping to improve the floral and faunal assemblages of the whole site. It is highly recommended that this form of management continues. It is also recommended that in some areas, scrub should be encouraged especially those areas associated with the slopes as long as this doesn't conflict with other habitats' interests.

It also highly recommended that the pond is enlarged, deepened and has some of the surrounding scrub removed to reduce shade. In the wooded area towards Cliff Lane some of the sycamore regrowth ought to be removed to create a glade.

It was noted that apparently unauthorised clearings and tree removal is taking place in areas adjacent to the back gardens of properties on the northern boundary and this activity should be discouraged.

A further late spring/early summer visit for this site would be desirable.

Site name: Site reference 12 – Pipers Vale including Elm Hill

IBC ref: W13
Site status: County Wildlife Site & Local Nature Reserve
Grid ref: TM 17749 41593
Area: 20.79 hectares
Date: 14 April 2013, 18 June 2013
Recorder: M Wright
Weather conditions: Clear skies, hot and sunny
Ranking: 2
Biodiversity value: High

Map:

Photos:

Main area of Pipers Vale with of blocks of gorse and acid grassland

A glade within Pipers Vale

Reed and woodland-fringed shoreline

Elm Hill

Gainsborough Lane

Habitat type(s):
Acid grassland, gorse and bramble scrub, bracken, broadleaf woodland, reedbed, poor semi-improved grassland

Subsidiary habitats:
Deadwood, sandy cliff faces, springs and a small stream

Site description:
Pipers Vale is located on the southern fringes of Ipswich between the north bank of the Orwell estuary and the estates of Greenwich and Gainsborough. The site is owned and managed by the Borough Park Rangers as part of the Orwell Country Park. The CWS is managed through a Natural England Higher Level Stewardship Agreement.

The habitats associated with Pipers Vale are diverse. The high ground is a heathland mosaic dominated by gorse, broom and acid grassland; aspen, oak and birch woodland with bramble scrub interface with the heathland areas. Drainage through the site has established a small reedbed and wet woodland area. Fresh water also permeates from the hillside through reed, which fringes the upper shore before flowing across the mudflats. Across the site are a number of well-walked footpaths. The historic route of Gainsborough Lane runs between Raeburn Road and Pond Hall farm. An area of former allotments known as Elm Hill now supports a valuable bramble scrub/grassland mosaic and is an integral part of the CWS.

Protected species:
Grass snake, common lizard and slow worm (2004/5)

Protected species potential:
Various bat species

BAP habitats present:
Lowland heathland (including acid grassland)

BAP species seen:
-
BAP species known:
Stag beetle (1997) grass snake, slow worm, common lizard, toad, starling (2009), song thrush, linnet and bullfinch (2013). Various BAP moth species are listed by SBRC, but the records date from 1997

BAP species potential:
House sparrow, spotted flycatcher, yellowhammer, hedgehog, various bats

Connectivity:
Piper's Vale links with the major wildlife areas of the Orwell Country Park, Pond Hall Carr and Braziers Wood, and is an important part of the extensive wildlife corridor of the Orwell Estuaries Special Protection Area (SPA), Ramsar site and its hinterland.

Structural diversity:
The structural diversity of all areas within this large complex of habitats was excellent, from the mosaics of good quality scrub, acid grassland, reedbed and woodland.

Flora:
The diversity and mosaic of habitats provides a rich assemblage of plants, shrubs and trees.

Over 300 species has been recorded, see Appendix 1. The list has been compiled for the period 1980 to 1992 and for the period from 2004. For the period >2004 there are two compartments, Pipers Vale and Elm Hill.

Trees and shrubs recorded during the site survey visits in 2013 are as follows: ash, alder, blackthorn, bramble, broom, buckthorn, gorse, elder, elm, field maple, hawthorn, hazel, holly, lime, mountain ash, oak, sallow, silver birch, spindle, sycamore and white poplar.

Plants and grasses: birds-foot trefoil, black horehound, black knapweed, black medick, bristly oxtongue, broad-leaved dock, bracken, Canadian fleabane, celandine, cock's foot, common bent, common poppy, creeping cinquefoil, common sorrel, common storksbill, dittander (nationally scarce), false oat-grass, field bindweed, field horsetail, fleabane, great willowherb, ground ivy, hard rush, hedge bindweed, hedge mustard, hemlock, herb Robert, horseradish, knotgrass, mallow, meadow buttercup, meadowsweet, mugwort, pink clover, ragwort, ribwort plantain, smooth hawkweed, smooth sow-thistle, soft brome, soft rush, spear thistle, timothy, wall barley, woody nightshade, yarrow and Yorkshire fog.

Avifauna:
The variety of habitats found at this site will support very important bird communities throughout the year from wintering thrushes and finches to breeding summer migrants.

Six nightingale territories were recorded in 2012 during a national survey organized by the British Trust for Ornithology (BTO) (Wright M. 2012).

A breeding bird survey of Pipers Vale for Ipswich Borough Council in 2004 found that there were 25 breeding species including seven summer migrants, reed warbler, sedge warbler, lesser whitethroat, whitethroat, blackcap, chiffchaff and willow warbler breeding (Wright M. 2004). This survey was repeated in 2009 and recorded the same breeding migrant species apart from willow warbler and lesser whitethroat.

Observations during the site visits included blackbird, blackcap, blue tit, carrion crow, chaffinch, chiffchaff, collared dove, stock dove, dunnock, great tit, goldfinch, greenfinch, jay, jackdaw, long-tailed tit, magpie, nightingale, robin, whitethroat and wren. In addition to the above a SWT Trading Ltd breeding bird survey in 2013 recorded sparrowhawk, song thrush, mistle thrush, garden warbler, goldcrest, coal tit, tree creeper, linnet and bullfinch. A regular walker on the site reported seeing a barn owl in 2013.

Invertebrates:
The rich variety of habitats, plant and shrub communities found at this site will be supporting a very rich and diverse invertebrate assemblage. A wide range of butterflies has been recorded over the years as well as moths, dragonflies, grasshoppers and crickets (SBRC records).

Observations during the site visits included brimstone, brown Argus, comma, large white, meadow brown, gate keeper, small tortoiseshell, red admiral, small copper, Essex skipper, peacock, purple hairstreak, small white and speckled wood. The following species are known to occur: green hairstreak, green-veined white, common blue, orange tip, large skipper and small skipper. Painted lady and clouded yellow are also frequently recorded.

Other invertebrates seen include common darter, emperor dragonfly, migrant hawker and field grasshopper. There are a number of moth records dating from 1997, including good numbers of BAP species, but no recent records for this group.

Herpetofauna:
No species were seen during the site visit; however grass snake, common lizard, slow worm, toad and frog have been recorded in surveys of Elm Hill (2004/05) and are likely to occur across the site.

Mammals:
The only species seen were grey squirrel, rabbit and evidence of mole*;* however, fox and muntjac are known to occur. The variety of habitats associated with the woodland and grassland are likely to support small mammals such as field and bank voles, wood mice, common and pygmy shrews. A number of bat species may also use the site as

the mosaic of shrubs and trees provide excellent foraging habitat. Hedgehog may also be present and this could be an important site for this declining species.

Comments and recommendations:

Pipers Vale, due to its variety of woodland, grassland and scrub habitats, is a very important wildlife and public amenity site. The management work being carried out to create a better gorse scrub and acid grassland mosaic is excellent, in particular the 'dead end' glades.

Further surveys of invertebrates should be undertaken to get a more up to date picture of this group. A bat survey within the Orwell country park could provide valuable records.

There was evidence of vandalism including broken trees and air pellet damage.

References:

SWT Trading Ltd. (2013) Breeding bird survey of the Orwell Country Park.

Wright M. (2004) Breeding Birds of Pipers Vale, Suffolk Wildlife Trust Report for Ipswich Borough Council

Wright M. (2009) Breeding Birds of Pipers Vale, Suffolk Wildlife Trust Report for Ipswich Borough Council

Wright M. (2012) Results of a national Nightingale survey for the British Trust for Ornithology

Pipers Vale Botanical Species List

Nationally scarce
Scarce

Comp 1. Pipers Vale
Comp 2. Elm Hill

		1980 - 1992		>2004		
		1		1	2	
Sheep's Fescue	*Festuca ovina*	*		*		
Red Fescue	*Festuca rubra agg*	*		*		
Squirrel Tail Fescue	*Vulpia bromoides*			*		
Silver Hair Grass	*Aira caryophyllea*	*		*		EH, JS
Early Hair Grass	*Aira praecox*			*		JS
Smaller Cat's-tail	*Phleum bertolonii*			*		JS
Barren Brome	*Bromus sterilis*	*		*		
Soft Brome	*Bromus mollis*	*		*		
Wood False-brome	*Brachypodium sylvaticum*	*		*	*	
Sea Couch	*Elymus pycnanthus*	*		*		
Common Couch	*Elymus repens*	*		*	*	
Wild Oat	*Avena fatua*			*		
Tall Oat-grass	*Arrhenatherum elatius*			*		JS
Yellow Oat-grass	*Trisetum flavescens*	*		*		
Perennial Ryegrass	*Lolium perenne*	*		*	*	
Annual Meadow Grass	*Poa annua*	*		*	*	
Rough Meadow Grass	*Poa trivialis*	*		*	*	
Sweet Vernal-grass	*Anthoxanthum odoratum*	*		*		
Cocksfoot	*Dactylis glomerata*	*		*	*	
Crested Dogstail	*Cynosurus cristatus*	*		*		
Yorkshire Fog	*Holcus lanatus*	*		*	*	
Wall Barley	*Hordeum murinum*	*		*	*	
Creeping Bent	*Agrostis stolonifera*	*		*		
Common Bent	*Agrostiscapillaris*	*		*	*	
Black Bent	*Agrostis gigantea*			*		JS
Creeping Soft-grass	*Holcus mollis*			*		JS
Good Friday Grass	*Luzula campestris*	*		*		
Hard-grass	*Parapholis strigosa*			*		JS
Cord-grass	*Spartina anglica*	*				
Eel Grass	*Zostera marina*			*		MW & DC *1
Reed Grass	*Phalaris arundinacea*			*		
Common Reed	*Phragmites australis*	*		*		
Common Cord -grass	*Spartina anglica*	*		*		
Lesser Pond Sedge	*Carex acutiformis*	*		*		
Remote Sedge		*				
Spiked Sedge	*Carex muricata lamprocarpa*			*		JS
False Fox Sedge	*Carexotrubae*	*		*		
Sea Clubrush	*Scirpus maritimus*	*		*		
Hard Rush	*Juncus inflexus*	*		*		
Soft Rush	*J. effusus*	*		*		
Saltmarsh Rush	*Juncus gerardii*	*		*		
Bracken	*Pteridium aquilinum*	*		*	*	
Broad Buckler Fern	*Dryopterus fdilatata*	*		*		
Male Fern	*Dryopterus filix-mas*	*		*		

Trees & Shrubs						
Goat Willow	*Salix caprea*	*		*		
Grey Willow	*Salix cinerea*			*		JS
Crack Willow	*Salix fragilis*	*		*		JS
Common Osier	*Salix viminalis*			*		JS
Silver Birch	*Betula pendula*	*		*	*	
Alder	*Alnus glutinosa*	*		*		
Beech	*Fagus sylvatica*			*		
Hazel	*Corylus avellana*	*		*		
Spindle	*Euonymus europaeus*	*		*		*2
Pedunculate Oak	*Quercus robur*	*		*	*	
English Elm	*Ulmus procera*	*		*		
Elm suckers				*		
Aspen	*Populus tremula*	*		*		
Dogwood	*Cornus sanguinea*			*		
Sycamore	*Acer pseudoplatanus*	*		*		
Field Maple	*Acer campestre*	*		*		
Holly	*Ilex aquifolium*	*		*		
Ash	*Fraxinus excelisior*	*		*		
Nettle Family	***Urticaceae***					
Nettle	*Urtica dioica*	*		*	*	
Hop	*Humulus lupulus*	*		*		
Dock Family	***Polygonaceae***					
Amphibious Bistort	*Polygonum amphibium*	*				
Redshank	*Polygonum persicaria*	*		*		
Knotgrass	*Polygonum aviculare*	*		*		
Equal-leaved Knotgrass	*Polygonum arvenastrum*			*		JS
Japanese Knotweed	*Reynoutria japonica*	*				
Spring Beauty	*Montia perfoliata*	*		*		
Common Sorrel	*Rumex acetosa*	*		*	*	
Sheeps Sorrel	*Rumex acetosella*	*		*		
Broad-leaved Dock	*Rumex obtusifolius*	*		*	*	
Curled Dock	*Rumex cripus*	*		*		
Narrow-leaved Sheep's Sorrel	*Rumex tenuifolius*	*				FS 1981
Goosefoot Family	***Chenopodium***					
Fat Hen	*Chenopodium album*	*		*	*	
Red Goosefoot	*Chenopodium rubrum*			*		JS
Spear-leaved Orache	*Atriplex hastata*	*		*		
Grass-leaved Orache	*Atriplex littoralis*			*		
Sea Beet	*Beta vulgaris*	*		*		
Sea Purslane	*Halimione portulacoides*	*		*		
Glasswort	*Salicornia europaea*	*				
	Salicornia agg.					
Annual Seablite	*Suaeda maritima*	*		*		
Pink Family	***Caryophyllaceae***					
Three-veined Sandwort	*Moehringia trinervia*	*		*		
Greater Stitchwort	*Stellaria holostea*	*		*	*	
Lesser Stitchwort	*Stellaria graminea*	*		*		
Common Chickweed	*Stellaria media*	*		*	*	
Field Mouse-ear	*Cerastium arvense*	*		*		

Common Mouse-ear	*Cerastium fontanum*	*		*		
Lesser Sea Spurrey	*Spergularia marina*	*		*		
Red Campion	*Silene dioica*	*		*	*	
White Campion	*Silene alba*	*		*	*	
Ragged Robin	*Lychnis flos-cuculi*	*				
Buttercup Family	***Ranunculaceae***					
Marsh Marigold	*Caltha palustris*	*		*		
Meadow Buttercup	*Ranunculus acris*	*			*	
Bulbous Buttercup	*Ranunculus bulbosus*	*				
Creeping Buttercup	*Ranunculus repens*	*			*	
Lesser Celendine	*Ranunculus ficaria*	*		*		
Celery-leaved Buttercup	*Ranunculus sceleratus*	*				
Fumitory Family	***Fumariaceae***					
Climbing Corydalis	*Corydalis claviculata*	*		*		
Common Fumitory	*Fumaria officinalis*	*				
Poppy Family	***Papaveraceae***					
Common Poppy	*Papaver rhoeas*	*		*	*	
Opium Poppy	*Papaver somniferum*	*		*		
Cabbage Family	***Cruciferea***					
Hedge Mustard	*Sisymbrium officinale*	*		*		
Garlic Mustard	*Alliaria petiolata*	*		*		
Dittander	*Lepidium latifolium*	*		*	*	
Horse-radish	*Armoracia rusticana*			*	*	
Wavy Bittercress	*Cardamine flexuosa*	*		*		
Hoary Cress	*Cardaria draba*	*		*		
Lesser Swinecress	*Coronopus didymus*	*				
Shepherds Purse	*Capsella bursa-pastoris*	*		*	*	
Mignonette family	***Resedaceae***					
Weld	*Reseda luteola*	*		*		
Saxifrage Family	***Saxifragaceae***					
Opp-leaved Golden Sax	*Chrysosplenium oppositifolium*	*		*		
Rose Family	***Rosaceae***					
Meadowsweet	*Filipendula ulmaria*	*				
Dog Rose	*Rosa canina*	*		*		
Field Rose	*Rosa arvensis*			*		JS
Bramble	*Rubus fruiticosus agg.*	*		*	*	
Cut-leaved Bramble	*Rubesa laciniatus*	*		*		
Raspberry	*Rubus idaeus*	*				
Herb Bennet	*Geum urbanum*	*		*		
Creeping Cinquefoil	*Potentilla reptans*	*		*		
Sulphur Sinquefoil	*Potentilla recta*	*				*3
Silverweed	*Potentilla anserina*	*		*		
Hawthorn	*Crataegus monogyna*	*		*		
Blackthorn	*Prunus spinosa*	*		*		
Gean	*Prunus avium*	*		*		

Pea Family	***Leguminosae***					
Gorse	*Ulex europaeus*	*		*	*	
Broom	*Cytisus scoparius*	*		*	*	
Common Vetch	*Vicia sativa*	*		*		
Hairy Tare	*Vicia hirsuta*	*			*	
Bush Vetch	*Vicia sepium*			*		
Meadow Vetchling	*Lathyrus pratensis*	*				
Ribbed Melilot	*Melilotus officinalis*	*				
White Melilot	*Melilotus alba*	*				
Lucerne	*Medicago sativa*	*				
Birdsfoot Trefoil	*Lotus corniculatus*	*		*		
Birdsfoot	*Ornithopus perpusillus*	*		*		
Black Medic	*Medicago lupulina*	*		*		
Spotted Medick	*Medicago arabica*	*		*		
Hop Trefoil	*Trifolium campestre*	*		*		
Red Clover	*Trifolium pratense*	*		*		*4
White Clover	*Trifolium repens*	*		*	*	
Haresfoot Clover	*Trifolium arvense*	*		*		
Clustered Clover	*Trifolium glomeratum*	*		*		*5
Knotted Clover	*Trifolium striatum*	*				*6
Lesser Trefoil	*Trifolium dubium*			*		JS
Geranium Family	***Geraniaceae***					
Common Storksbill	*Erodium cicutarium*	*		*	*	
Hedgerow Cranesbill	*Geranium pyrenaicum*			*		
Herb Robert	*Geranium robertianum*	*		*	*	
Dovesfoot Cranesbill	*Geranium molle*	*		*		
Small-flowered Cranesbill	*Geranium pusillum*	*		*		
Cut-leaved Cranesbill	*Geranium dissectum*	*				
Round-leaved Cranesbill	*Geranium rotundifolium*	*		*		
Spurge Family	***Euphorbiaceae***					
Dog's Mercury	*Mercurialis perennis*	*		*		
Sun Spurge	*Euphorbia helioscopia*			*		
Mallow Family	***Malvaceae***					
Common Mallow	*Malva sylvestris*	*		*		
St. John's Wort Family	***Guttiferae***					
Perforate St John's Wort	*Hypericum perforatum*	*		*		
Violet Family	***Violaceae***					
Common Dog Violet	*Viola riviniana*	*		*		
Field Pansy	*Viola arvensis*	*			*	
Gourd Family	***Cucurbitaceae***					
White Bryony	*Bryonia cretica*	*		*		
Willowherb Family	***Onagraceae***					
Enchanter's Nightshade	*Circaea lutetiana*	*		*		
Large-f. Evening Primrose	*Oenothera erythrosepala*	*				RTH 1985
Rosebay Willowherb	*Epilobium angustifolium*	*		*		
Great Willowherb	*Epilobium hirsutum*	*		*		
Broad-leaved Willowherb	*Epilobium montanum*	*		*		

Ivy Family	***Araliaceae***					
Ivy	*Hedera helix*	*		*		
Carrot Family	***Umbeliferae***					
Cow Parsley	*Anthriscus sylvestris*	*		*		
Upright Hedge Parsley	*Torilis japonica*			*		JS
Rough Chervil	*Chaerophyllum temulentum*	*		*		
Bur Chervil	*Anthriscus caucalis*	*		*		
Wild Carrot	*Daucus carota*	*		*		
Pignut	*Conopodium majus*	*		*		
Hogweed	*Heracleum sphondylium*	*		*		
Angelica	*Angelica sylvestris*	*		*		
Hemlock	*Conium maculatum*	*		*		
Hemlock Water Dropwort	*Oenanthe crocata*	*				MW 1991
Fool's Watercress	*Apium nodifloum*	*				
Wild Celery	*Apium graveolens*	*				
Wild Parsnip	*Pastinaca sativa*	*				
Alexaders	*Smyrnium olusatrum*	*		*		
Fennel	*Foeniculum vulgare*	*		*	*	
Heath Family	***Ericaceae***					
Heather	*Calluna vulgaris*	*		*		
Primrose Family	***Primulaceae***					
Scarlet Pimpernel	*Anagallis arvensis*	*		*		
Sea Milkwort	*Glaux maritima*	*		*		
Olive Family	***Oleaceae***					
Garden Privet	*Ligustrum ovalifolium*	*		*		
Gentian Family	***Gentianaceae***					
Common Centuary	*Centaurium erythraea*	*		*		
Bindweed Family	***Convolvulaceae***					
Hedge Bindweed	*Calystegia sepium*	*		*	*	
Great Bindweed	*Calystegia silvatica*	*		*		
Field Bindweed	*Convolvulus arvensis*	*		*	*	
Bedstraw Family	***Rubiaceae***					
Heathbedstraw	*Galium saxatile*	*		*		
Cleavers	*Galium aparine*	*		*		
Borage Family	***Boraginaceae***					
Amsinckia	*Amsinckia intermedia*	*				
Viper's Bugloss	*Echium vulgare*	*		*		
Green Alkanet	*Pentaglottis sempervirens*	*				
Field Bugloss	*Anchusa arvensis*	*				
Changing Foregetmenot	*Myosotis discolor*				*	
Labiate Family	***Labiatae***					
Bugle	*Ajuga reptans*	*		*		
Self-Heal	*Prunella vulgaris*	*		*		
Ground Ivy	*Glechoma hederacea*	*		*	*	
Black Horehound	*Ballota nigra*	*		*	*	
Hedge Woundwort	*Stachys aylvatica*	*				

Marsh Woundwort	*Stachys palustris*	*		*		
White Dead Nettle	*Lamium album*	*		*		
Red Dead-nettle	*Lamium purpureum*	*				
Water Mint	*Mentha aquatica*	*		*		
Gipsywort	*Lycopus europaeus*	*				
Nightshade Family	***Solanaceae***					
Bittersweet	*Solanum dulcamara*	*		*		
Black Nightshade	*Solanum nigrum*			*		JS
Figwort Family	***Scrphulariaceae***					
Great Mullein	*Verbascum thapsus*	*		*		
Common Figwort	*Scrophularia nodosa*	*				
Water Figwort	*Scrophularia auriculata*	*		*		
Common Toadflax	*Linaria vulgaris*	*		*		
Germander Speedwell	*Veronica chamaedrys*	*		*		
Thyme-leaved Speedwell	*Veronica serpyllifolia*	*				
Common Field Speedwell	*Veronica persica*	*				
Wall Speedwell	*Veronica arvensis*			*		JS
Wood Speedwell	*Veronica montana*			*		JS
Parsley Piert	*Aphanas arvensis*	*				
Plantain Family	***Plantaginaceae***					
Greater Plantain	*Plantago major*	*		*	*	
Ribwort Plantain	*Plantago lanceolata*	*		*	*	
Buckshorn Plantain	*Plantago arenaria*	*		*	*	
Moschatel Family	***Adoxaceae***					
Moschatel	*Adoxa moschatellina*	*		*		
Honeysuckle Family	***Caprifoliaceae***					
Elder	*Sambucus nigra*	*		*	*	
Honeysuckle	*Lonicera periclymenum*	*		*		
Bellflower Family	***Campanulaceae***					
Harebell	*Campanula rotundifolia*	*				
Teasel Family						
Wild Teasel	*Dipsacus fullonum*					? Planted/mix
Daisy Family	***Compositae***					
Hemp Agrimony	*Eupatorium cannabinum*	*		*		
Daisy	*Bellis perennis*	*		*	*	
Scented Mayweed	*Chamomilla recutita*	*		*		
Pineapple Mayweed	*Chamomilla suaveolens*	*		*		
Sea Aster	*Aster tripolium*	*		*		
Common Cudweed	*Filago vulgaris*	*		*		
Small Cudweed	*Filago minima*	*				
Common Fleabane	*Pulicaria dysenterica*	*				
Yarrow	*Achillea millefolium*	*		*	*	
Mugwort	*Artemisia vulgaris*	*		*		
Ox-eye Daisy	*Leucanthemum vulgare*	*		*		
Coltsfoot	*Tussilago farfara*	*		*		
Ragwort	*Senecio jacobaea*	*		*	*	

Groundsel	*Senecio vulgaris*	*		*	*	
Lesser Burdock	*Arctium minus agg.*	*		*	*	
Cotton Thistle	*Onopodum acanthium*	*				
Creeping Thistle	*Cirsium arvense*	*		*		
Spear Thistle	*Cirsium vulgare*	*		*	*	
Marsh Thistle	*Cirsium pulustre*	*				
Musk Thistle	*Carduus nutans*	*		*		
Black Knapweed	*Centaurea nigra*	*				
Smooth Sow-thistle	*Sonchus oleraceus*	*		*		
Prickly Sow-thistle	*Sonchus asper*	*		*		
Perennial Sow-thistle	*Sonchus arvensis*	*		*	*	
Prickly Lettuce	*Lactuca serriola*	*		*		
Dandelion	*Taraxacum sect. vulgaria*	*		*	*	
Mouse-ear Hawkweed	*Hieracium pilosella*	*		*		
Smooth Hawksbeard	*Crepis capillaris*			*		JS
Bristly Ox-tongue	*Picri echiodess*	*		*		
Common Catsear	*Hypochaeris radicata*	*		*		
Lesser Hawkbit	*Leontodon taraxacoides*			*		JS
Lily Family	***Liliaceae***					
Ramsons	*Allium ursinum*	*		*		
Bluebell	*Endymion non-scriptus*	*		*	*8	
Arum Family	***Araceae***					
Lords and Ladies	*Arum maculatum*	*		*		
Orchid Family	***Orchidaceae***					
Bee Orchid	*Ophrys apifera*	*				*7

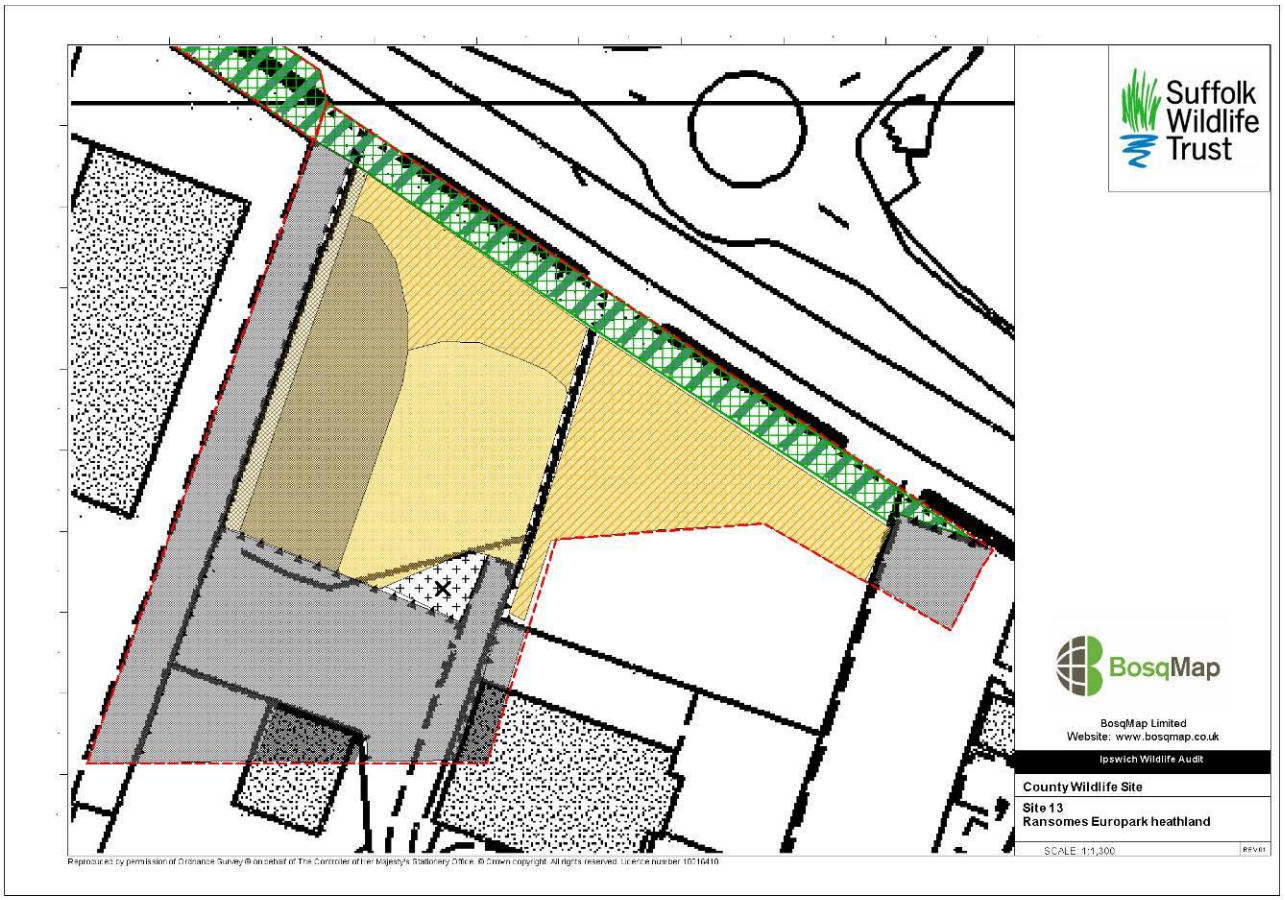
FS	F Simpson
JS	Jonny Stone
RTH	RT Hutton
EH	E Hyde
DC	Dorothy Casey
MW	Mick Wright

*1 Small patches recorded in 1990s, increasing annually. (confirmed by Dorothy Casey)
*2 Gainsborough Lane (planted)
*3 Swimming pool site
*4 Planted on haul road site
*5 On main path (confirmed by E Hyde) & (JS)
*6 On main path and jetty
*7 c100 spikes either side of ditch (in 1991)
*8 Spanish Bluebell (blue, white & Pink)

Site name: Site reference 13 - Ransomes Europark Heathland CWS

IBC ref: New
Site status: County Wildlife Site
Grid ref: TM 20740 41889
Area: 1.41 hectares
Date: 30 August 2012
Recorder: S Bullion
Weather conditions: Cool, sunny, 18° C
Ranking: 2
Biodiversity value: High

Map:



Photos:


View north-eastwards with security fence


View south-westwards across bracken dominated area


View westwards across site


View eastwards beyond security fence

Habitat type(s):
Lowland heath, acid grassland

Subsidiary habitats:
Bracken, tree belt

Site description:
The site lies within the Ransomes Europark Industrial estate and can be described as having three distinct areas:

1 The western section is dominated by bracken, which is being managed to reduce its spread and to restore this area to heather heathland. For the last five years this area has been rolled during the summer growth period and this has helped stunt its growth. In 2012 it was treated with Azulox, a specific herbicide used for treating bracken. The success of this will not be known until the 2013 season, but it is hoped that this will assist with its management programme.

2 The central part of the CWS is heather heathland and acid grassland and is of the highest biodiversity value. Small strips within this area have been cut to facilitate rejuvenation of the heather.

3 The eastern section is divided from the rest of the CWS by a metal security fence. This area forms part of a plot allocated for development, but as yet is undeveloped. Acid grassland was stripped from this area around five years ago and translocated along with some heather turfs to the new Anglian Water flood lagoon 250 metres to the south. In subsequent years grassland has re-established in this area and heather tussocks are also starting to re-colonise.

Since the site was designated as a County Wildlife Site (CWS), there has been development to the south and south-east, in accordance with an earlier outline planning consent. Most recently, an oil distribution depot was constructed in 2012 to the south, within the CWS boundary. Beyond the western boundary, behind a chain link fence, are older warehousing and the Ipswich to Felixstowe railway line represents the northern boundary. Future development may reduce the CWS further on the southern and eastern boundaries and notably, further development to the south would result in a loss of heathland.

The main area of the site (0.85 hectares in the north-west) is currently managed by Ipswich Borough Rangers with funding provided by the site owners, with a management plan provided by Suffolk Wildlife Trust. In addition, the owner is funding the restoration of heathland within the bracken area, which if successful, is proposed as partial compensation for any future losses to this core area.

Protected species:
Common lizard, grass snake

Protected species potential:
Slow worm

BAP habitats present:
Lowland heathland (including acid grassland)

BAP species seen:
-

BAP species known:
Silver studded blue butterfly, small heath butterfly, common lizard, grass snake

BAP species potential:
Slow worm, hedgehog

Connectivity:
The Ipswich to Felixstowe railway line borders the northern boundary, so there is habitat connectivity along the northern edge of the site to other heathland sites in the vicinity.

Structural diversity:
Structural diversity is excellent for this habitat type.

Flora:
The central heathland was dominated by common ling and bell heather, with occasional gorse. Other species are typical of free-draining soils and include sheep sorrel, thyme-leaved speedwell, heath speedwell, heath bedstraw, trailing St-John's-wort, field woodrush, wood sage, smooth hawk's-beard, common centaury and fine *Festuca* grasses. In some areas lichen was present (lichen heath is a very

scarce resource in Suffolk). In addition, cat's-ear, ragwort, creeping cinquefoil, common bent, yellow oat grass and Yorkshire fog were also recorded along with occasional birch and bramble.

The eastern area beyond the metal security fence was dominated by grasses and occasional ruderals, but with occasional bell heather and ling tussocks. It is highly likely this area will continue to develop towards a heather dominated sward.

The western section of the site is bracken dominated, but several years of management (rolling and forage harvesting) has allowed some patches of heather regeneration to start to occur. There is a band of buddleia along the western boundary, which could become invasive if left unchecked.

In a small area immediately in front of the entrance gate in the south-eastern corner, the species are typical of disturbed ground, due to soil being mistakenly deposited here during the last year. These include scarlet pimpernel, common stork's-bill, creeping thistle, common cudweed, prickly sow thistle, knotweed, black nightshade and buddleia seedlings.

Avifauna:
No birds were recorded but this was an unsuitable time of year for surveying this group. The trees and scrub along the railway line boundary may provide some roosting, nesting and foraging habitat for locally common species.

Invertebrates:
The site is remarkable for its breeding colony of silver studded blue butterflies. In 2012 a peak count of 21 male and 3 female were recorded on 5th July. Higher counts in the region of 60 butterflies have been recorded in previous years, but the cold and wet spring weather conditions of 2012 are likely to be the cause as indicated by lower numbers at other local sites this year. Bell heather is the favoured nectar source of the adults and also provides a larval food source, along with common ling and gorse. Small heath butterfly was also recorded in 2010.

A red admiral was recorded on buddleia at the time of the survey. Grasshoppers and various bees were abundant at the time of the survey and the large black slug (black arion) was also seen.

Herpetofauna:
The site is known to support a population of common lizard. A single basking grass snake was recorded in 2011 in the southern part of the site (URS Scott Wilson), as part of a survey to accompany a planning application for Plot K3 to the south. Slow worm may also be present.

Mammals:
Rabbits are abundant and their grazing helps maintain a short grassland sward, beneficial to the heathland butterflies. Moles are also present and fox scats were observed. Pygmy shrew is likely to be present as a small mammal species typically associated with heathland. Hedgehog may occur along the northern boundary as there is sufficient cover and invertebrate prey to support them.

Comments and recommendations:
Following the unavoidable changes to this site since it was designated as a CWS, the CWS panel should review the current boundaries to reflect the existing situation.

Following the accidental dumping of soil, the disturbed area by the entrance gate should be scraped back to remove excess nutrients and allow natural re-colonisation of heather.

The invasive buddleia along the western boundary should be removed as a matter of urgency.

Other management operations should follow the prescriptions in the management plan.

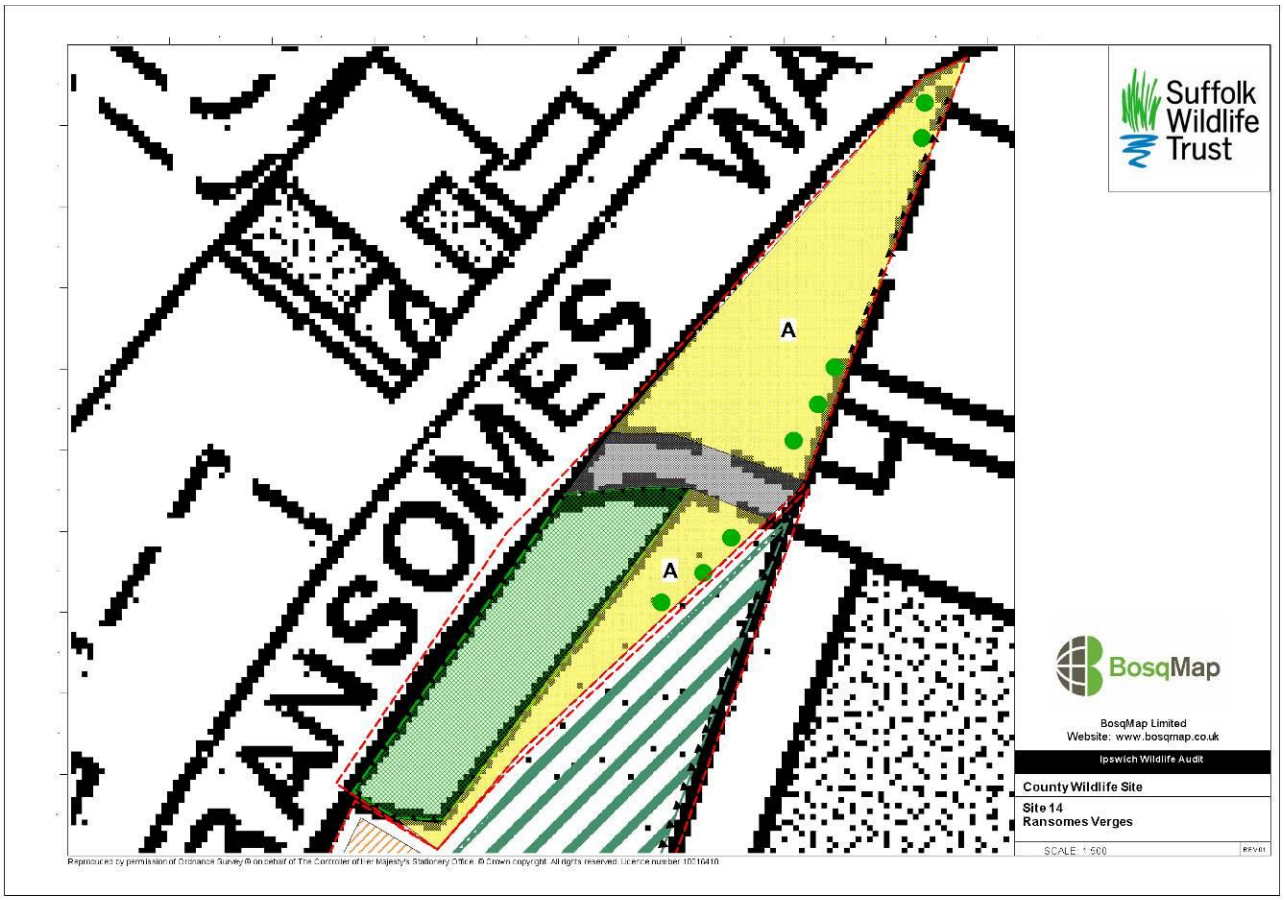
References:

URS Scott Wilson. August 2011. Ransomes Europark Plot K3. Extended Phase 1 (Ecology) Report (Final).

Site name — Site reference 14 – Ransomes Way Verges

IBC Ref: W14
Site status: Part undesignated, part County Wildlife Site
Grid ref: TM 19839 41914
Area: 0.16 hectares
Date: 19 June 2013
Recorder: S Bullion
Weather conditions: Warm and sunny 28°C
Ranking: 5
Biodiversity value: Low

Map:



Photos:

Looking north east along edge of site

View southwards across amenity grassland to scrub area

Habitat type(s):
Scrub, amenity grassland

Subsidiary habitats:
Pine trees

Site description:
This is a small area of scrub, surrounded by rabbit fencing, situated within the verge bordering the A1189 Ransomes Way. The origin of this site is believed to be derived from a translocation of heathland turfs but lack of management has resulted in the site scrubbing up and it is no longer heathland or acid grassland habitat.

The boundary of the area surveyed encompasses an area of short-mown amenity grassland with a line of Scot's pine trees along the eastern edge.

Protected species:
-
Protected species potential:
-
BAP habitats present:
-
BAP species seen:
-
BAP species known:
-
BAP species potential:
-
Connectivity:
Connectivity is very poor as the site is unconnected to any other areas of semi-natural habitat.

Structural diversity:
This is a very small site, which limits opportunities for structural diversity. The area designated as CWS is dominated by scrub with three tiny patches where grasses and herbs still remain, so structural diversity is poor. The remainder of the site is close mown.

Flora:
The principal species are bramble and gorse with Scot's pine, buddleia, elder and occasional oak and raspberry, beneath which is bare ground due to shading. There are three tiny patches of grassland remaining with only one of these containing acid grassland species (wavy hair grass, sheep's fescue and mouse-ear-hawkweed). Other species are more typical of higher nutrient soils, including cock's foot, Yorkshire fog, sweet vernal grass, yarrow, white campion, nettle, ground ivy, ragwort, ribwort plantain, creeping thistle and spear thistle. A single male fern was present on the shaded rear edge.

The amenity grassland is species poor and included common species of herbs typical of short mown, free-draining soils.

Avifauna:
The scrub could provide nesting opportunities, but its very small size means this will be limited to a very small number of birds.

Invertebrates:
The site is unlikely to support any scarce species of invertebrates. Locally common species that inhabit scrub may be present.

Herpetofauna:
The isolation, size and scrubbed up habitat on the site means that it is highly unlike to support reptiles.

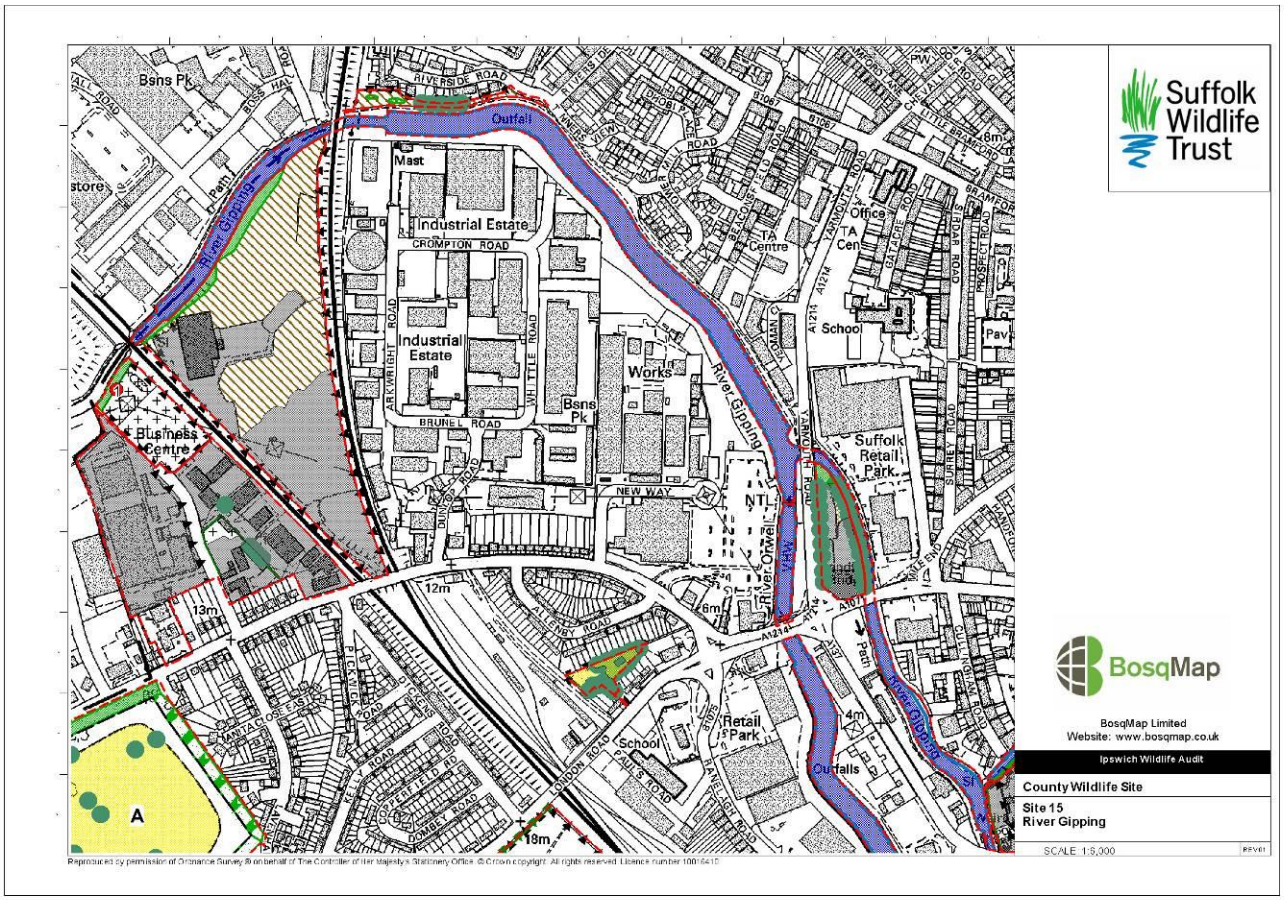
Mammals:
Rabbit droppings were seen, but no other mammal species is likely to be present

Comments and recommendations:
This site appears to no longer have the characteristics for which it was designated. The scrub could be removed and the brash taken off-site, as it is likely that acid grassland plants still remain in the seed bank. However, without further regular management scrub will rapidly re-colonise, particularly pine seedlings from the trees to the rear. It is recommended that the site is reviewed by the CWS panel.

Site name — Site reference 15 – River Gipping CWS

IBC Ref: W15
Site status: County Wildlife Site
Grid ref: TM 14742 44944
Area: 4.63 hectares
Date: 19 June 2013
Recorder: A Looser
Weather conditions: Sunny, 24°C
Ranking: 2
Biodiversity value: High

Map:



Photos:

River Gipping

Habitat type(s):
River and riparian margins
Semi-improved neutral grassland

Subsidiary habitats:
Scattered trees
Scrub
Tall ruderal

Site description:
This site represents the designated section of the River Gipping from the railway line bridge at Boss Hall in the west to the Yarmouth Road. From here, the designation includes the eastern divergence of the River Gipping to Portman Walk, whilst the western watercourse (described as part of the River Orwell) is undesignated. The River represents a key wildlife corridor running through the center of the Town and contributes to the overall ecological network. The bankside vegetation and scattered trees provide valuable habitat for invertebrates, birds and mammals.

Protected species:
Water vole (1997), Bats (NBMP records)

Protected species potential:
Reptiles (slow worm – unreported record 2005)
Otter

BAP habitats present:
River

BAP species seen:
Reed bunting, herring gull

BAP species known:
Bats

BAP species potential:
Reptiles (slow worm –unreported record 2005)
Otter
Bats
Hedgehog
Stag beetle

Connectivity:
This site is part of the River Gipping corridor which provides excellent connectivity for wildlife. This site connects with the Alderman Canal (CWS Site 1) and the non CWS part of the River Orwell (Site 16).

Structural diversity:
The site has good structural diversity, with marginal vegetation and a small amount of bramble scrub and trees.

Flora:
There is a good floral diversity on the river banks with wall barley, cock's foot, false oat, rough meadow grass, rye grass and barren brome grass with common reed, field bindweed, yellow iris, mallow, nettle, dandelion, ribwort plantain, doves foot cranesbill, mugwort, cleavers, nettle, hogweed, comfrey, bristly ox-tongue, sedge spp, ragwort, great willowherb, garlic mustard, burdock, creeping buttercup, water forget-me-not, green alkanet, shepherds cress, cow parsley, curled dock, creeping thistle, spear thistle, white campion, ragwort, red clover, white clover, tansy, hops and dittander (a nationally scarce plant).

Japanese knotweed was also discovered near the Handford Bridge.

The emergent vegetation included common reed, lesser water parsnip, yellow iris, bulrush and water lily.

The scattered trees were mostly willow with bramble, cherry, elder, ash and blackthorn.

Avifauna:
The river provides excellent habitat for a range of bird species and a good number of species were observed during the visit. Long tailed tit, blue tit, great tit, chaffinch, blackbird, wood pigeon, swan, moorhen, mallard, reed warbler, sedge warbler, herring gull, greater black backed gull and black headed gull were all observed during the visit. In addition reed bunting was seen, particularly in the common reed on the river bank.

Invertebrates:
There is a good diversity of plant species on this site which provide good nectar sources for butterflies and moths so there are likely to be a range of common species throughout the year. In addition the water provides good habitat for dragonflies and damselflies. Small white and common blue butterflies were seen during the visit as well as banded demoiselles and common blue damselfly. There is some standing dead wood along the river which provides good habitat for a range of invertebrate species. Dead tree stumps also provide good habitat for stag beetles as the larvae require subterranean dead wood.

Herpetofauna:
The habitat is suitable for reptiles and the river provides a good corridor for wildlife, particularly reptiles to move along. There are reports of grass snake swimming in the River Gipping slightly further upstream of this section and also reports of slow worm in the vicinity in 2005 (Simone Bullion pers. comm.).

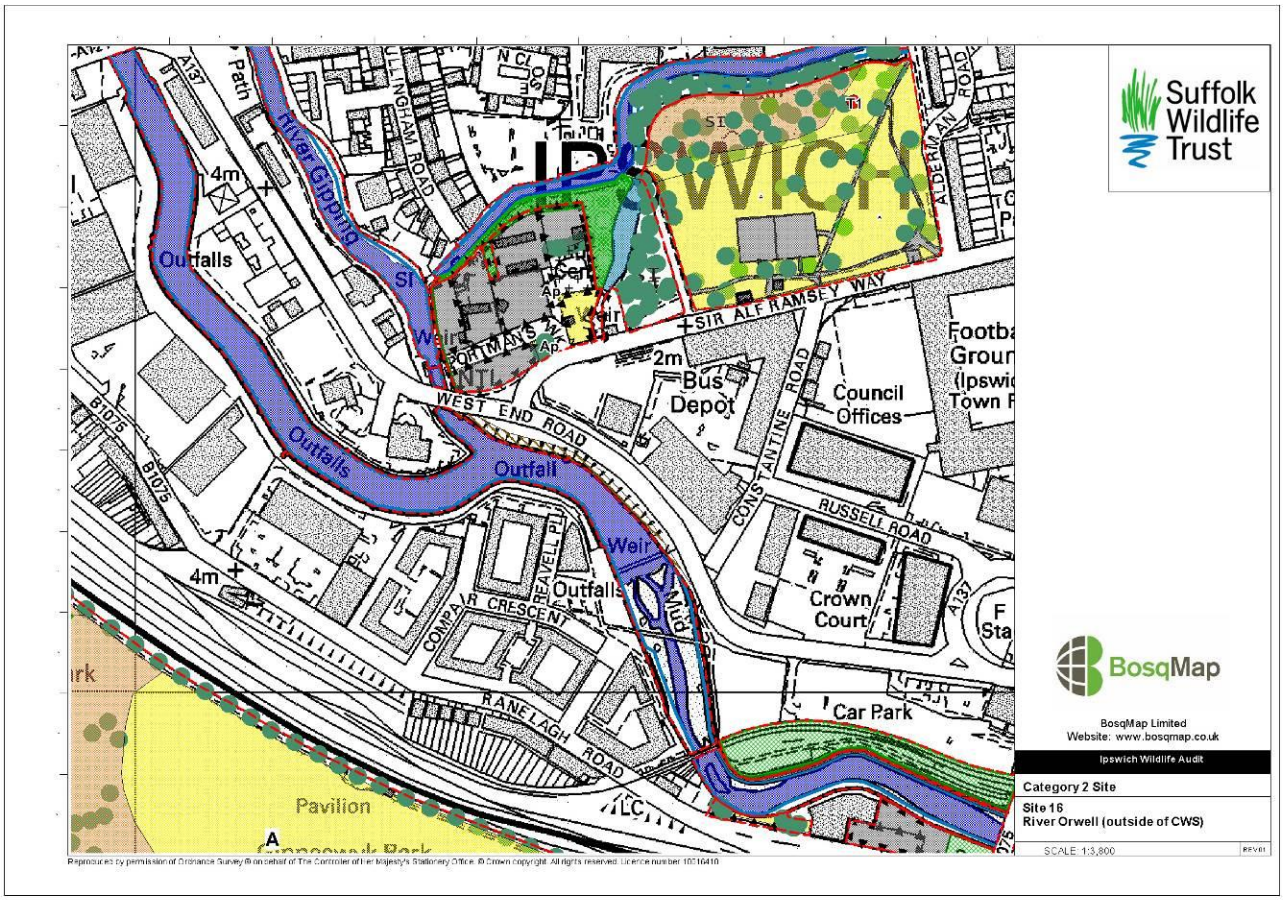
Mammals:
The habitat along the river is excellent for a range of mammals. The long vegetation on the banks provides excellent cover for a variety of small mammals including mice, voles and shrews. There are several old records of water vole along this section of the River Gipping (1997) and the habitat is very good for them. The habitat is also suitable for otters and there are records of them further downstream in 2012 and from the Alderman Canal which feeds into the Gipping at the southern end of this section.. Bats will use the river to feed on the insects as well as navigating along it to find other sites. There are several reports of hedgehogs in the vicinity so it is likely they will utilise the river.

Comments and recommendations:
The Japanese knotweed could become a problem if it spreads along the river corridor and further advice should be sought regarding its control. It must not be strimmed as this will cause it to spread faster.

Site name — Site reference 16 – River Orwell (non-CWS)

IBC Ref: W16
Site status: No wildlife designation
Grid ref: TM 15301 44185
Area: 4.11 hectares
Date: 19 June 2013
Recorder: A Looser
Weather conditions: Sunny and warm, 25°C
Ranking: 2
Biodiversity value: High

Map:



Photos:

View of the river corridor near West End Road

Looking eastwards towards Station Bridge (Princes Street)

Habitat type(s):
River with intertidal mud, marginal vegetation, poor semi-improved grassland, scattered scrub and trees, tall ruderal

Subsidiary habitats:
-

Site description:
This site is part of the River Orwell between Princes Street and Yarmouth Road. Although this part has no wildlife designation, the two sections of river it joins are both designated as County Wildlife Sites. It has typical marginal vegetation and scattered trees. There is a small section of poor semi-improved grassland and tall ruderal vegetation on the northern side of the river near West End road. The river has a number of riffles and pools and various sand and gravel bars which create good habitat for a range of wildlife, particularly birds.

Protected species:
Otter (2012)

Protected species potential:
Reptiles (slow worm, grass snake and common lizard)
Water vole
Bats

BAP habitats present:
Rivers

BAP species seen:
Herring gull

BAP species known:
-

BAP species potential:
Reptiles (slow worm, grass snake and common lizard)
Water Vole
Bats
Hedgehog
Stag Beetle

Connectivity:
This site is part of the River Gipping corridor which provides excellent connectivity for a large range of wildlife. This site is adjacent to the River Gipping (CWS Site 15) and the River Orwell (CWS Site 16) and is also adjacent to the Alderman Canal (CWS Site 1) and Ranelagh Road open space (Site 116).

Structural diversity:
The site has good structural diversity with river, bankside vegetation and trees.

Flora:
There is a good floral diversity on the river banks with cock's foot, false oat, Yorkshire fog, crested

dogs tail and rye grass with common reed, mallow, cleavers, fennel, hemlock, white campion, red campion, broad leafed dock, curled dock, ragwort, doves foot cranesbill, cut leafed cranesbill, nettle, creeping cinquefoil, spear thistle, cow parsley, perforate St Johns wort, herb Robert, scented mayweed, yarrow, weld, poppy, scarlet pimpernel, ribwort plantain, English stonecrop, teasel, wild carrot, wild celery, bittersweet, perennial wall rocket, ox-eye daisy, melilot spp, bitter cress and dittander (a nationally scarce plant).

The scattered trees and scrub included willow, bramble, elder, gorse, dog rose, and lilac.

Avifauna:
The river provides excellent habitat for a range of bird species and a good number of species were observed during the visit. Blue tit, great tit, chaffinch, blackbird, moorhen, mallard, little egret, oystercatcher, swan, reed warbler, sedge warbler, carrion crow, herring gull, greater and lesser black backed gull and black headed gull were all observed during the visit.

Invertebrates:
There is a good diversity of plant species on this site which provide good nectar sources for butterflies, moths and other invertebrates, so there is likely to be a good diversity of species throughout the year. In addition, the water provides good foraging habitat for dragonflies and damselflies. Small white and red admiral butterflies were seen during the visit as well as common blue damselflies. There are several records of stag beetles in the area and they could be present if there is any subterranean dead wood associated with the boundary trees and scrub.

Herpetofauna:
The habitat along the river is suitable for reptiles and the river provides a good corridor for wildlife, particularly reptiles to move along. There are reports of grass snake swimming in the River Gipping further upstream and slow worm are also known from sites further upstream.

Mammals:
The habitat along the river is excellent for a range of mammals. The long vegetation on the banks provides excellent cover for a variety of small mammals including mice, voles and shrews. There are records of water vole along the CWS section of the Gipping (1997) and the Alderman Canal (2007) and the habitat is good for them in this section as well. The habitat is also suitable for otters and there are recent records of two of them playing on the banks of the Orwell near Station Bridge (Princes Street) (2012). Bats will use the river to feed on the insects as well as navigating along it to find other sites. There is also a recent record of a dead pipistrelle being found on the footpath along the Alderman Canal (2011) which is close to this section of the river. There are several reports of hedgehogs in the vicinity so it is likely they will utilise the river and associated habitat.

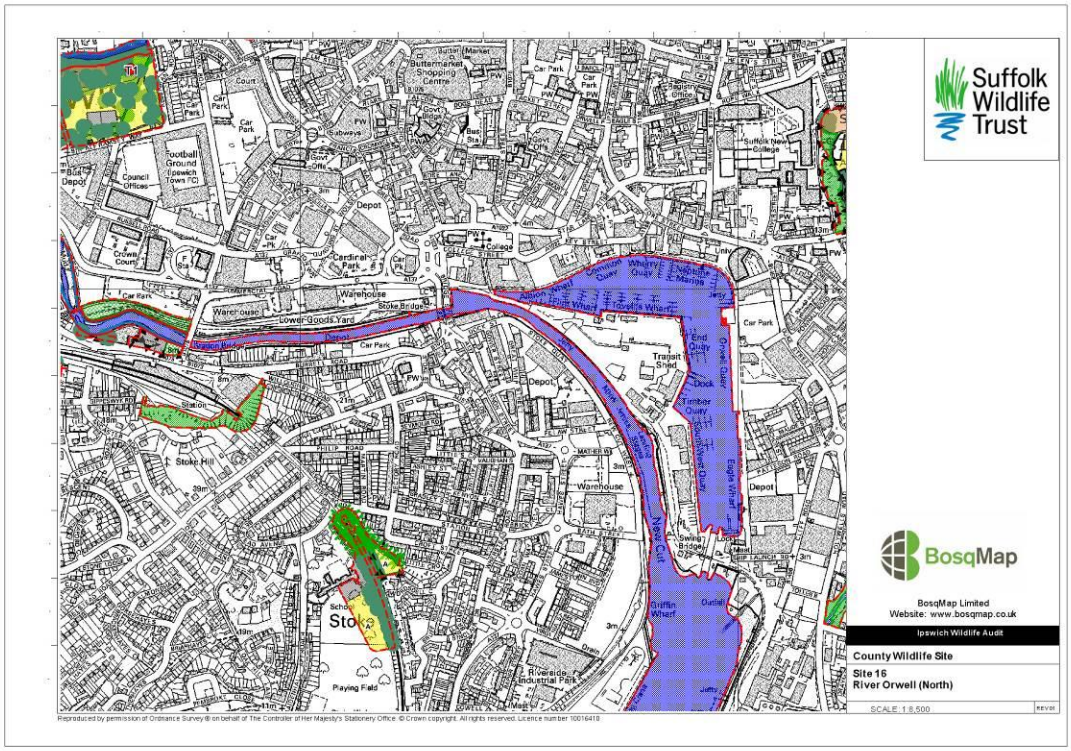
Comments and recommendations:
This section of the river, although more disturbed than the adjoining sections, still has a high wildlife value. This is particularly relevant in the role it plays in terms of connectivity through the Town, as it links a number of sites together as part of the whole river corridor.

It is recommended that the CWS Panel assesses whether this part of the river corridor meets the criteria for designation as a County Wildlife Site, so that the whole river corridor through the Town holds this designation.

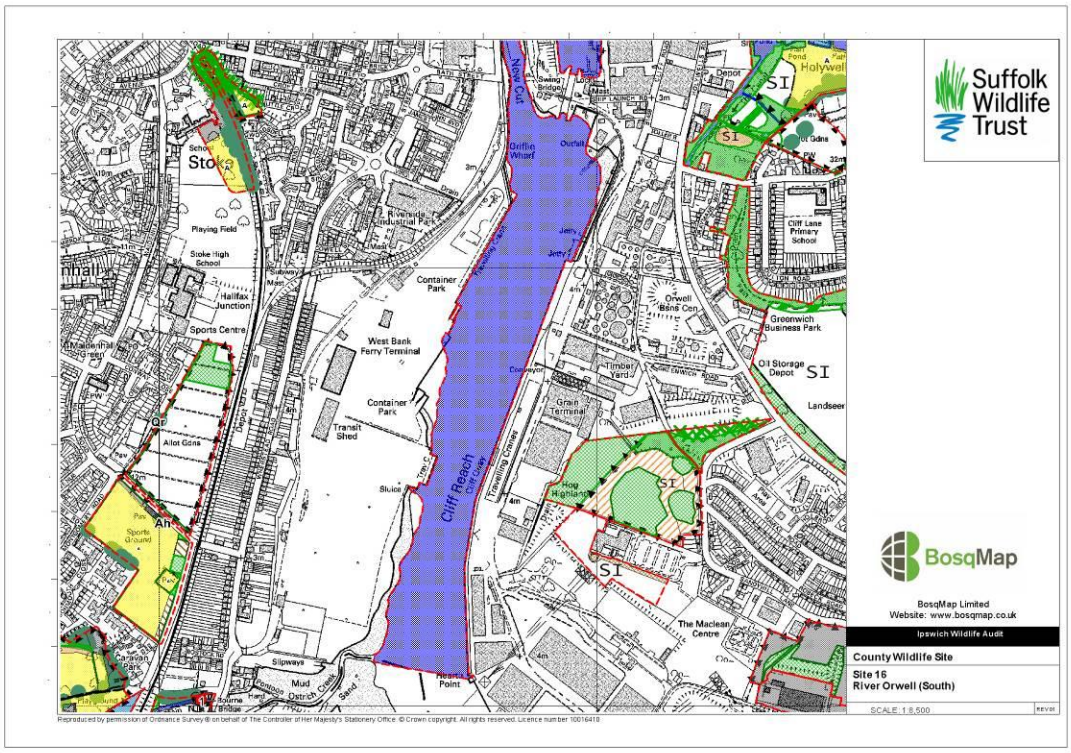
Site name: Site reference 16 - River Orwell (CWS only)

IBC ref: W16
Site status: County Wildlife Site
Grid ref: TM 165422 to TM157438
Area: 4.11 hectares
Date: 14 November 2012
Recorder: M Wright
Weather conditions: Dry, bright sunny, 50% cloud, fresh westerly wind
Ranking: 2
Biodiversity value: High

Maps:



Map of northern section



Map of southern section

Photos:

Ostrich Creek, south of West Bank Terminal, looking up stream towards the Lock Gates

The stretch of river between Station Bridge (Princes Street) and Stoke Bridge, looking down stream

Habitat type(s):
Open water, intertidal mud and bank-side vegetation.

Subsidiary habitats:
-

Site description:
The site is almost totally open tidal water (at high tide), which extends from Ostrich Creek to the Lock Gates, along New Cut as far as Princess Street Bridge and includes the area of open water in the Wet Dock.

At low water mud is exposed along the New Cut and up stream of Ostrich Creek, however, this area of mud falls outside of the boundary given but is an integral part of the habitat for associated wildlife.

The site's entire boundary is either steel piling, rock rubble or block work revetment. Between Stoke Bridge and the Princes Street Bridges, above the high the high water mark, the banks are vegetated.

Protected Species:
Kingfisher

Protected species potential:
Common lizard

BAP habitats present:
Intertidal mudflats

BAP species seen:
-

BAP species known:
-

BAP species potential:
Common lizard

Connectivity:
The site is a major link in the wildlife corridor of the Orwell estuary, which includes the Stour and Orwell Estuaries Special Protection Area (SPA) and RAMSAR site.

Structural diversity:
There is very little structural diversity, but this is to be expected in this type of habitat.

Flora:
The flora associated with the vegetated banks includes typical estuarine species such as sea beat, sea aster and sea couch; other species include black horehound, bristly oxtongue, buckshorn plantain, Canadian fleabane, common nettle, common mallow, dove's-foot crane's bill, fennel, ribwort plantain, wild carrot, wild celery, wild parsnip, white clover, yarrow and Yorkshire fog.

Avifauna:
The open water of this site during the winter months is very important for large numbers of many species of waterbirds. Regularly rare and scarce species such as Slavonian grebe, smew and great northern diver occur. When inland fresh water sites freeze over, this site becomes even more important when, for example, over 100 great-crested grebes may be present.

Annually, the following species will occur at some point over the winter period: red throated and great northern divers, great-crested, red-necked, Slavonian and black-necked grebes, shag, cormorant, mute swan, shelduck, mallard, teal, wigeon, tufted, pochard, pintail, smew and goldeneye ducks and red-breasted merganser in addition to many other species.

The kingfisher is a regular breeding species where the steel piling is eroded and the birds can access the substrate behind.

Invertebrates:
None were observed, however, in the inter and sub-tidal areas of mud there will be an abundance and variety of marine species such as harbour rag worm which are a very important food source for wading birds. It is likely that bait digging levels are very low here due to difficult access, which may help sustain good numbers of this species.

Herpetofauna:
The habitat is largely unsuitable for this group, but common lizards may bask on the rock revetments.

Mammals:
None were observed at the time of the visit and the habitat is only suitable for marine species. On rare occasions common seal have been recorded this far up the River Orwell.

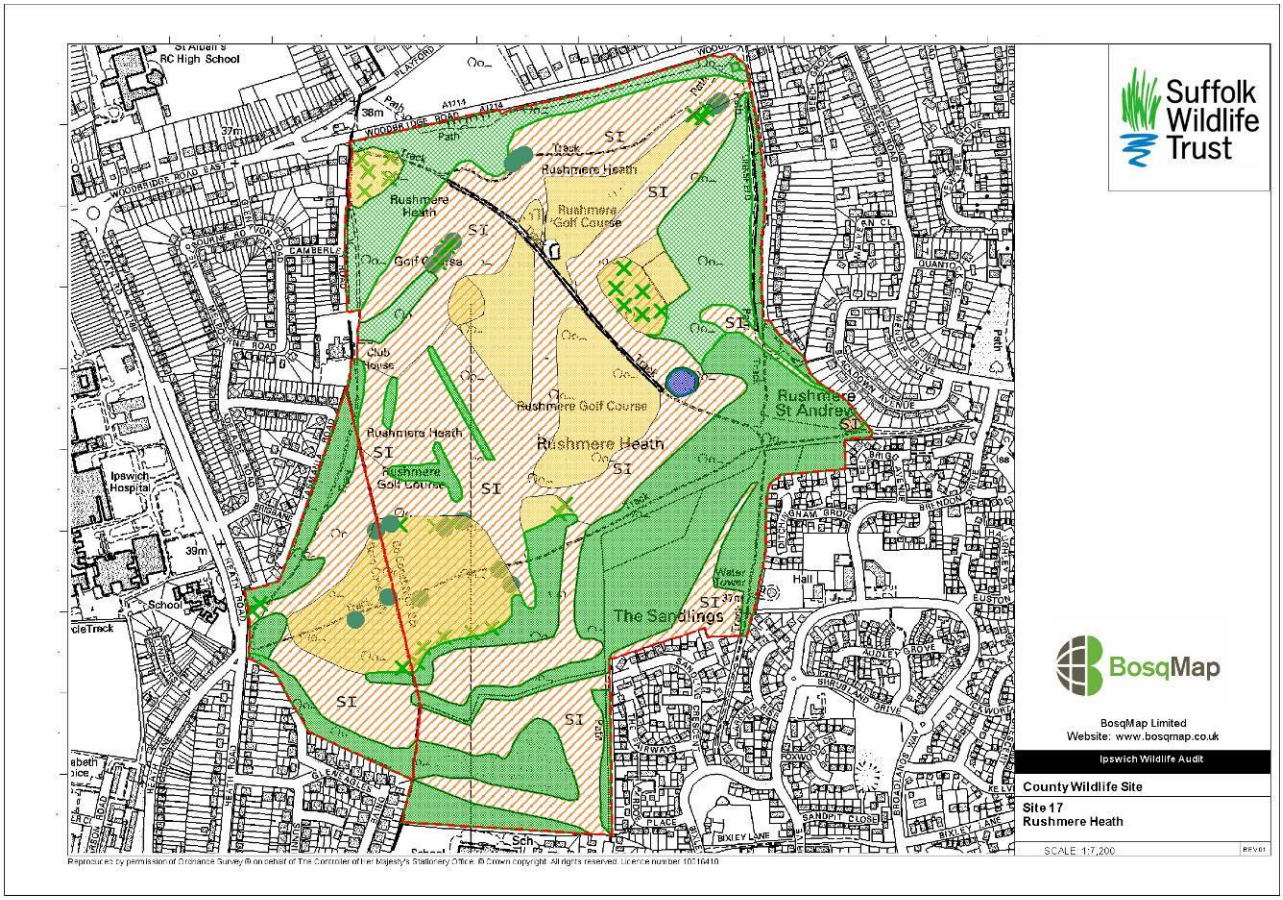
Comments and recommendations:
This site is an extremely valuable and important for its intertidal habitat and complements the adjacent Special Protection Area (SPA) and RAMSAR site of the Orwell estuary. Areas of hinterland, especially the West Bank, are important for roosting waders such as redshank, turnstone, ringed plover and oystercatcher and loafing sites for shelduck.

The remaining non-CWS stretches of the river were surveyed in 2013.

Site name — Site reference 17 – Rushmere Heath

IBC Ref: W17
Site status: County Wildlife Site & Registered Common
Grid ref: TM 20156 44814
Area: 77.57 hectares
Date: 19 June 2013
Recorder: S Bullion
Weather conditions: Hot and sunny 28°C
Ranking: 2
Biodiversity value: High

Map:



Photos:

Large tract of acid grassland bordering fairway

Area of recent gorse clearance towards the northern end of the site

Gorse scrub in north-east of site

Pond


Wooded areas in south-east

Habitat type(s):
Heathland and acid grassland, gorse scrub, broadleaf woodland, tree belts

Subsidiary habitats:
Pond, small area of neutral grassland

Site description:
This is a substantial area of heathland on the eastern edge of Ipswich within which is an eighteen hole golf course. The majority of the site lies within Suffolk Coastal District (SCD) with a smaller area in the south-western corner being within Ipswich Borough (IB). The CWS also extends to a small area north of the Woodbridge Road (within SCD) which lies outside of the boundary supplied for the IBC Wildlife Audit. Although the sward of the golf course greens, tees and fairways is improved, these are interspersed by large areas of 'rough' with patches of heather, gorse and acid grassland. A small area of lichen heath was noted in a recently managed area within the northern, central section. A large area in the south caught fire in the summer of 2010, but heathland vegetation is now re-establishing itself. There is a large block of mature woodland along the eastern edge and other tree belts on the south-western edge and running east-west within the southern section.

Protected species:
Grass snake, slow worm and common lizard

Protected species potential:
Bats

BAP habitats present:
Lowland heathland (including acid grassland)
Eutrophic standing water

BAP species seen:
Starling

BAP species known:
Grass snake (1989), slow worm (1983) and common lizard (1983), toad (2008)
Linnet (2008), starling (2010), song thrush (2010), dunnock (2010), spotted flycatcher (1993)
Hedgehog (1990)
Silver studded blue butterfly (2006), small heath (2006), grayling (1995), white letter hairstreak (2005), lunar yellow underwing (2006), goat moth (2008)
Stag beetle (1998)

BAP species potential:
Bats

Connectivity:
The CWS is surrounded by housing on all sides and the Woodbridge Road runs through the northern section. Other suitable habitat lies to the south and east, but this will only benefit mobile species.

Structural diversity:
Structural diversity is excellent, with a heathland mosaic of acid grassland, heather, gorse scrub, woodland and scattered trees.

Flora:
Across the site there are large tracts of acid grassland with sheep's sorrel, common bent, sheep's fescue with common cat's ear and heath bedstraw. Ranker areas include cock's foot, rough meadow grass and Yorkshire fog grasses, with lesser stitchwort, yarrow, ragwort, ribwort plantain, white clover and hop trefoil. There are notable areas of common ling and bell heather in the northern, central section along with tussocks of wavy-hair grass and a small patch of lichen heath (*Cladonia* spp) in an area from where gorse and birch scrub has been recently cleared. In north-east are dense stands of gorse bisected by grassy paths and sweet vernal grass was noted here as well as other common grass species. Another large block of heather interspersed by acid grassland is situated in the south-west. Bracken occurs in patches across the site.

A small area of more neutral grassland lies on the eastern edge, beyond the woodland belt, with false oat grass, cock's foot, soft brome, rough meadow grass, lesser cat's tail, lesser stitchwort, ribwort plantain, few nettles and a small patch of pignut.

The main woodland area is largely birch and oak, with yew, holly, oak, sycamore, hawthorn, rowan, elder also recorded across the site. Bramble and bracken are present, but there are also large areas of bare ground. Bluebells are present, but had gone over by the time of the visit.

The small pond contained common reed and reed sweet-grass, with water lily. A planted hawthorn

hedge is present on three sides of the pond.

Avifauna:

The visit took place after the bird breeding season, so fewer species were recorded. Starling, blue tit, wren, great tit, blackbird, chaffinch, chiffchaff, crow, magpie and woodpigeon were seen or heard during the visit. Linnet is known to occur (last recorded 2008) and the habitat is highly suitable for this species. Kestrel and sparrowhawk were last recorded in the 1990s. If a breeding bird survey took place this would reveal other bird species.

Invertebrates:

The habitat mosaic across the heathland is superb and consequently it is rich in invertebrates and there are a number of notable records. There are a good number of recent dragonfly and damselfly records (common and ruddy darter, four-spotted and broad bodied chaser, large red, blue tailed, small red-eyed, common blue and azure damselflies, emperor dragonfly, migrant, brown and southern hawkers. Butterfly records are also interesting with some scarce species (silver studded blue, small heath, white letter hairstreak and grayling). Small tortoiseshell, ringlet, peacock, meadow brown, speckled wood, comma, hedge brown, red admiral, painted lady, orange tip, brimstone, large white, green-veined white and small white, Essex, small and large skipper, small copper, brown argus, green and purple hairstreak, holly blue are also known to be present. Similarly there are excellent moth records including the scarce goat moth and lunar yellow underwing. Stag beetle has been observed in the area, but the record is not recent. Surprisingly, there are no records for ground nesting bees and wasps (aculeate hymenoptera) and the bare ground in recently cleared areas and along paths should support a good number of members of this group.

Herpetofauna:

There are records of slow worm, common lizard and grass snake dating from the 1980s and it is surprising that there are no recent records. Given the habitat, it is highly likely that all three species are present. The pond will support amphibians and during the visit there was a migration of young frogs away from the pond. Toad may also be present.

Mammals:

Rabbits are numerous and muntjac deer will also be present. Hedgehogs have not been recorded for thirteen years, but may still be present. Small mammals (mice, voles and shrews) are likely to be abundant and form important prey for both weasel (seen in 1991) and fox, which are also known to be present. The woodland edges provide excellent foraging for bats and there are a number of roosts recorded in adjacent residential areas. Some of the mature trees on site will also provide roosting opportunities for bats.

Comments and recommendations:

It is the current habitat mosaic within this site which is important, so future management should focus on maintaining a good variety of habitat blocks and features. This may mean that work may need to be undertaken to ensure that gorse and bracken do not become overly dominant.

The site has old records for reptiles and an up-to-date survey is recommended. Similarly, both a bat survey and breeding bird survey is recommended. As there are no records for aculeate hymenoptera, this is also a group that merits further attention by a specialist recorder.

Site name: Site reference 18 – Spring & Millennium Woods & Kiln Meadow

IBC ref: W18
Site status: County Wildlife Site & Local Nature Reserve
Grid ref: TM 14423 41431
Area: 19.38 hectares
Date: 3 June 2013
Recorder: M Wright
Weather conditions: Warm sunny periods
Ranking: 2
Biodiversity value: High

Map:

Photos:

Millennium Wood with grassy rides

Spring Wood, with bluebells to right of picture in untrampled areas

Spring Wood

Kiln Meadow looking south-east towards Spring Wood

Habitat type(s):
Ancient woodland, broad-leaf plantation woodland, scrub, hedgerow, semi-improved neutral and poor semi-improved grassland.

Subsidiary habitats:
Deadwood, habitat piles, wet flush and spring

Site description:
Spring, Millennium Wood, Kiln Meadow and an adjacent grassland area are located on the south-western fringe of Ipswich.

Area 1. Spring Wood
Area 2. Millennium Wood
Area 3. Kiln Meadow, adjacent to Bobbits Lane
Area 4. A grassland area to the west of Spring Wood and south of the power lines

Area 1. Spring Wood is ancient woodland dominated by oak standards and also contains hornbeam, small-leaved lime and wild cherry. The understorey is mainly hazel and birch, some of which is been coppiced, particularly in the vicinity of the overhead power lines. The flora includes characteristic ancient woodland indicators such as bugle, wood spurge, yellow archangel, wood speedwell, wood anemone, yellow pimpernel, primrose and bluebell. A small spring rising on the southern edge of the wood gives the site its name and provides conditions for damp-loving species such as wood sorrel and opposite-leaved golden saxifrage.

Area 2. Millennium Wood is an area of woodland that has been planted with a variety of trees and shrubs, which include oak, silver birch, field maple, dogwood and hazel. Other parts of the wood have regenerated naturally with ash and other species. The wood also contains open grassy glades and a well-developed ride. There is a belt of scrub and coppiced hazel beneath the power lines on the northern edge. On the eastern border of the wood there is a well-developed hedgerow with blackthorn, hawthorn and field maple.

Area 3. Kiln Meadow is predominantly tall grassland dominated by false-oat grass; Yorkshire fog, cock's-foot and rough meadow grass with a tall herb and ruderal flora. Scattered scrub/tree saplings and bramble thickets are invading the grassland. There is a very important established hedge on the northern boundary adjacent to Bobbits Lane; it is tall and wide and for the most part has a closed canopy with the hedgerow on the opposite side of lane. A variety of species are to be found in the hedge, which is dominated by blackthorn with elm and hawthorn in abundance. A scrub belt south of the site is species-rich and has developed into broad, thick wildlife habitat.

Area 4. A grassland area to the west of Spring wood and south of the power lines. The site is dominated by tall grassland with a variety of tall herbs and ruderal plants, very similar to Kiln Meadow but without the invasion of scrub and tree species. The meadow is bordered by Spring Wood to the east, a tree and scrub belt adjacent to the A12 dual carriageway to the south and a planted scrub belt in the north.

Protected species:
Dormouse (2012), bats (common pipistrelle, soprano pipistrelle, noctule, brown long-eared 2010), grass snake, slow worm, common lizard (2010)

Protected species potential:
-

BAP habitats present:
Lowland mixed deciduous woodland
Ancient species-rich hedgerow (Southern boundary of Bobbits Lane bordering Kiln Meadow but technically within the Ashground Covert and Bobbits Lane Meadows CWS)

BAP species seen:
Dunnock, bullfinch, song thrush

BAP species known:
Dormouse (2012), stag beetle
common pipistrelle, brown long-eared bat, noctule (2010)
grass snake, common lizard and slow worm (2010) Toad (2012)

BAP species potential:
Hedgehog, harvest mouse, starling, house sparrow, spotted flycatcher, turtle dove

Connectivity:
This site is an integral part of the ecological network of the Belstead Brook corridor, which also links with the wildlife rich areas of Bourne Park and the Stour and Orwell Estuaries SPA to the east.

Structural diversity:

The structural diversity of the whole site is extremely good due to age class and the variety of tree and shrub species found throughout the woodlands. The mosaic of grassland types, in conjunction with the scrub and hedgerows and wet areas, improve the structural diversity still further.

Flora:

The flora to be found in Spring and Millennium Woods, Kiln Meadow and the adjacent grassland area is both rich and diverse. With more visits and search time a greater species list would be compiled. Plants not seen during the fieldwork but are known to occur include moschatel, ramsons and primrose.

Area 1. Spring Wood:
Trees and shrubs - field maple, silver birch, hornbeam, sweet chestnut, hazel, hawthorn, ash, holly, blackthorn, pedunculate oak, aspen, goat willow, elder, small-leaved lime, guelder rose, broom, dog rose, bramble and raspberry.

Grasses, sedges, rushes and ferns: remote sedge, cock's foot, false brome, soft rush, wood millet, rough meadow-grass, branched bur-reed and Yorkshire fog, male fern and bracken.

Herbs: bugle, wood anemone, wild angelica, cow parsley, climbing corydalis, rough chervil, enchanter's-nightshade, wavy bitter-cress, marsh thistle, spear thistle, pignut, great willowherb, wood spurge, meadowsweet, cleavers, herb Bennet, ground-ivy, ivy, hogweed, hop, bluebell, square-stalked St. John's-wort, white dead nettle, yellow archangel, honeysuckle, yellow pimpernel, dog's mercury, wood-sorrel, greater plantain, self-heal, lesser celandine, creeping buttercup, broad-leaved dock, common figwort, red campion, lesser stitchwort, greater stitchwort, common chickweed, dandelion, common nettle, germander speedwell, wood speedwell and bush vetch.

Area 2. Millennium wood:
Trees and shrubs: field maple, alder, silver birch, hornbeam, hawthorn, ash, cherry, cherry plum, blackthorn, pedunculate oak, sallow, rowan, dogwood, elm, bramble, raspberry and dog rose.

Grasses, sedges, rushes and ferns: meadow foxtail, false oat grass, soft brome, barren brome, cock's foot, Yorkshire-fog, annual meadow-grass and rough meadow-grass.

Herbs: yarrow, cow parsley, lesser burdock, mugwort, daisy, hedge bindweed, rosebay willowherb, creeping thistle, spear thistle, field bindweed, wild carrot, great willowherb, field horsetail, cleavers, cut-leaved crane's-bill, dove's-foot crane's-bill, herb Bennet, ground-ivy, ivy, hogweed, hop, perforate St. John's-wort, square-stalked St. John's-wort, ribwort plantain, greater plantain, self heal, creeping buttercup, wild radish, common sorrel, curled dock, broad-leaved dock, common figwort, red campion, greater stitchwort, black bryony, tansy, lesser trefoil, white clover, scentless mayweed, colt's-foot, common nettle and common vetch.

Area 3 and 4 Kiln Meadow and Grassland:
Trees and shrubs: field maple, hazel, hawthorn, ash, aspen, cherry, blackthorn, pedunculate oak, elm.

Grasses, sedges, rushes and ferns: bracken, common couch, false oat grass, hairy brome, soft brome, cock's-foot, Yorkshire fog, wall barley, perennial rye grass, annual meadow grass and rough meadow grass.

Herbs: cat's-ear, cow parsley, mugwort, musk thistle, common knapweed, rough chervil, rosebay willowherb, common nettle, curled dock, creeping thistle, cut-leaved cranesbill, spear thistle, field bindweed, beaked hawk's-beard, wild carrot, great willowherb, field horsetail, cleavers, ladies bedstraw, hedgerow crane's-bill, bristly oxtongue, hogweed, prickly lettuce, hedge mustard, knotgrass, oxeye daisy, greater bird's-foot trefoil, pineapple mayweed, wild parsnip, ribwort plantain, greater plantain, creeping cinquefoil, cowslip, meadow buttercup, creeping buttercup, dog rose, bramble, common sorrel, broad-leaved dock, common figwort, red campion, hedge mustard, smooth sow-thistle, greater stitchwort, dandelion, shepherd's purse, goat's-beard, yarrow, lesser trefoil, red clover, salsify, white clover, wild parsnip and common vetch.

Avifauna:
The variety of habitats found at these sites will support an important variety of bird communities throughout the year from wintering thrushes and finches to breeding summer migrants. BAP bird species observed during the fieldwork were song thrush dunnock and bullfinch.

Observations during the site visit included blackbird, blackcap, blue tit, carrion crow, chaffinch, chiffchaff, collared dove, great tit, goldfinch, magpie, robin, willow warbler, whitethroat, wood pigeon and wren.

In 2012 there was a national Nightingale survey organized by the British Trust for Ornithology (BTO). There was a single territory found (Regnault M. 2012).

A survey at other times of the year would produce a much greater species list. In the past spotted flycatcher and lesser spotted woodpecker bred within Spring Wood but are highly unlikely to occur here now, due to their increasing scarcity.

Invertebrates:
The rich variety of habitats, plant and shrub communities found within these sites support a very rich and diverse invertebrate assemblage. A wide range of butterflies has been recorded over the years (SBRC records). There are good number of records for moths and various species of cricket.

Observations during the site visit included comma, large white, small white, green-veined white, brimstone, orange tip, peacock, speckled wood, azure damselfly, hornet, scorpion fly and red-tailed bumblebee.

The site is known to support stag beetles.

Herpetofauna:
No reptile species were seen during the site visit; however, grass snake, slow worm and lizard are known to occur following a survey of Kiln Meadow by Greenwillows Associates (2010). Kiln Meadow therefore supports important populations of reptiles.

This site supports exceptionally high numbers of toads, which use the site for foraging, hibernating, protection and for migration. A common frog was seen during the site visit.

Mammals:
Dormice were first discovered in 2010 in Millennium Wood; following a survey in surrounding areas they were then found in Kiln Meadow and Spring Wood (Regnault 2012a, 2013). They are a protected a species, which require good quality woodland and hedgerow habitat.

The only mammal observation during the site visit was of a mole; other species that are known to occur include pygmy shrew, yellow-necked mouse, grey squirrel and fox.

In a bat survey carried out by Greenwillows Associates (2010) the following species were recorded: common pipistrelle, soprano pipistrelle, brown long-eared and noctule bats.

Harvest mice have been recorded in November 2013 in an area of Belstead Brook Park to the west of this site and it is highly likely that they are also present within the grassland.

Comments and recommendations:
Spring and Millennium Woods and Kiln Meadow are outstanding for their rich and diverse assemblage of wildlife and quality of habitat.

Parts of Spring Wood appear to be experiencing high levels of visitor pressure and consequently some of the sensitive ground flora, including bluebell-rich areas, is quite heavily trampled. Consideration should be given to implementing measures for reducing this pressure by encouraging people to remain within the clearly defined paths.

The distribution of the dormouse population along the Belstead Brook Park is not fully understood and likely to be more extensive than the current records indicate (Regnault 2012b). It is strongly recommended that further surveys are carried out at least as far as Copdock to the west and the railway line to the east as far north as Bourne Park and also including the river corridor of Belstead Brook itself. The survey should focus on all areas of woodland, scrub and hedgerow which have some connectivity to Spring and Millennium Woods and take into consideration the high public usage of the area to avoid interference with any survey devices. The outcome of the surveys will help inform future decision making regarding habitat management.

References

Greenwillows Associates Ltd 2010, Reptile Survey of land South of Bobbit's Lane, Thorrington, Ipswich

Greenwillows Associates ltd 2010, Bat Survey of land South of Bobbit's Lane, Thorrington, Ipswich

Regnault M. 2012, Results of a National Nightingale Survey for the British Trust for Ornithology (BTO)

Regnault M (2012a) Dormice survey of Millennium and Spring woods Ipswich

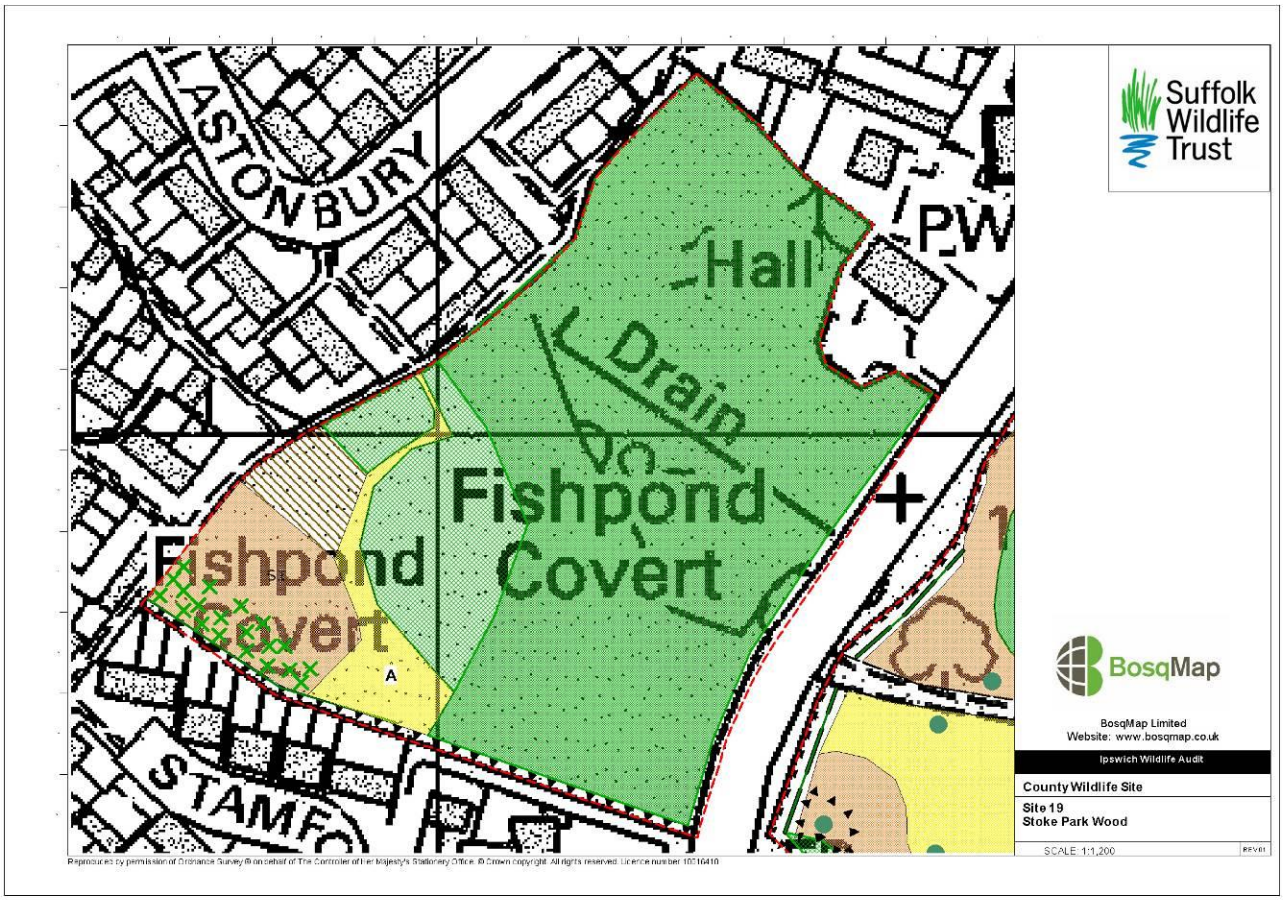
Regnault M (2012b) Dormice survey recommendations Belstead for 2013

Regnault M (2013) Dormice survey of Millennium and Spring woods Ipswich

Site name — Site reference 19 – Stoke Park Wood CWS

IBC Ref: W20
Site status: County Wildlife Site & Local Nature Reserve
Grid ref: TM 15037 41985
Area: 2.17 hectares
Date: 20 August 2012
Recorder: A Looser
Weather conditions: Warm and overcast with sunny intervals, 24°C
Ranking: 2
Biodiversity value: High

Map:



Photos:

Grassland in south west corner

Woodland looking north

Area of scrub in the woodland

Habitat type(s):

Broadleaf woodland, semi-improved grassland

Subsidiary habitats:

Scrub, tall ruderal vegetation

Site description:

This site is situated on the west side of Stoke Park Drive, opposite to Bourne Park. On Ordnance Survey maps it is described as 'Fishpond Covert'. This is primarily a woodland County Wildlife Site, with an area of rough grassland in the south west corner of the site. There is some bramble and hawthorn scrub in the grassy area and a patch of willow scrub on the edge of the woodland. There has

been some management in the woodland and there are good areas of scrub where there has been coppicing. There is also evidence there has been some management of the grassland with piles of cut grass present. The site is managed by Greenways.

Protected species:
-

Protected species potential:
Bats, slow worm

BAP habitats present:
Lowland mixed-deciduous woodland

BAP species seen:
-

BAP species known:
Stag beetle, nightingale

BAP species potential:
Bats, slow worm

Connectivity:
The connectivity is quite good as it is on the other side of the road from Bourne Park (Site 62) and so is part of the wider green space. Netley Close (site 110) is approximately 200m to the south-west beyond housing, with some limited connectivity between the two sites.

Structural diversity:
The site has good structural diversity with rough grassland, tall ruderal vegetation, scrub and woodland on site.

Flora:
The woodland has a good range of tree and shrub species including sweet chestnut, horse chestnut, bramble, holly, ash, elder, sycamore, yew, ivy, oak, hazel, aspen, hornbeam, hawthorn, cherry, dog rose and willow. It also contains a number of introduced species including laurel, snowberry, buddleia and holm oak.

It was a sub-optimal time of year for surveying ground flora but species included typical woodland species such as enchanter's nightshade, wood avens and hedge woundwort. There were several different sedge species in the ground flora. The time of year of the survey made it difficult to identify these species but remote and thin-leaved wood sedge have both been recorded there.

There is a small area of rough grassland in the south western corner of the site. It is dominated by cocksfoot and false oat with hogweed, dock, nettle, common thistle, bindweed, common mouse-ear, cut-leafed cranesbill and meadow vetchling.

There is a short section of hedge along the south western corner where it borders the gardens containing elm, hawthorn and dog rose.

Next to the grassland is a small area dominated by rosebay willowherb and tansy.

Avifauna:
It was a sub-optimal time of year for surveying birds. Magpie, collared dove and blackbird were observed on the site. Other woodland bird species are also likely to be present including summer migrants such as chiffchaff, willow warbler and blackcap as the site provides good foraging, roosting and nesting opportunities. Nightingales have been recorded here in 2008 and there are still some good areas of scrub within the woodland so it is likely they are still present.

Invertebrates:
Good numbers of speckled wood and gatekeeper butterflies were recorded during the visit. It is likely that other species of butterfly are also present at different times of the year. There were also a number of bees. Old trees, particularly oak, are good for a range of invertebrate species. Stag beetles have been recorded in 2008 and are likely to be present in any subterranean dead wood.

Herpetofauna:
The rough grassland provides suitable habitat for reptiles, particularly slow worm. The piles of cut grass provide additional good habitat for reptiles.

Mammals:
Common species of mammal are likely to be present, such as rabbit, fox and grey squirrel. Small mammals such as mice, voles and shrews are likely to be present across the whole site. The site may represent an important feeding area for bats, and some of the mature oaks had cracks and crevices that are potentially suitable for roost sites.

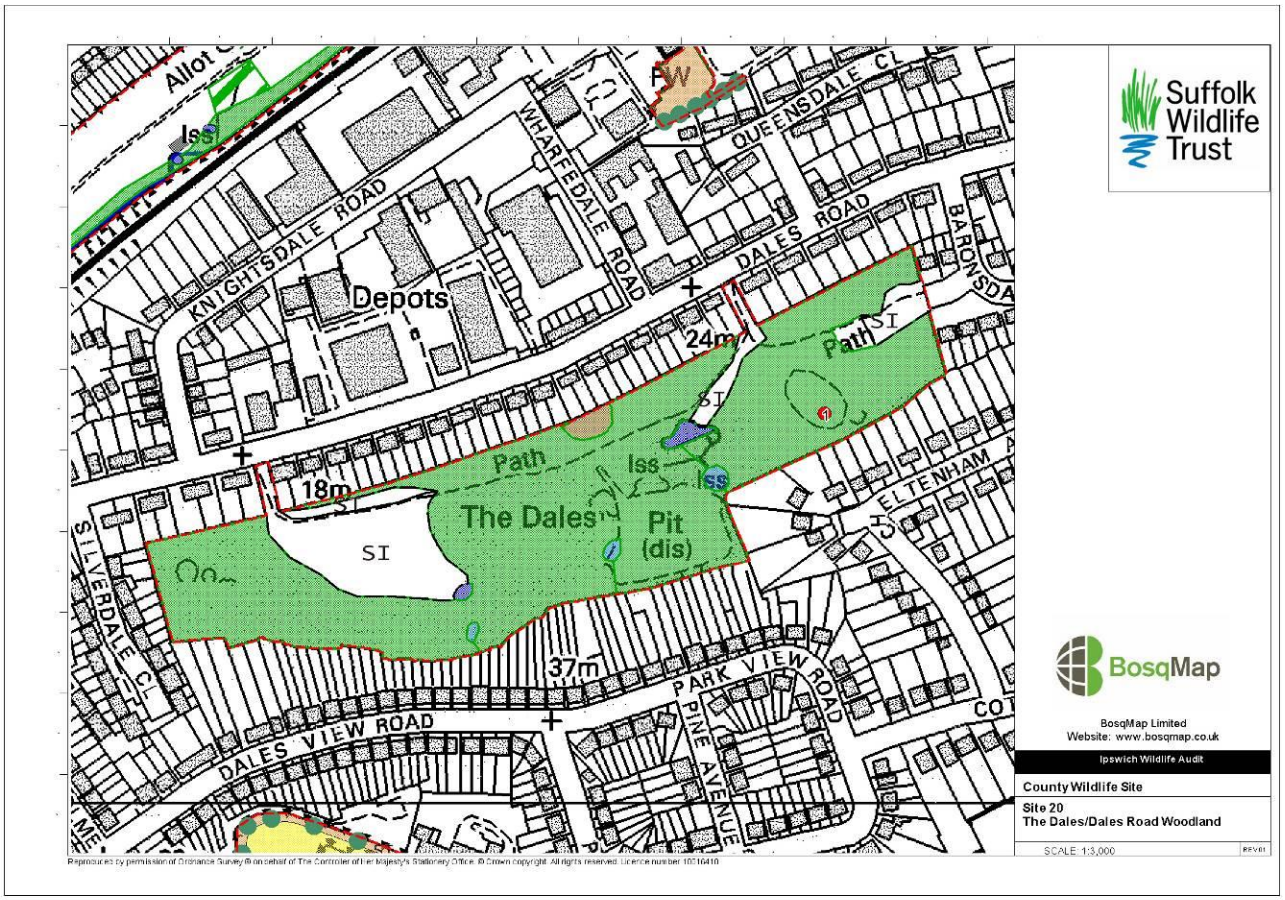
Comments and recommendations:
Continuing to cut and rake off parts of the grassland on a rotation would improve the floristic diversity of the site, whilst still allowing plenty of habitat for small mammals and reptiles. Any grass cuttings should be moved to the edge of the grassland area to reduce the nutrient input.

Continuing coppice rotation would also be beneficial by increasing the light levels to the woodland floor and increasing the structural diversity within the site. This benefits a huge range of species including flora, birds and insects. Any coppice stools must be protected from deer either by fencing or by covering the stools with brash.

Site name — Site reference 20 – The Dales/Dales Road Woodland

IBC Ref: W10
Site status: County Wildlife Site and Local Nature Reserve
Grid ref: TM 15438 46207
Area: 5.88 hectares
Date: 3 June 2013
Recorder: S Bullion
Weather conditions: Warm and sunny 18°C
Ranking: 2
Biodiversity value: High

Map:



Photos:

View eastwards from north-west corner

Woodland view with bracken-dominated ground flora


Western pond with sunny aspect

Habitat type(s):
Wet and dry broadleaf woodland, scrub, species-poor rough grassland, short mown species-poor grassland

Subsidiary habitats:
Ponds

Site description:
The history of this site is that it was formerly an area of clay and sand excavation. The land slopes quite steeply upwards along the southern boundary and most of the site is thickly wooded with few glades. There is a former pit, now scrubbed up, within the centre of the site. The north-west and north-east corners contain areas of species-poor short mown grassland to assist with its amenity use, with un-mown rough grassland areas around the margins. There is a network of well-used paths across the site. Two ponds are present, with the western pond in particular having an open, sunny aspect.

Protected species:
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Protected species potential:
Slow worm and grass snake

BAP habitats present:
Lowland mixed deciduous woodland
Eutrophic standing water (ponds)

BAP species seen:
Song thrush and dunnock

BAP species known:
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BAP species potential:
Slow worm and grass snake
Stag beetle
Hedgehog

Connectivity:
Connectivity is poor as the site is surrounded by housing and unconnected to any other areas of semi-natural habitat.

Structural diversity:
Structural diversity is good with a mixture of wet and dry woodland, scrub, glades, ponds, tall grassland and short mown grassland.

Flora:
The woodland is varied, with dry areas towards the top of the slopes containing ash, holly, Norway maple, field maple, aspen, oak. Here the field layer includes bluebell, wood avens, with a large patch of pignut in a sunny glade (Target Note). More shaded areas had wood avens, male fern and there was a patch of wood sorrel and also yellow archangel (ancient woodland indicator species). The pit is colonised by willows and was impenetrable. On the northern edge there is a scrubby belt of field maple, hawthorn, elder and Norway maple, rowan, dogwood and *Prunus* species.

The short mown grass areas were species- poor and contained common herbs. Where un-mown, cow parsley, alexanders, hedge crane's-bill, nettle, cleavers, creeping buttercup, bulbous buttercup, cat's ear, mouse-ear chickweed, yarrow, germander speedwell were present.

The north-western pond is relatively unshaded and had abundant brooklime. The second, more central pond included pendulous sedge, bulrush and great willowherb.

Avifauna:
Fifteen species were recorded: dunnock, song thrush, robin, blackbird, chaffinch, wren, great tit, long-tailed tit, blue tit, wood pigeon, collared dove, magpie and three migrant warblers - chiffchaff, blackcap, lesser whitethroat. Two mallard ducks were on one of the ponds. There was no evidence of turtle dove which was formerly recorded on site, but this species has undergone a dramatic steep decline in the last thirty years across Europe.

Other species for which the habitat is suitable include great spotted woodpeckers and green woodpecker, mistle thrush, greenfinch, goldfinch and jay. Tawny owl is also possible.

Invertebrates:
The woodland/grassland mosaic will be important for a wide range of invertebrates which will particularly benefit from the juxtaposition of woodland and grassland habitats. The site is known to support white-letter hairstreak butterfly. The habitat is suitable for stag beetle and their larvae will be present if there is subterranean deadwood. Large red damselfly was seen flying over the north-western pond.

Herpetofauna:
Grass snake has been recorded on Dales View Road in 2011, which may have originated from this site. The habitat is suitable for slow worm. Toads are also likely to be present as well as frogs and newts. Numerous small fish were seen in the western pond which could have an impact on amphibian populations.

Mammals:
The site will support common mammals such as muntjac deer, grey squirrel, fox and various small mammals. The habitat is suitable for hedgehog and may be an important site for this declining mammal.

Comments and recommendations:
The mosaic of habitats makes this an important site for biodiversity within the Town and the habitat does not require any additional management over and above current levels.

The site is well used by the local community. In the woodland an area of ground has been cleared to create an informal BMX track. Fishing was taking place in the western pond during the survey.