Northamptonshire Biodiversity Records Centre



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Our Reference: 18-150

18th October 2018

Dear Lisa,

Re: Ecological data search, Ringstead Parish

Thank you for approaching the NBRC with this enquiry. All the information that you have requested is contained within this report. This includes a map of the search area, statutory and non-statutory site details and a list of protected and notable species records from your specified search area. For definitions of these sites please refer to the document at the end of this report.

Statutory sites

The following statutory sites are located within your specified search area. These sites have been labelled on the accompanying map.

Kinewell Lake LNR/SSSI/SPA Upper Nene Valley Gravel Pits SSSI (SPA/RAMSAR)

Further details, such as SSSI status and citations, can be accessed through the Natural England website using the following links;

http://www.sssi.naturalengland.org.uk/Special/sssi/search.cfm http://www.lnr.naturalengland.org.uk/Special/Inr/Inr_search.asp http://jncc.defra.gov.uk/pdf/SPA/UK9020296.pdf http://jncc.defra.gov.uk/pdf/UK11083.pdf

Non-statutory sites

Following the Natural Environment White Paper (2011), twelve Nature Improvement Areas (NIA's) were designated and granted government funding in February 2012.

They should aim to achieve significant and demonstrable enhancements of the ecological network over large areas by undertaking the actions prioritised in the review.

Further information regarding the Nene Valley Nature Improvement Area can be found on the Natural England website using the following link: <u>http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/funding/nia/projects/nenevalley.aspx</u>

The following non-statutory sites are located within your specified search area. These sites have been labelled on the accompanying map.

Site Name	Site Status
Kinewell Lake	Local Wildlife Site/Pocket Park/NIA/LNR/SSSI/SPA
Ringstead Grange Gravel Pits	Local Wildlife Site/Pocket Park/NIA/SSSI/SPA
Ringstead Grange Gravel Pits - North	Local Wildlife Site/Pocket Park/NIA/SSSI/SPA
Woodford Old Railway	Local Wildlife Site/NIA

Descriptions for these non-statutory sites are attached to this report.

We do not currently hold any information for the following non-statutory sites located within your specified search area.

Site Number/Name	Site Status
892	Potential Wildlife-Site Category 1/NIA
898	Potential Wildlife-Site Category 1/NIA
899	Potential Wildlife-Site Category 1/NIA
900/1	Potential Wildlife-Site Category 1/NIA
Ringstead, Kinewell Lake	Pocket Park/Local Wildlife Site/NIA/LNR/SSSI/SPA

Potential Wildlife Site Category 1 definition is; sites never fully surveyed and assessed against LWS criteria.

Unfortunately we do not hold descriptions for Pocket Parks (please refer to the website for further information <u>http://www.northamptonshireparks.co.uk/northamptonshireparks.co.uk/northamptonshireparks/Pages/default.aspx</u>).

For full definitions of Northamptonshire non-statutory sites please refer to the section "Sites of wildlife and geological importance in Northamptonshire" below.

Species records

Please note that we do not provide data for bats. This information can be obtained directly from the Northants Bat Group/County Recorder for Mammals using the contact details already provided.

166 protected and notable species records fall within your specified search boundaries. A list of these species records is attached to this report.

This report contains sensitive information about the location of protected species and has been provided in confidence to assist you in your work. Because of this OS Grid References must be withheld from documents destined for public consumption.

I would remind you that these data are limited spatially and temporally and I would strongly recommend that follow-up surveys be carried out to support the baseline provided. I would also like to draw your attention to our terms and conditions once again.

Northamptonshire Biodiversity Records Centre Terms and conditions

- 1. All rights to the data are reserved and ownership is not transferred with it. Data held by the Northamptonshire Biodiversity Record Centre (N.B.R.C.) remains the intellectual property, and in the ownership and copyright, of the originator(s).
- 2. Whilst every effort is made to ensure the accuracy of all the data provided, the N.B.R.C. can accept no responsibility for any costs, damages or liabilities whatsoever arising from the use of the data or for any omissions or inaccuracies within it.
- 3. The data held by the N.B.R.C. may not be comprehensive and the absence of data, in response to a data search, does not imply that a species, important habitat or designation does not exist within that search area. Recorded presence does not imply current presence and the date for all records will be provided.
- 4. Data is provided solely for the use of the enquirer (and their client) and only for the purpose(s) specified by the enquirer at the time of its request. Data must not be reused or stored beyond the life of the project for which they were acquired.
- 5. Data may be used as required in support of the planning process but OS grid references must be removed from documents destined for public consumption due to sensitive data concerning protected species.
- 6. The N.B.R.C. will provide access to data subject to any conditions imposed on its use by the Data Protection Act, Environmental Information Regulations 2004, Copyright and Intellectual Property Right Law or the data owner. Restrictions on the release of information may therefore apply.
- 7. The N.B.R.C. will only release un-interpreted data and will not usually comment upon its significance.
- 8. The N.B.R.C. will release as soon as possible, and within twenty working days of receipt, the request unless an extension of time is necessary. In this event the enquirer will be informed within ten working days.
- 9. All charges made by the N.B.R.C. relate to the provision of administration, data handling and search services.

As agreed, the total charge for the time taken to extract this information and put together the report is £120 plus VAT (£144 including VAT). An invoice will be sent under different cover from our Cambridgeshire office.

Should you have any enquiries please feel free to contact me at the above address.

Yours sincerely,

Rachel Tate Biodiversity Data Officer

Sites of wildlife and geological importance in Northamptonshire

Statutory Sites:

Special Protected Area (SPA)

SPAs are strictly protected sites classified in accordance with Article 4 of the EC Directive on the conservation of wild birds (79/409/EEC), the Birds Directive.

Site of Special Scientific Interest (SSSI)

The SSSI series provide statutory protection for the best examples of the natural environment. SSSI were originally notified under the National Park and Access to the Countryside Act 1949 and they were renotified under the Wildlife and Countryside Act 1981. Improved provisions for their protection and management were introduced in the Countryside and Rights of Way Act 2000.

National Nature Reserve (NNR)

NNRs are declared by the statutory country conservation agency (English Nature) under the National Park and Access to the Countryside Act 1949. NNR contain the most important examples of natural and semi-natural ecosystems within Great Britain. NNR conserve the habitats within them and offer opportunities for research.

Local Nature Reserve (LNR)

LNRs are declared under the National Park and Access to the Countryside Act 1949 by local authorities. LNR are declared and managed for nature conservation, education and research or opportunities for public access to nature.

Non-statutory sites:

Nature Improvement Area (NIA)

Following the Natural Environment White Paper (2011), twelve NIAs were designated and granted government funding in February 2012. They should aim to achieve significant and demonstrable enhancements of the ecological network over large areas by undertaking the actions prioritised in the review:

- Improving the management of existing wildlife sites
- Increasing the size of existing wildlife sites
- Increasing the number of wildlife sites
- Improving connectivity between sites
- Creating wildlife corridors

Local Wildlife Site (LWS)

Local Wildlife Sites are areas of land which are rich in wildlife and are the equivalent to Sites of Importance for Nature Conservation. Criteria for selection take in threats and declines in certain species, national priorities and local distinctiveness. The LWS system is managed, in partnership, by The Wildlife Trust, local authorities, statutory nature conservation agencies, local naturalists and landowners. Local Wildlife Sites were previously known as County Wildlife Site (CWS) in the past.

Protected Wildflower Verge (PWV)

Protected Wildflower Verges are roadside verges rich in wildlife and are crucial to the success of the local Biodiversity Action Plan. Criteria for selection take in threats and declines in certain species, national priorities and local distinctiveness. The PWV system is managed, in partnership, by The Wildlife Trust, local authorities, statutory nature conservation agencies, local naturalists and landowners.

Pocket Park

The Pocket Park vision is to develop easy public access to the countryside, bringing the countryside to the people and providing opportunities for enjoyment and understanding of 'Countryside on the Doorstep'. Over the past 18 years, the county council has worked in partnership with many organisations and other local authorities to help create 80 Pocket Parks. For more information on this scheme please refer to the website at www.pocketparks.com.

Local Geological Site (LGS)

Local Geological Sites (LGS) are the most important places for geology and geomorphology outside the statutory SSSI. The sites are designated using locally developed criteria and are assessed by the local geological group.

Potential Local Geological Site (PLGS)

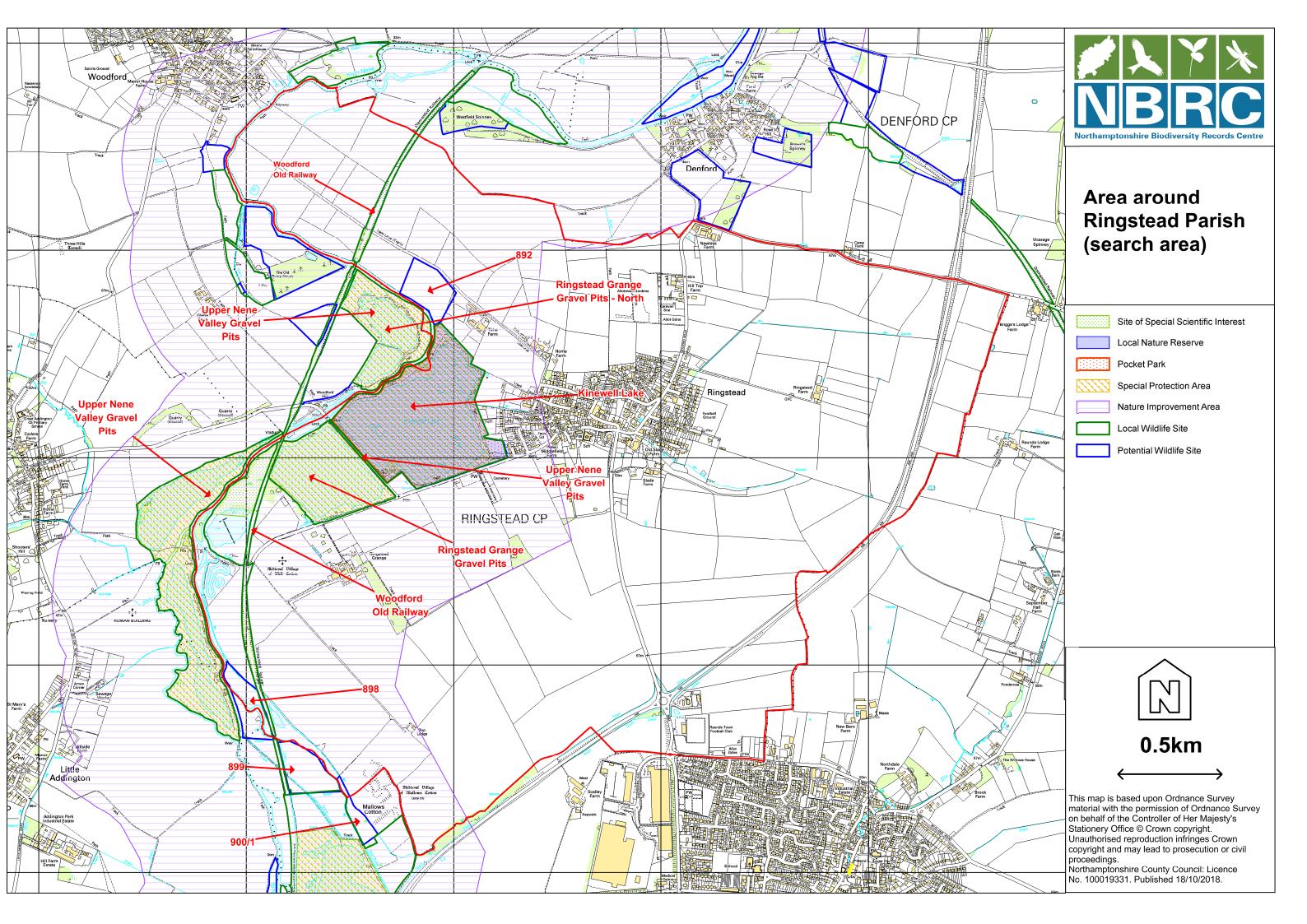
Potential Local Geological Sites (PLGS) are sites that were identified and considered to be important geological exposures. These sites have not yet been formally notified as Local Geological Sites by the local geological group. Currently these sites can only be located by a grid reference, as they do not have a formal site boundary and there is no descriptive survey information.

Potential Wildlife Site (PWS)

Potential Wildlife Sites (PWS) are sites that are either known or thought to be of higher biodiversity value than the average countryside but have not been confirmed to be of Local Wildlife Site (LWS) standard.

PWS can belong to one of three categories: 1. Sites never fully surveyed and assessed against LWS criteria. 2. Sites surveyed and assessed against the LWS criteria but not currently reaching the standard. 3. Sites previously recognised as LWS but not currently meeting the latest LWS criteria.

PWS were originally outlined using a combination of local knowledge and looking at aerial photographs for evidence of biodiverse habitats. All PWS are likely to be important for the County's biodiversity, either in their own right, or through buffering and linking current LWS and contributing to Green Infrastructure. Many of these sites could potentially be of LWS standard once surveyed.



Site Name: Kinewell Lake

Site Code: E744

Status: LWS

Other Designations: Site of Special Scientific Interest, Pocket Park, Special Protection Area (SPA), Local Nature Reserve, Nene Valley NIA

Grid Reference: SP978751

Area (ha): 35.1

District: East Northamptonshire

Site History:

25/06/1993	LWS
18/12/2006	LWS
06/11/2012	LWS

Habitats present

Broad Habitat: Grassland, Wetland, Woodland BAP Habitat: Eutrophic Standing Waters

Reason for Designation:

A large open gravel pit in the SPA that is managed as a pocket park. The site qualifies as a LWS with 7 wetland indicators recorded (1 strong - rare). The shoreline is lined with willows and would benefit from opening up some areas to increase marginal vegetation.

Site Description:

03/09/2012

A large lake on a former gravel pit on the outskirts of Ringstead, the site is also a pocket park and part of the Upper Nene Valley SPA. The lake is relatively shallow and fringed for the most part by trees, predominantly a variety of willow Salix species. A well-worn pathway follows the edge of the lake with narrow grassland areas to the outside of the pathway. There are a number of small wooded island popular with birds such as grey heron Ardea cinerea, little egret Egretta garzetta and cormorant Phalacrocorax carbo.

East Boundary; A fairly dense fringe of trees, predominantly willow, with occasional gaps kept open for fishing swims. The grassland is relatively species poor beyond which a hawthorn Crataegus monogyna dominated hedgerow forms the site boundary. This then becomes a narrow woodland fringe to the north with a ditch running alongside the footpath. Himalayan Balsam Impatiens glandulifera is frequent alongside the ditch and footpath in this section.

To the west of the car park is a small fenced area that has been seeded and now contains a mixture of meadow and rank species. North of the car park is a small meadow which has been identified for enhancement. It currently consists of a grassy sward with a scattering of herb species.

In the northeast corner is a bay area, which has some more open areas along the shoreline, with small areas of wetland vegetation. A small copse has been planted in this area, to the north of the footpath.

North boundary; the strip of land becomes wider along this section, particularly to the eastern end which is wooded, with some more open patches of reed and sedge. Whilst the banks remain tree lined with frequent large willows. Some tree works have taken place in the past which have maintained the openness of this section and provided numerous log piles, a boardwalk forms the pathway in this section. Further west becomes more open with grassland areas to edge of the pathway.

West boundary; This is another narrow section with only a narrow species poor grassland between the willow fringed lake and the hedgerow alongside the road. At the southwest corner is a small undisturbed scrubby woodland and a disabled fishing platform. Adjacent to the fishing platform is a small area of wetland habitat, predominantly reed Phragmites australis and reed sweet-grass Glyceria maxima which was providing habitat for a sedge warbler Acrocephalus schoeno baenus.

Southern boundary; again a densely fringed willow bank, but with occasional openings in places, where marginal wetland vegetation was present. A wide grassy path was surrounded to either side by the best grass at the site, which was semi-species rich in places with patches of knapweed Centaurea nigra, birds-foot-trefoil Lotus corniculata and frequent red clover Trifolium pratense.

23/07/2006

The site consists of a large lake, which has formed subsequent to gravel extraction. The lake is surrounded by grassland, scrub and trees which have established naturally after gravel extraction. The dominant trees are willow sp (including white willow and crack willow) with alder, oak, wild cherry, ash, field maple, hawthorn and blackthorn. The emergent species include Phragmites australis, Typha latifolia, Epilobium hirsutum, Solanum dulcamara, Juncus inflexus, J. effusus, Mentha aqautica and Gylceria maxima. The grassland is cut for hay and had just been cut a couple of weeks before the survey which made it difficult for some species to be recorded. Species recorded included Lotus corniculatus, Centaurea nigra, Stachys sylvatica and Stachys palustris. A high number of waterfowl use the site including mallard duck, coot, Canada goose and great crested grebe. There are a number of bird boxes up around the site, which are said to be well used. A barn owl has been seen feeding within the site. The site is popular with local visitors.

The site is managed by an active group of local volunteers from the village. A high number of species have been recorded here by local enthusiasts.

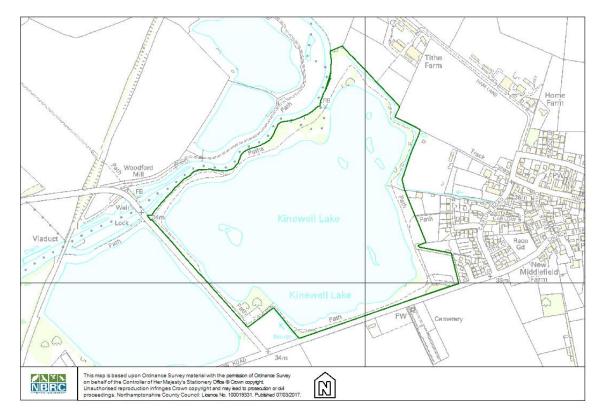
The site is one of a number of ex-gravel pits along the river Nene and forms an important habitat within the Nene valley.

01/01/2006 No description

25/06/1993

A large lake caused by fairly recent flooding of a gravel pit and now maintained by the Kinewell Lake Trust as a Pocket Park. The lake is large enough to attract waterfowl. The vegetation has not yet developed its full potential diversity and the heavy fishing activities have probably not helped this. Emergent species include Phragmites australis, Salix viminalis, S. capraea, S. cinerea, S. fragilis, Juncus effusus, J. inflexus, Agrostis stolonifera, Typha latifolia, Epilobium hirsutum, Solanum dulcamara, Mentha aquatica, Impatiens capensis and Pulicaria dysenterica. Birds noted at the time of survey were tufted duck, pochard, great crested grebe and coot, although several other species are frequently recorded. There are a few small islands with S. cinerea and mallards populating the edges. Grassland surrounding the northeast side of the lake is apparently cut for hay. The herb content is not high but Carex spicata, Lotus corniculatus, Centaurea nigra, Avenula pubescens, Bromus hordaceus, Arrhenatherum elatius, Holcus lanatus, Festuca rubra and a small amount of F. ovina were found, and Cynosurus cristatus was frequent. It may be that other species would be evident on a visit before the hay was cut that confirm a more interesting composition. Hedges around the lake and on the perimeter of the grassland have a good variety of woody species such as rowan, blackthorn, hawthorn, oak, wild cherry, ash, alder (also non-native alder) and bramble. Banded demoiselles and blue tailed damselflies were frequent around the bramble. The site seems promising for other Odonata, and is now part of a complex of gravel pit lakes of various ages that offer a valuable Nene Valley habitat in the Ringstead/Woodford area. Likely to improve as the vegetation gets better established.

Map:



Site Name:	Ringstead Grange Gravel Pits
Site Code:	E746
Status:	LWS
Other Designations (SPA)	Nene Valley NIA, Site of Special Scientific Interest, Special Protection Area
Grid Reference:	SP972748
Area (ha):	25.1
District:	East Northamptonshire
Site History:01/09/1996LWS18/12/2006LWS	
Usbitate process	

Habitats present

Broad Habitat: Wetland, Woodland BAP Habitat: Eutrophic Standing Waters

Reason for Designation:

Two large gravel pits and the surrounding woodland and grassland. The site was designated a LWS in 2006 due to its SSSI designation, gravel pits and associated habitats. A full survey is recommended to ascertain whether it now meets LWS criteria. The site has been retained as a LWS until it can be surveyed.

Site Description:

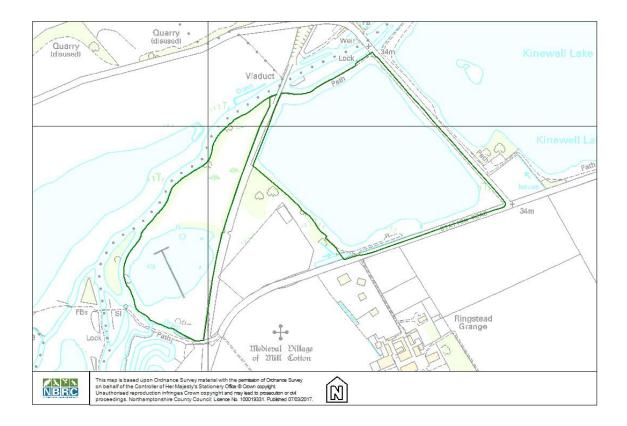
01/09/1996

A series of gravel pit lakes on the east side of the River Nene adjacent to Kinewell Lake. The westernmost pits are the most well-established in the area, and are now obscured by osiers, sallow scrub, white willows and crack willows. Much of the ground on the site of the old disused railway line (now used as an access track) has weedy, ruderal vegetation and/or low-diversity MG1 grassland. Part of the ground between the west and east pits has also been planted up with saplings. The larger east pit offers more open water with fringing cover for breeding wildfowl plus aquatic invertebrates such as dragonflies and damselflies. Both lake areas (the west lake is divided into two) are heavily fished, but the main, east lake also has some boat fishing and jetties. This is part of a larger complex of gravel pit lakes along the River Nene which provide excellent bird habitat and also offer a continuous habitat corridor for other wildlife in the Nene Valley. They have recently been joined by other nearby lakes which are managed for wildlife and fishing, and are in any case likely to increase in wildlife interest as the marginal vegetation changes with time. NB. the adjacent Mill Tail Fishery specialises in trout fishing; this is the first of several stocked trout sites along this part of the Upper Nene. These pits would reward some monitoring as to how their wildlife value changes with time.

Boundary Changes

06/02/2012 removed overlap with railway LWS and changed the site centroid to SP972748.

Map:



Site Name:	Ringstead Grange Gravel Pits - North
Site Code:	E745
Status:	LWS
Other Designations: Valley NIA	Site of Special Scientific Interest, Special Protection Area (SPA), Nene
Grid Reference:	SP977756
Area (ha):	13.1
District:	East Northamptonshire
Site History: 18/12/2006 LWS	
Habitats present	

Broad Habitat: Grassland, Wetland BAP Habitat: Eutrophic Standing Waters

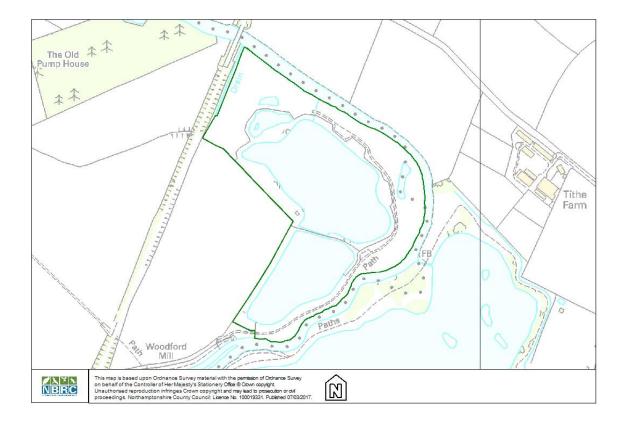
Reason for Designation:

Two gravel pits and surrounding grassland. The site was designated a LWS in 2006 due to its SSSI designation, gravel pits and associated habitats. A full survey is recommended to ascertain whether it now meets LWS criteria. The site has been retained as a LWS until it can be surveyed.

Site Description:

18/12/2006 Site not surveyed

Map:



Woodford Old Railway

Administrative areas:	East Northamptonshire(E District (74-)) Woodford(Civil Parish)
Status(es):	Local Wildlife Site
Centroid:	SP973756 (Site Centroid)
Site type:	Site
File code:	E1303
Site/Subsite hierarchy:	Woodford Old Railway
Description:	2009 Survey
	The old level of the railway had a crushed ston and cycle track, and which was a part of the St were strips of level grassland at the edges of the

The old level of the railway had a crushed stone surface about 2 metres wide, which was used as a footpath and cycle track, and which was a part of the Stanwick Lakes complex at the southern end of this site. There were strips of level grassland at the edges of the path. They varied in width and their quality was partly dictated by the amounts of shade. The banks of this long dismantled railway were almost entirely occupied by mature scrub that was succeeding to young woodland.

The basic pattern of vegetation on this site was for there to be about a two metre width of crushed stone on the footpath/cycle way, with a strip of regularly mown grassland to each side. Behind this there was a variable width of unmown grassland and then dense scrub succeeding to young woodland. Variables included the width of the unmown grassland; the height of the scrub, thus affecting the amount of shade; and whether the track was on an embankment, in a cutting or level.

The site was surveyed from north to south and split into four sections. Section 1 from Woodford lock to the first Nene crossing, section 2 to the second Nene crossing, section 3 to the crossing of a drain at the south of Great Addington Grtavel Pit and section 4 to Stanwick Lakes. Areas of species rich grassland are picked out and these are shown in survey report maps.

SECTION 1

At the north end the track began on a low embankment with narrow strips of mown grassland to each side. The partially shaded level grass verges held plants such as, Yarrow Achillea millefolium, Dandelion Taraxacum officinale and Creeping Cinquefoil Potentilla reptans in the mown strip. Greater Plantain Plantago major, Rye Grass Lolium perenne, Annual Meadow-grass Poa annua and White Clover Trifolium repens were most abundant at the edges of the track. Between the mown strip and the scrub there was a narrow strip of unmown grassland with neutral to calcareous species, including Common Knapweed Centaurea nigra and Rough Hawkbit Leontodon hispidus. Most abundant here were tall False Oat-grass Arrhenatherum elatius, Cock's Foot Dactylis glomerata, Red Fescue Festuca rubra and Yorkshire Fog Holcus lanatus. Where Common Knapweed was frequent, then this fell into the NVC category MG1e, the richer Centaurea nigra sub-community of Arrhenatherum elatius grassland, and where less rich MG1a, the Festuca rubra sub-community. The most coarse areas of Arrhenatherum elatius grassland, with locally abundant Nettle and more abundant umbellifer species, was MG1b grassland, the Urtica dioica sub-community.

The banks were occupied by dense tall scrub with frequent young Ash Fraxinus excelsior and less frequent Oak Quercus robur, and with taller trees on the old boundary line. These were mostly Ash and some large specimens had been coppiced in the past and now had multiple-stemmed regrowth. Hawthorn Crataegus monogyna was abundant, with locally abundant Blackthorn Prunus spinosa. A little less frequent were Field Maple Acer campestre, Hazel Corylus avellana, Crab Apple Malus sylvestris and Elder Sambucus nigra. Among the scrub was occasional to very locally abundant Black Bryony Tamus communis and White Bryony Bryonia dioica. The ground below was mostly bare, with just a scattering of shade species including Cuckoo Pint Arum maculatum, Ground Ivy Glechoma hederacea, Wood Avens Geum urbanum and False Brome Brachypodium sylvaticum.

Adjacent to Westfield Spinney on the eastern side there was somewhat heavier shade with locally abundant Nettle Urtica dioica on the level ground, as well as Hedge Garlic Alliaria petiolata, and very locally abundant Rosebay Chamerion angustifolium. There was still some MG1a/MG1b grassland here, but it was coarser with frequent Hogweed Heracleum sphondylium. At a gateway (SP978765), the shade was less dense to give locally abundant Hedge Woundwort Stachys sylvatica, Nipplewort Lapsana communis, Smooth Meadow-grass Poa pratensis Rough Meadow-grass P. trivialis, Upright Hedge Parsley Torilis japonica and Germander Speedwell Veronica chamaedrys.

The abundance of young trees in the scrub was variable, but the above descriptions set the basic pattern of vegetation over the whole site.

To the south of the gateway the unmown grassland was mostly MG1b with frequent Nettle, Occasional Red Clover Trifolium pratense, Black Medick Medicago lupulina and Creeping Cinquefoil Potentilla reptans, locally frequent Ribwort Plantain Plantago lanceolata. With the Nettle was locally abundant Cleavers Galium aparine. Gaps in the scrub here held locally abundant Bramble Rubus fruticosus.

Area 1; The track ran into a deepening cutting at SP976763. Hawthorn was abundant here and there was more frequent than average Elder, but taller trees were less frequent. Nettle and Cleavers were abundant and there were small patches of richer grassland at the edge of the track here, and among the nettles, the plants

including Agrimony Agrimonia eupatorium, Field Scabious Knautia arvensis, Burnet-saxifrage Pimpinella saxifraga and Common Knapweed Centaurea nigra. There was also less abundant Wild Basil Clinopodium vulgare, and some patches of Teasel Dipsacus fullonum. Beyond an area where the shade closed in a little, the Common Knapweed and Field Scabious got a little more frequent toward the first bridge, which carried Ham Lane over the old railway at SP975761, and the cutting was more species-rich on the eastern side than the western. In the cutting there was a small patch of Common Reed Phragmites australis at the edge of the track with no obvious water in sight.

To the south of the bridge the cutting quickly receded, with gaps in the scrub on the banks having locally dominant Creeping Thistle Cirsium arvense or Nettle Urtica dioica. At the edges of the track were locally frequent White Campion Silene alba and very locally frequent Common Knapweed Centaurea nigra.

Area 2; Before the first bridge over the river a path joined the track from the west, connecting Ham Lane on the higher ground to the path/cycleway. There was a more open grassland here with moderately tall MG1 False Oat-grass grassland with locally abundant Agrimony Agrimonia eupatorium, Common Knapweed, Field Scabious Knautia arvensis and Hedgerow Crane's-bill Geranium pyrenaicum and others in an area perhaps mown a little less frequently than the verges, or which was being maintained by rabbit grazing or frequent trampling. This grassland got a little coarser toward the river bridge but Perforate St John's-wort Hypericum perforatum remained abundant.

SECTION 2

To the south of the river bridge at SP975759 the track again ran on a low embankment. Scrub remained abundant, with occasional small trees. Behind the mown strip Perforate St John's-wort remained quite abundant, with a little less frequent Agrimony and Wild Basil.

Area 3; This was the largest species-rich area on the site. A ramp on the western side at SP974757 led down to a heavily shaded track. Ribwort Plantain Plantago lanceolata was particularly abundant on the old railway track in this area, as well as locally abundant Spiked Sedge Carex spicata. A shallow cutting began here with strips of tall, species-rich grassland that was wider on the western side than on the eastern one. Some notable plants here were frequent Meadow Vetchling Lathyrus pratensis, Common Knapweed Centaurea nigra and Tufted Vetch Vicia cracca. There were quite frequent smaller patches of coarser MG1b as well though, with very locally abundant Nettle and locally frequent Field Horsetail Equisetum arvense. The presence of abundant umbellifers in the sward indicated that it hadn't been mown for at least a few years. As the track levelled out to the south, Nettle became more abundant, and there were small areas of Rosebay Chamerion angustifolium and Mugwort Artemisia vulgaris. Tufted Vetch, Perforate St John's-wort and Red Fescue Festuca rubra remained frequent though, and there was occasional Greater Knapweed Centaurea scabiosa and Field Scabious. Near an old brick hut at the southern end of the species-rich stretch, there was locally abundant Black Horehound Ballota nigra.

Area 4; A very shallow cutting where a public footpath crossed the track at SP972753 quickly deepened to the south where, at SP972752, a bridge took a road over the track. Here there was Common Mallow Malva sylvestris at the edges of the old railway track, as well as some Black Medick Medicago lupulina, Red Bartsia Odontites verna and Creeping Buttercup Ranunculus repens. Perforate St John's-wort was quite frequent near the bridge. There were also patches of locally frequent Common Knapweed, Greater Knapweed, Field Scabious and Red Bartsia, with the west side a little richer than the east.

To the south of the road bridge, the cutting quickly receded to level out at another bridge over the river at SP971751. The old railway track then ran south on a low embankment with a flooded gravel pit close by on the eastern side, and with just occasional low scrub close to the track. The whole verge was mown on this side. On the western side there was willow woodland. Tall White Willow Salix alba overhung the track from there and there were smaller Osier Salix viminalis and Grey Willow S. cinerea below the tall trees, some of which had spread a little way onto the low bank.

SECTION 3

To the south of the corner of the eastern gravel pit at SP971749 the track became more or less level with the adjacent land, or had a very gentle slope downward at the edges. On the eastern side the fence moved back to about 10 metres from the edge of the footpath/cycleway at first. In this area there was moderately tall MG1 grassland in less heavily shaded parts, and there was scattered Hawthorn scrub and various planted young shrubs and trees. These included Guelder Rose Viburnum opulus, Alder Alnus glutinosa and Grey Alder A. incana.

Area 5; There were also areas of moderately rich short grassland here too though, between a pair of old gateways in the north at about SP970747 and a road level-crossing and car park in the south at SP969744. Plants here included Greater Knapweed, Common Knapweed, Black Medick, Lucerne M. sativa, Wild Carrot Daucus carota and Hoary Ragwort Senecio erucifolius. On slightly lower ground beside the flooded gravel pit on the western side there was very locally frequent Marsh Horsetail Equisetum palustre and a little Hard Rush Juncus inflexus. This grassland was probably being maintained by rabbit grazing and many of the plants, even flowering Teasel, were just a few centimetres tall.

To the south of the level-crossing there was an area of very short vegetation with White Clover, Greater Plantain, Rye-grass, Pineapple Weed, Thyme-leaved Speedwell, Smooth Hawks-beard, Hop Trefoil and others.

Area 6; The track then entered another cutting with Hawthorn and Elder abundant, as well as occasional Grey Willow Salix cinerea and Blackthorn Prunus spinosa, but tall trees were only occasional. The coarser vegetation here was mainly MG1 grassland at the mown edges of the track. This included locally abundant Black Horehound Ballota nigra, Hogweed Heracleum sphondylium, Mugwort Artemisia vulgaris and Lesser Burdock Arctium minus. Below the shrubs were locally frequent Ground Ivy Glechoma hederacea, and quite a lot of bare ground. Gaps in the scrub on the cutting slopes were vegetated by locally dominant Bramble Rubus

fruticosus or Rosebay Chamerion angustifolium. On the lower slopes there was very locally frequent Greater Willowherb Epilobium hirsutum.

As the cutting deepened, the grassland to each side became more species-rich. Recorded from this area were Common Knapweed, Greater Knapweed, Meadow Vetchling, Oxeye Daisy Leucanthemum vulgare, Field Scabious, Hoary Ragwort, Hedge Bedstraw Galium mollugo and others.

As the banks of the cutting fell away, Hedge Woundwort, Mugwort, Rosebay and Creeping Thistle became more abundant, but Greater knapweed, Perforate St John's-wort and Meadow Vetchling continued to be quite frequent, especially on the western side, until the southern end of the cutting and a little way beyond. The old railway then ran further south on a low embankment, before crossing the river at SP971734.

SECTION 4

South of the river bridge there was frequent tall hawthorn at the edges but few really tall trees, except for rare White Willow Salix alba on the eastern side. The mown strip here held Black Medick, Knotgrass Polygonum aviculare, Dove's-foot Cranes-bill Geranium molle, Creeping Buttercup, Creeping Cinquefoil and much rarer Rough Hawkbit Leontodon hispidus and Perforate St. John's-wort. Behind the mown strip there was narrow, mostly species-poor MG1 False Oat-grass grassland with abundant tall Hogweed, Upright Hedge Parsley Torilis japonica, Spear Thistle, Creeping Thistle, Teasel and Rosebay. Hoary Willowherb and Broad-leaved Willowherb E. montanum were present but less frequent.

There were also some shady areas beside the track here with locally frequent Herb Robert Geranium robertianum, Ground Ivy Glechoma hederacea, Wood Avens Geum urbanum, Germander Speedwell Veronica chamaedrys, Nipplewort Lapsana communis and Bittersweet Solanum dulcamara. There was an occasional ground-carpet of Ivy.

The western level verge then became wider and was separated from the nearby river by dense Bramble underscrub. Tall MG1 Arrhenatherum elatius vegetation here had locally frequent Bristly Oxtongue, Ragwort, Cock's-foot, Yorkshire Fog, Upright Hedge Parsley and Rough Meadow-grass Poa trivialis. Tufted-vetch often scrambled over these plants and there was also occasional Common Knapweed, Red Bartsia and Ribwort Plantain.

A narrow drain ran along the eastern edge of the track here right to the southern end of the site. It was more open in the north with a reasonable depth of water and with Broad-leaved Pondweed Potamogeton natans and Duckweed Lemna minor in the water, and with Marsh Woundwort Stachys palustris, Marsh Bedstraw Galium palustre, Marsh Horsetail Equisetum palustre, Hard Rush Juncus inflexus, Pulicaria dysenterica and Creeping Jenny Lysimachia nemorum on the banks. There was much less frequent Tufted Hair-grass Deschampsia cespitosa beside the ditch and Tufted Vetch scrambled over the taller plants. Scrub and trees soon returned to the eastern side, shading the ditch, and a little further south the wide western verge was again occupied by abundant scrub.

At one point a little further south, an isolated arm of the river on the western side came close to the track. A more open part of the low embankment sloped down to it with locally frequent Meadowsweet Filipendula ulmaria, Upright Hedge Parsley Torilis japonica and the occasional large anthill. Lower on the slope there was a little Wild Angelica Angelica sylvestris and Greater Bird's-foot Trefoil Lotus uliginosus, while in the river arm there was tall swamp vegetation of Branched Bur-reed Sparganium erectum, Reed Sweet-grass Glyceria maxima and Reedmace Typha latifolia. Below the tall swamp plants was occasional Creeping Jenny Lysimachia nummularia, Water Forget-me-not Myosotis scorpioides, Water Mint Mentha aquatica and Purple Loosestrife Lythrum salicaria.

There was now a row of medium tall White Willow alongside the eastern ditch, together with occasional Grey Willow Salix cinerea, and it was dry at the time of survey. The presence of locally abundant Greater Pond Sedge Carex riparia, with less frequent Reed Sweet-grass Glyceria maxima and rarer Reed mace Typha latifolia suggested that the ditch held water here more often than it was dry though. Beside the ditch was occasional to locally frequent Meadowsweet and Hard Rush.

Summary

There were species of interest from neutral to calcareous grassland almost all the way along the old railway track. On the maps the most species-rich parts are enclosed by a purple line, the moderately species-rich or areas with the most potential for improvement are enclosed by an orange line. Species lists for each main grassland area of interest are given, and these cover all grassland species found on the site.

Indicator Species

In the grasslands of this site, three neutral grassland indicators were found, including the strong indicator Spiked Sedge Carex spicata; and nine neutral to calcareous indicators, including the strong indicators Field Scabious Knautia arvensis and Rough Hawkbit Leontodon hispidus. A further three calcareous indicators were recorded, including the strong indicator Greater Knapweed Centaurea scabiosa.

In the scrub fourteen woody species were found, including the Ancient Woodland indicators Field Maple Acer campestre, Hazel Corylus avellana and Midland Hawthorn Crataegus laevigata, each of which was rare overall. In addition, the Alder Alnus glutinosa here was probably all planted recently. A single Ancient Woodland indicator was found in the ground flora: Hairy St Johns-wort Hypericum hirsutum, which was also rare here.

Near the southern end of the site, and associated with a river arm on the western side of the old railway line and a ditch on the eastern side, nine plants from the Fen, Swamp and Marsh indicator list were found, together with five further plants from the Submerged, Floating and Emergent plant list.

This site seems to fall a little way short of LWS quality but this is a valuable wildlife corridor in an area of

abundant arable land, and it complements the large Stanwick Lakes complex to the south.

There were frequent animal burrows in the cuttings. Breeding Bullfinches, Turtle Doves, Linnets, Yellowhammers, Blackcaps and Whitethroats were recorded within the scrub.

From the northern end of this site the botanical interest continued alongside a bridleway leading toward Thrapston past Woodford Grange, where there was locally frequent Common Knapweed Centaurea nigra, Greater Knapweed C. scabiosa and Field Scabious Knautia arvensis.

This old railway line provides a good wildlife corridor along the Nene Valley and qualifies as an LWS due the scrub diversity and patches of species rich neutral grassland (13 indicators).

Total number of records:	315
Total number of species:	128