Wildern Local Nature Reserve

Outline Management Plan 2019 – 2029

HEDGE·END TOWN COUNCIL

Serving the Community

In association with

Friends of Wildern Nature Park

Report V.10
December 2018

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1. Introduction

‘A perfect place to be, guided by nature’

‘Wildern Local Nature Reserve is set in just over 10 hectares of land managed to complement the land and woodlands around us for the benefit of local wildlife and to support biodiversity. The land is diverse from grazing fields, meadowland to ponds. Historic trees blend the woodlands and grasslands of the neighbourhood together making a rare and tranquil place to be on the urban fringe of Southampton.

The reserve has a diverse range of flora and fauna and is a rich tapestry of habitats. The Coltsfoot Pond is full of dragonflies and damselflies that feed on the insects feeding on the flowers and grasses which are in turn fed upon by the birds. There are many old trees in the Wildern Local Nature Reserve that provide the perfect ecology for Nuthatch and Woodpeckers. In a dwindling landscape increasingly becoming barren to wildlife, our groundstaff and Friends of Wildern Nature Park work to support biodiversity from the ground up.

The three SINCs (Sites of Importance for Nature Conservation) comprise an area of just over 10 hectares that includes sections of woodland with a significant element of surviving:

- Native woodland,
- agriculturally unimproved grasslands (two ‘wet meadows’) that have been allowed to develop without the major use of herbicides or inorganic fertilisers,
- watercourses inundating grassland and woodland supporting flora and fauna characteristic of waterlogged conditions, that ultimately feed into the River Hamble and the Solent
- and three ponds, only one of which is directly connected to the two watercourses through the Wildern area.

Much of Britain’s natural beauty lies in the seasons and Wildern Local Nature Reserve is absolutely no exception. Through considered management of the land and pond and the wider site, we can help conserve this valuable mix of habitats year after year. The spring flowers and autumn colours of our young trees will take time to mature but nothing compares with the abundance of the meadow, flora and fauna in summer or the wide-open skies in winter.

The Wildern Local Nature Reserve is a ‘green lung’ supporting a diverse haven of species of wildlife and fauna. The Town Council alongside its key partners wishes to embrace and protect this area for generations to come and ensure a lasting area for the enjoyment of many.’

Kevin Glyn Davies

Town Clerk

2. Our Vision

Hedge End Town Council seek to develop Wildern Local Nature Reserve in partnership with the Friends of Wildern Nature Park as a tranquil haven that through a diversity of habitat supports a broad range of wildlife and is welcoming, clean and safe for people to visit.

3. General information

The mosaic of ponds, wetlands, meadows and woodlands all linked by streams which flow through the site, provide a rich habitat for both flora and fauna. Extensive species lists can be found in the appendix of this plan. The site forms the basis of the Wildern Priority Biodiversity Link and is an effective wildlife corridor of remnant habitat connecting Biodiversity Hotspots each side of the urban development of Hedge End.

The reserve covers an area of over 10 hectares and has 3 designated SINC's (Site of Importance for Nature Conservation).

The area comprises of Bridget Mary Gardens, Wildern Nature Park and Hogsty Copse (the 3 SINCs) plus the periphery woodland areas of Greta Park and the Recreational Cricket ground at Turnpike Way.

Comprehensive site surveys of the Wildern area were conducted by Hampshire Biodiversity Information Centre in 2003 and 2008 as part of the SINC survey programme. These reports provide details of the habitat, recorded species and site descriptions for each of the main habitats in the park.

More recently 'Friends of Wildern Nature Park' have carried out extensive species surveys (species lists are available in the appendix) throughout 2018 giving us a fantastic baseline to work from.

The LNR site selection was made to further protect and enhance the wildlife corridors included in the Wildern Priority Biodiversity Link as detailed in the Eastleigh Borough Biodiversity Action Plan 2012-2022.

The site is described as a heavily modified urban stream with potential for the restoration of associated priority habitats including rivers, lowland meadows and fen, floodplain grazing, marsh, purple moor grass and rush pastures plus hedgerow, lowland mixed deciduous woodland.

The Plan notes the constraints imposed by the surrounding urban developments.

Hedge End Town Council are the owners of all land included in the Local Nature Reserve and are fully responsible for the management and ongoing maintenance of the site.

The site will remain a protected LNR for a period of twenty-five years from the date of the original application.

4. Site History

Wildern Local Nature Reserve is an urban site surrounded by industrial units and housing. Historically the site was part of a larger estate owned by Adam de la Wildern in 1286. Much of the land at this time was too wet to be used for farming. By the 16th Century farms started to appear, the first being Wildern Farm. Hedgerows were planted to create enclosed fields for grazing sheep. Following World War 1, land that is now Wildern Nature Park continued as farming land, with the woodland used for shooting and the meadows used as rough pasture. Eastleigh Borough Council managed the land as a nature park until 2013 when ownership was transferred to Hedge End Town Council.
In 1961, Dr E. Sakoschansky donated Bridget Mary Gardens to Hedge End Parish Council which became Hedge End Town Council reflecting the large number of houses and businesses which now surround the reserve.

Historic image of Wildern Farmhouse

Aerial imagery from the 1940's gives us some insight into the reserves history (below). Despite the urbanisation of Hedge End the reserve itself appears to have improved dramatically, it is now more wooded and the intense agriculture use now long gone. When compared to the same view in 2013 we can see the reserve is hemmed in by residential properties, industry and highway.

Image taken between 1939 - 1944

Image taken in 2013

5. Site of Importance for Nature Conservation (SINC)

The three SINCs cover an area of approximately 10.3ha that includes sections of woodland with a significant element of surviving:

- ancient semi-natural woodland,
- agriculturally unimproved grasslands (two 'wet meadows') that have been allowed to develop without the major use of herbicides or inorganic fertilisers,
- watercourses inundating grassland and woodland supporting flora and fauna characteristic of waterlogged conditions, that ultimately feed into the River Hamble and the Solent
- and three ponds, only one of which is directly connected to the two watercourses through the Wildern area.

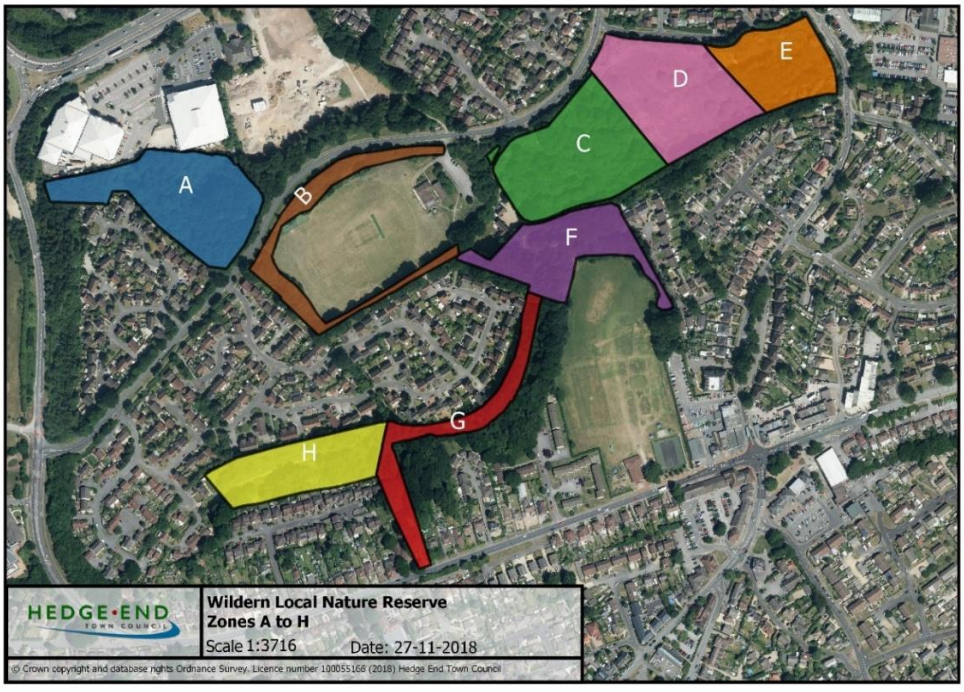
The watercourses that run through all three SINCs are fundamental to the nature of the habitat and its biodiversity, giving real meaning to the Eastleigh Borough Council Biodiversity Plan designation of a Priority Biodiversity Link; a vital wildlife corridor running through urban Hedge End.

6. Tree Preservation Orders (TPO)

Many of the trees within the site are covered under Tree Preservation Orders, these having been historically used to protect trees within the park. The oldest TPO's on the site date back to 1985. There are three different categories of Tree Preservation Order within Wildern Local Nature Reserve; *'Area'* (trees are protected from a specific date and before), *'Woodland'* (All trees of any age are protected) and '*Single/ Group'* (Specific named trees are protected).

7. Wildern Local Nature Reserve Zones

To allow us to easily identify areas of the reserve and to help with managing risk and organisation of works we have created 8 zones, each identifiable by a letter and a unique name based on existing boundaries and ecologically linked habitats.



A. Hogsty Copse

Designated as a SINC and occupying an area of approximately 2.4 ha, Hogsty Copse includes sections of ancient woodlands, semi-natural woodlands including alder carr, areas of heathland which have succeeded to woodland, watercourses, Valley mire and a pond.

The area boundaries with the retail park on the northern side, Upper Northern woodland on the western side, Goodlands Vale on the southern side, Turnpike Way and Shafford Meadows on the eastern side.

Much of this area is covered by a tree protection order. The woodland adjacent to Shafford Meadows is not part of the reserve. Public access is available via a footpath from Turnpike Road.

Above: Hogsty Copse: Parts are flooded for much of the year

B. Turnpike Cricket Ground Woodland

The peripheral hedgerow and woodland areas of recreational playing fields. Boundaries with Turnpike Way on the northern side, wooded walking track running parallel to Lucerne Gardens on the eastern side, Lucerne Gardens on the southern side and Goodalls Lane on the eastern side. All the recreational areas are excluded from the Local Nature Reserve. Public access and car parking areas are available when turning off Turnpike Way.

Above: View of the cricket ground and woodlands with one hundred Black-headed Gulls.

C. Goodalls Meadows

Forming part of the Wildern Nature Park SINC - comprising wetlands, meadows, watercourse, a pond and woodlands. The area boundaries with Goodalls Lane on the western and southern sides, Turnpike Way on the northern side and Coltsfoot Paddock on the eastern side. Public access and car parking areas are available off Turnpike Way.

Above: The pond at Goodalls Meadow

D. Coltsfoot Paddock

Part of the Wildern Nature Park SINC - comprising a fenced wetland meadow with shallow pond and watercourse within the centre of the Park. Boundaries are with Coltsfoot Close on the northern side, Goodalls Lane on the southern side, Turnpike Way/Goodalls Meadow on the western side and Coltsfoot Pond on the eastern side. Public access to this area is limited.

Above: Coltsfoot Paddock a flooded meadow in the heart of the Local Nature Reserve.

E. Coltsfoot Pond

Part of the Wildern Nature Park SINC - comprising a balancing pond with adjacent woodland and watercourse. Boundaries with Coltsfoot Close on the northern side, Coltsfoot paddock on the western side, Goodalls Lane on the southern side and Wildern Lane on the eastern side. Public access is available via a footpath from Coltsfoot Lane.

Above: Coltsfoot Pond, the main pond on the Local Nature Reserve

F. Greta Park Woodland

The woodland is north of the recreation open space and features some large Oak, Alder and Ash with the watercourse running through to the north. This zone is just over 1ha and boundaries with Goodalls Lane on the northern side, Park View on the eastern side and Thistle Road on the western side. All recreational areas are excluded from the Local Nature Reserve. Public access is via a footpath from Upper Northam Road and a footpath from Sowden Close.

Above: Greta Park Woodland; playing fields are excluded from the Local Nature Reserve.

G. Bridget Mary Gardens

This area is the woodland walk part of the designated Bridget Mary Gardens SINC and is approximately 0.75ha. The woodland runs from an entrance on Upper Northam Road, through woodland joining a path going through further woodland with a watercourse running alongside, in the direction of and up to Goodalls Lane (woodland path). Much of this area is covered by a tree protection order. Public access is via a footpath off Upper Northern Road.

Above: A section of the woodland path through Bridget Mary Gardens

H. Gully Mead: Part of the Bridget Mary Gardens SINC, this is a flooded meadow wetland and watercourse with a woodland fringe. Boundaries are with Chalice Court on the southern side, Mallow Road on the western side, Bridget Mary Gardens woodland walk on the eastern side and Thistle Road on the northern side. Public access is via footpaths from Chalice Court and Thistle Road.

Above: Gully Mead, with Cow Parsley predominating and the tree line encroaching. May 2018.

8. Ponds, Rivers and Watercourses

Rivers and watercourses run through the spine of the reserve and ultimately flow into the River Hamble and in turn the Solent. In addition, there are ponds located in Coltsfoot, Goodalls Meadow and Hogsty Copse. This water system, along with wet meadows and flooded woodland, distinguishes the LNR as a series of wetlands, and forms the basis of the biodiversity in the reserve and as such is a key element of the management plan.

River Hamble

Watercourses from the Hogsty Copse and Bridget Mary Garden SINCs merge together within Wildern Nature Park and flow through the Botley Grange area into the River Hamble at Botley Mill. Sections of this watercourse were polluted by a diesel spillage in 2012 which killed Sticklebacks and other fish in these waters.

Coltsfoot Pond

This pond was excavated as part of a housing development in the 1980s and is the largest in the reserve. The pond is not directly fed from the brook alongside, though it does overflow into the adjacent watercourse when full. While the pond was originally created with some amenity features, these have fallen away in time and its main values are now ecological. The pond supports a wide range of important biodiversity include dragonflies, frogs, newts and fish but is in poor condition. An independent consultants report conducted in September 2017 concluded that while the pond has an excessive sediment layer, there are 3 species of invasive non-native weed and it is heavily shaded, but there is no excessive algae growth from nutrient enrichment and as such the pond will respond well to moderate management. Water monitoring on an ongoing basis will support this work.
A main aim of the management plan will be to compile and implement a pond improvement plan that provides suitable habitat for the biodiversity in the pond yet provides safe public access. Recognising that much work has already been carried out on all these fronts during 2018, the plan will continue to address the following issues:

- Removal of some sediment
- Remove of invasive pondweed
- Removal of overhanging trees to improve the light levels
- Identify the main water source to the pond.

Goodalls Pond

This is a small pond recently reinstated by Hedge End Conservation Volunteers (2017). Early maps of the area show a much larger water body that formed part of the river, flooded meadows and woodlands in the area. Encroachment from the adjacent woodland and a build-up of sediment has greatly reduced the size of this pond – yet already, since its reinstatement, we have seen it colonised by frogs and newts, and a small number of dragonfly species.
Goodalls Pond is an important link to the other ponds in the area, and we propose to enlarge it as soon as practically possible, possibly cutting it off from the adjacent brook (to minimise silting up and the possibility of further pollution incidents).

Hogsty Pond

This is a small pond that is not directly fed from the river system in the area and dries out during the summer. The pond is situated directly below overhead power lines and the area surrounding the pond has recently been cleared of shrub and small trees. This has lightened up the whole area and improved access to the pond.
The removal of excessive vegetation within the pond, particularly trees, is desirable to prevent succession.

Bridget Mary Gardens Pond

A small, tree covered pond sits near the brook, just off the path that runs down the hill from Upper Northam Road.

9. Public Access to Wildern Local Nature Reserve

Public access to the Wildern Local Nature Reserve is available via permissive paths from Upper Northern Road, Turnpike Way, Thistle Rd, Mallow Rd, Chalice Court, Coltsfoot Close, Wildern Lane and Greta Park. Car parking is available at the Turnpike Cricket Ground entrance on Turnpike Way. Some of the pathways are gravel based and the access from Upper Northern Road via Greta Park through to Turnpike Way is on a sealed path suitable for disabled access and cyclists. Limited visitor facilities are available within the Local Nature Reserve. Toilet facilities are available in Hedge End 'village', nearby.

The main pedestrian access through the reserve is Goodalls Lane which runs adjacent to the Wildern Nature Park SINC. This public right of way is known locally as the 'Old Stoney' and forms an access track and pedestrian walkway with associated woodland strip and watercourses that runs from the Turnpike Way entrance to Wildern Lane. The lane boundaries with the Wildern farmhouse complex and Thistle Road on the western side, Greta Park woodland, Park View and Dean Court on the southern side.

Above: A view of part of Goodalls Lane – a brook runs along the right-hand side

10.Biodiversity Management and Environmental Education Issues

Site surveys within Wildern Local Nature Reserve were conducted by the Hampshire Biodiversity Information Centre in 2008 as part of the SINC review process. The subsequent survey reports contain extensive details of the flora and fauna found in the area.

The Friends of Wildern Nature Park group conduct regular surveys of the flora and fauna in the area with particular attention to the Priority Species as defined in the Eastleigh Biodiversity Action Plan to establish a database that accurately details the biodiversity on the site. This data is provided to the County Species Recorders and the on-line recording systems that support the Hampshire Biodiversity Information Centre and the National Biodiversity Network (such as iRecord, BirdTrack, etc). This monitoring will enable the appropriate management plans to be developed for the protection of key habitat and species in the reserve.

The Friends of Wildern Nature Park issue regular online postings to its members and the general public to raise awareness of the environmental issues associated with the park and advise of opportunities for public participation in the biodiversity monitoring or conservation volunteering activities in the Park. A newsletter is produced for circulation to local councils, interested parties and other supporters.

11.Aims and objectives for Years 2019 - 2024

All Zones
Continue the monitoring and recording of the flora and fauna of the reserve with attention to the priority species to establish a database that accurately details the biodiversity on the site. This data will be provided to the County recorders (or whichever is the most appropriate official recording scheme for taxon in question), the Hampshire Biodiversity Information Centre and will be used to identify the appropriate management plans to be developed. The exact levels of survey work conducted during the year will be determined by the available monitoring resource and expertise.

The following levels are considered sufficient to monitor the impacts of ongoing habitat improvements on the flora and fauna in the local nature reserve:

- Bird Surveys each Spring and Winter.
- Dragonfly surveys early Spring and Summer.
- Butterfly surveys early Spring and Summer.
- Waterway and Pond surveys each Spring to check for frog and toad spawn and newts.
- Wildflower and Plant survey each Spring to monitor wild flowers and the possible ingress of invasive non-native plants.
- Hoverfly, bee and wasp surveys, year round

In addition to the monitoring activities, the Hedge End Conservation Volunteers meet each month to carry out a wide range of habitat improvement activities including pond and watercourse clearance, path clearance and coppicing.

Our overall aims include:

- Continue to raise awareness of the biodiversity issues associated with the Local Nature Reserve within the local community by means of local newsletters and social media. Community participation will be encouraged and developed with the Wildern and Shamblehurst Schools via the Friends of Wildern Nature Park, social media outlets and the Hedge End Conservation Volunteers Group.

- Introduce a litter reduction and collection strategy across the site. Hedge End Town Council has allocated litter collection resources for the general area, supported by volunteer effort.
- Introduce a program for the identification and removal of specific invasive plants from the site and aid the natural regeneration of the impacted areas.
- In conjunction with specialist groups monitor watercourses and ponds on the reserve for the possible presence of Great Crested Newts.
- Design and install educational boards and signage covering the main access and environmental features and wildlife associated with the Local Nature Reserve.
- In conjunction with the Environment Agency, monitor water quality across the watercourses and ponds on the site.
- Engage with all interested parties such as species experts, community groups and local schools to improve awareness, appreciation, co-operation and general understanding of the importance of biodiversity and to guide general improvements to the local environment.
- Continue mapping of key features of the site – notable trees, waterways, species, habitats, historic features, amenities such as bins, benches etc.

Specific zone aims include:

Zone A - Hogsty Copse

- Continue with the control of invasive weeds, removal of excess pond plant growth and silt, water management and tree clearance activities at the pond site, recognising the breeding habitat requirements of the specialised species in this area.
- Trial scrub clearance in a specific location (to be decided) to encourage the remnant growth of heather and gorse; this will hopefully encourage reptiles including the return of the Smooth snake.
- Clearance of shrubbery to protect and reinstate the Valley mire habitat that is of special conservation interest
- Investigate the possible presence of Common Dormice populations as reported in the neighbouring woodland areas.

Zone B - Turnpike Cricket Ground Woodlands

- Investigate the potential for the removal of the invasive plants (particularly Cherry Laurel) along the woodlands and hedgerows that border the cricket ground and Lucerne Gardens. This will include engagement with residents directly adjoining the area to assess the impact of Laurel removal as it currently provides a screen from the recreation ground.

Zone C - Goodalls Meadow

- Continue with control of invasive weeds, water management, silt and excess plant removal, and selective tree clearance, recognising the breeding habitat requirements of the specialised species in this area.
- Investigate the potential for the creation of a new or enlarged pond in the area.
- Selectively cut and control undergrowth in wooded area to create glades that allow for the return of wildflowers and a greater fauna biodiversity, particularly invertebrates.

Zone D - Coltsfoot Paddock

- Introduce an annual cattle grazing plan to roll back encroaching woodland and to control grass levels in the paddock. Following a 3-year grazing hiatus – assess the impact of re-grazing the land.

- Explore other methods of grass cutting and removal to maintain meadow conditions suitable for the priority species in this area.

Zone E - Coltsfoot Pond

- Continue with the general improvement of Coltsfoot Pond and surrounding areas with emphasis on tree clearance to increase the light levels on the pond, control of invasive weeds, check the spread of rushes and other pond plants, and continue silt removal recognising the breeding habitat requirements of the specialised species in this area.
- Improve the pedestrian access in this area, look at accessibility and how we can encourage people of all abilities to the pond.
- Investigate and address the causes of litter/ contamination of the watercourses.

Zone F - Greta Park Woodlands

- Manage the woodlands to ensure they are safe for visitors as well as to enhance the wildlife corridor from the Village centre to the reserve.
- Investigate creation of buffers to the woodland through changes to the grass cutting schedules.

Zone G - Bridget Mary Gardens

- Investigate grants through the County Council to improve pathways and accessibility.
- Manage the woodlands to ensure they are safe for visitors/ residents as well as to enhance bio-diversity.

Zone H - Gully Mead

- Selective tree removal to prevent further encroachment of the wetland.
- Identify areas to enhance to encourage woodland flowers.
- Investigate the potential for the creation of a new pond in the area.

12.Community Participation, Access and Visitor Management

Hedge End Conservation Volunteers – Established in 2016 with a growing membership of over 30 residents. The group meet monthly in the local area under the leadership and direction of Hedge End Town Council. The volunteers carry out a wide range of activities including, pond and watercourse clearance, path clearance and coppicing. It is anticipated that the Town Council will continue to promote such volunteering activity.

Friends of Wildern Nature Park – Established in 2017; the group has gained local support with over 150 people having joined the Facebook Group. The group's main objective is to raise the conservation status of the reserve for the benefit of the wildlife and those that live in the area.

Having gained support in principle from the local council and local authority, they have put in many hours recording and monitoring the flora and fauna of the Wildern area, engaging with experts in various fields, tapping into their knowledge and advice. A strong relationship has been built between 'Friends of' and Hedge End Town Council.

Community participation - will be encouraged and developed with local schools - Wildern and Shamblehurst, in particular. And by engagement through Friends of Wildern Nature Park with anyone and everyone, both individuals and organisations, who have an interest in improving the area for the benefit of wildlife and the community including specialists in various flora and fauna. A growing number, who do not use social media, additionally subscribe to reports issued on a regular basis.

Above: Hedge End Conservation Volunteers recreating a small pond in Goodalls Meadow, 25th January 2018

13.Costing and Funding Arrangements

The costs of the ongoing maintenance and upgrade works of the nature park as detailed in the Management Plan are currently under the control of HETC and will remain so after the upgrade to Local Nature Reserve, noting that in any event, the remit of the existing SINC status for the bulk of the area in question is to protect and enhance the habitat for biodiversity. The Council will determine the appropriate levels of funding made available to the LNR as part of their existing budget review and allocation procedures.

Hedge End Town Councils current financial commitments include Litter clearance (13 x Bins & staff time as required), Footpath/ road clearance, Tree safety, Path maintenance and Infrastructure repairs and Supervision of Conservation Volunteers group.

Future financial commitments include installation of Interpretation Boards, maintain levels of site maintenance for the plan period, improvements to visitor facilities, e.g. paths, access (DDA), furniture etc. and to work towards improving the bio-diversity and habitat opportunities of the reserve.

14.Appendix

I. Bird Species

Regular bird surveys are conducted in the Wildern Local Nature Reserve and the resultant bird records are submitted to BTO's BirdTrack. Hampshire Biodiversity Information Centre (HBIC) and the National Biodiversity Network also maintain records for the area. A review of these databases confirms that 73 or 28% of the 258-bird species included on the Hampshire list have been recorded in or around the Wildern Nature Reserve.

Above: Grey Wagtail in Coltsfoot Pond, 29th September 2018

24 different species of bird use the nature reserve to support their breeding activities; of note is the Tawny Owl, Great Spotted Woodpecker, Bullfinch, Nuthatch and the Moorhen. The reserve is a good location for winter migrants with Firecrest, Redwing and Lesser Redpoll recorded. In addition to the resident breeders and migratory visitors, HBIC has isolated records of passing rarities including the White Stork, the Pied Flycatcher and the Common Nightingale.

Above: Lesser Redpoll, Bridget Mary Gardens Woodland Path, 1st April 2018

There are many old trees in the park that provide nesting locations for the Nuthatch and woodpeckers however there are limited nesting options available for other resident birds such as the House Sparrow and the Blue Tit. The general loss of wild flowers in the park has resulted in a reduction of feeding options for many birds, particularly the House Sparrow, the Greenfinch and the Bullfinch.

Above: Green Woodpecker, Goodalls Meadow, 21st August 2018

As reported in the State of the UK's Birds 2017, farmland birds are in serious decline with the ongoing deterioration of habitats as the main cause, particularly woodlands and meadows. The monitoring of the status of our birds will be used to determine specific aims for the management plan for the management of the woodlands and meadows in the reserve.

Wildern Local Nature Reserve – Bird Species.

Common Name	Scientific Name	Hampshire Status*	Abundance in WLNR~	Notes^
Mute Swan	*Cygnus olor*	Common resident	no recent sightings	BirdTrack Record
Canada Goose	*Branta canadensis*	Common resident	no recent sightings	BirdTrack Record
Brent Goose	*Branta bernicla*	Winter Visitor	fly through	BirdTrack Record for 2018
Mandarin Duck	*Aix galericulata*	Introduced resident	no recent sightings	BirdTrack Record
Mallard	*Anas platyrhynchos*	Common resident	resident	BirdTrack Record for 2014-2018.
Grey Heron	*Ardea cinerea*	Common resident	resident	BirdTrack Record for 2015-2018
Night-heron	*Nycticorax nycticorax*	Rare vagrant	no recent sighting	BirdTrack Record
White Stork	*Ciconia Ciconia*	Rare vagrant	no recent sightings	HBIC Record 2002-2005. BirdTrack 2014.
Little Grebe	*Tachybaptus ruficollis*	Common resident	no recent sightings	BirdTrack Record
Red Kite	*Milvus milvus*	Common resident	fly through	BirdTrack Record for 2018
Sparrowhawk	*Accipiter nisus*	Common resident	resident	BirdTrack Record for 2017-2018
Common Buzzard	*Buteo buteo*	Common resident	resident	BirdTrack Record for 2015-2018
Eurasian Moorhen	*Gallinula chloropus*	Common resident	resident+	BirdTrack Record for 2014-2018
Eurasian Coot	*Fulica atra*	Common resident	no recent sightings	BirdTrack Record
Black-headed Gull	*Chroicocephalus ridibundus*	Numerous resident	resident	BirdTrack Record for 2014-2018
Mediterranean Gull	*Larus melanocephalus*	Summer visitor	summer visitor	BirdTrack Record for 2015
Lesser Black-backed Gull	*Larus fuscus*	Common visitor	fly through	BirdTrack Record for 2018
Herring Gull	*Larus argentatus*	Winter visitor	winter visitor	BirdTrack Record for 2014-2018
Great Black-backed Gull	*Larus marinus*	Winter visitor	fly through	BirdTrack Record for 2018
Feral Pigeon	*Columba livia*	Common resident	resident	BirdTrack Record for 2014-2018
Stock Dove	*Columba oenas*	Numerous resident	resident	BirdTrack Record for 2014-208
Common Woodpigeon	*Columba palumbus*	Abundant resident	resident+	BirdTrack Record for 2014-2018
Collared Dove	*Streptopelia decaocto*	Numerous resident	resident	BirdTrack Record for 2014-2018
Tawny Owl	*Strix aluco*	Common resident	resident+	BirdTrack Record for 2018

Swift	*Apus apus*	Summer visitor!	summer visitor	BirdTrack Record
Hoopoe	*Upupa epops*	Scarce visitor	no recent sightings	HBIC Record for 2010
Common Kingfisher	*Alcedo atthis*	Common resident	no recent sightings	BirdTrack Record
Wryneck	*Jynx torquilla*	Scarce migrant	no recent sightings	HBIC Record for 2004. BirdTrack for 2014.
Green Woodpecker	*Picus viridis*	Common resident	resident+	BirdTrack Record for 2015-2018
Great Spotted Woodpecker	*Dendrocopos major*	Common resident	resident+	BirdTrack Record for 2014-2018
Kestrel	*Falco tinnunculus*	Common resident!	visitor	BirdTrack Record for 2015-2018
Merlin	*Falco columbarius*	Winter visitor	no recent sightings	BirdTrack Record
Magpie	*Pica pica*	Numerous resident	resident+	BirdTrack Record for 2014-2018
Jay	*Garrulus glandarius*	Numerous resident	resident+	BirdTrack Record for 2014-2018
Jackdaw	*Corvus monedula*	Numerous resident	resident+	BirdTrack Record for 2014-2018
Rook	*Corvus frugilegus*	Numerous resident	resident	BirdTrack Record for 2014-2018
Carrion Crow	*Corvus corone*	Numerous resident	resident+	BirdTrack Record for 2014-2018
Goldcrest	*Regulus regulus*	Numerous resident	winter visitor	BirdTrack Record for 2017-2018
Firecrest	*Regulus ignicapilla*	Common resident	resident	HBIC Record 2016-2017 BirdTrack 2017-18
Blue Tit	*Cyanistes caeruleus*	Abundant resident	resident+	BirdTrack Record for 2014-2018
Great Tit	*Parus major*	Abundant resident	resident+	BirdTrack Record for 2015-2018
Coal Tit	*Periparus ater*	Numerous resident	resident	BirdTrack Record for 2017-2018
Swallow	*Hirundo rustica*	Summer visitor	summer visitor	BirdTrack Record for 2015-2018
Long-tailed Tit	*Aegithalos caudatus*	Numerous visitor	resident	BirdTrack Record for 2014-2018
Yellow-browed Warbler	*Phylloscopus inornatus*	Scarce migrant	no recent sightings	BirdTrack Record for 2016
Chiffchaff	*Phylloscopus collybita*	Summer visitor	summer visitor+	BirdTrack Record for 2014-2018
Willow Warbler	*Phylloscopus trochilus*	Summer visitor	summer visitor	BirdTrack Record for 2015-2018
Blackcap	*Sylvia atricapilla*	Summer visitor	summer visitor+	BirdTrack Record for 2015-2018
Whitethroat	*Sylvia communis*	Summer visitor	summer visitor	BirdTrack Record for 2014
Waxwing	*Bombycilla garrulus*	Winter visitor	no recent sightings	BirdTrack Record for 2016.

Nuthatch	*Sitta europaea*	Numerous resident	resident+	BirdTrack Record for 2014-2018.
Treecreeper	*Certhia familiaris*	Numerous resident	resident+	BirdTrack Record for 2014-2018
Wren	*Troglodytes troglodytes*	Abundant resident	resident+	BirdTrack Record for 2014-2018
Starling	*Sturnus vulgaris*	Numerous resident!	resident+	BirdTrack Record for 2014-2018
Rose-coloured Starling	*Pastor roseus*	Rare vagrant	no recent sightings	BirdTrack Record
Blackbird	*Turdus merula*	Abundant resident	resident+	BirdTrack Record for 2014-2018
Fieldfare	*Turdus pilaris*	Winter visitor	no recent sightings	HBIC Record for 2010
Song Thrush	*Turdus philomelus*	Numerous resident	resident+	BirdTrack Record for 2014-2018
Redwing	*Turdus iliacus*	Winter visitor	winter visitor	BirdTrack Record for 2014-2018.
Mistle Thrush	*Turdus viscivorus*	Common resident!	spring visitor	BirdTrack Record for 2018
Robin	*Erihacus rubecula*	Abundant resident	resident+	BirdTrack Record for 2014-2018
Pied Flycatcher	*Ficedula hypoleuca*	Scarce migrant	no recent sightings	HBIC Record for 2006-2012
Dunnock	*Prunella modularis*	Numerous visitor	resident+	BirdTrack Record for 2014-2018
House Sparrow	*Passer domesticus*	Numerous resident!	resident+	BirdTrack Record for 2014-2018
Grey Wagtail	*Motacilla cinerea*	Common resident	summer visitor	BirdTrack Record for 2015-2018
Pied Wagtail	*Motacilla alba*	Numerous resident	resident	BirdTrack Record for 2014-2018
Brambling	*Fringilla montifringilla*	Winter visitor	winter visitor	BirdTrack Record for 2014-2018
Chaffinch	*Fringilla coelebs*	Abundant resident	resident+	BirdTrack Record for 2015-2018
Bullfinch	*Pyrrhula pyrrhula*	Common resident!	resident	HBIC Record 2017 BirdTrack 2015-2018
Greenfinch	*Chloris chloris*	Numerous resident!	resident	BirdTrack Record for 2015-2018
Lesser Redpoll	*Acanthis cabaret*	Winter visitor	winter visitor	BirdTrack Record for 2018
Goldfinch	*Carduelis carduelis*	Numerous resident	resident+	BirdTrack Record for 2014-2018
Siskin	*Spinus spinus*	Common resident	winter visitor	BirdTrack Record for 2017-2018
73 species			37 residents	
As of August 2018			24 breeding residents	

			4 fly throughs	
			16 visitors	
			16 no recent sightings.	

* Birds Status as defined by the Hampshire Ornithological Society in the Hampshire Bird Report 2016.
~ Abundance as of August 2018 based on surveys conducted by Friends of Wildern Nature Park.
^ BirdTrack Records as included in squares SU 4812, SU 4813 and SU4913.
! Declining Species.
+ Breeding evidence noted.

GB/TC August 2018.

II. Dragonfly and Damselfly Species

Regular surveys are conducted in the Wildern Local Nature Reserve and the dragonfly and damselfly records are submitted to the British Dragonfly Society database via the iRecord online website. While Hampshire Biodiversity Information Centre (HBIC) and the National Biodiversity Network (NBN) maintain records for the area, there are very few dragonfly records available for this area in these databases. Most dragonfly records for the reserve have been collected as a result of an extensive monitoring program conducted by the Friends of Wildern Nature Park in 2018. A review of these surveys confirms that 15 or 41% of the 37 species of dragonflies on the South Hampshire (VC11) area have been recorded in or around the reserve of which 10 species have breeding evidence noted. 14 of these were photographed in the 2018 season.

Above: Beautiful Demoiselle damselfly, Coltsfoot Paddock, 21st June 2018

Historically, the NBN confirms that the Emerald Damselfly has been recorded at Coltsfoot Pond in low numbers, however the species has not been observed in 2018.

Whilst none of the species seen to date are nationally or county scarce, the biodiversity remains significant, particularly in the context of an urban area where there has been little active management to improve the habitat for dragonflies over some decades.

Above: Female Black-tailed Skimmer, Coltsfoot paddock, 18th June 2018

The monitoring of the status of our dragonflies will be used to determine specific aims for the management plan for the ponds, watercourses and meadows in the reserve. An important aim of the management plan is to attain Locally Important Status as determined by the British Dragonfly Society, for Wildern Local Nature Reserve.

Above: Ruddy Darter, Coltsfoot Pond, 14th July 2018

Wildern Local Nature Reserve: Dragonfly and Damselfly Species.

Common Name	Scientific Name	South Hampshire Status*	Proof of Breeding^	Notes~
Southern Hawker	*Aeshna cyanea*	Common – widely distributed	Probable Breeding confirmed in the WLNR area.	Photographed egg-laying at Coltsfoot Pond and local garden pond plus other photos in local gardens in 2018.
Migrant Hawker	*Aeshna mixta*	Common – widely distributed	Probable breeding based on adult numbers present in the WLNR area.	Photographed at Coltsfoot Pond, 2018 and local garden pond pre2018. Three adults seen together at Coltsfoot Pond, August 2018.
Emperor Dragonfly	*Anax imperator*	Common – widely distributed	Probable Breeding confirmed in the WLNR area.	Adult and sub-adult photographed at Coltsfoot Pond/Paddock (egglaying), Hogsty pond, 2018, local garden pond pre-2018.
Golden-ringed Dragonfly	*Cordulegaster boltonii*	Common – widely distributed	Probable breeding based on adult numbers present.	Photographed at Goodalls Pond, Hogsty Pond, local gardens, Coltsfoot Paddock and observed at Coltsfoot brook, all 2018.
Ruddy Darter	*Sympetrum sanguineum*	Localised distribution	Probable breeding	Photographed egg-laying at Coltsfoot pond, 2018
Common Darter	*Sympetrum striolatum*	Common – widely distributed	Exuviae found in local garden ponds confirms proof of breeding.	Photographed Coltsfoot Pond (mating), Coltsfoot Paddock, Goodalls Pond, Hogsty Pond, local garden pond, 2018.
Broad-bodied Chaser	*Libellula depressa*	Common – widely distributed	Emergent individual in local garden confirms proof of breeding.	Mating pair photographed Coltsfoot Pond, Coltsfoot Paddock, Hogsty Pond, Goodalls Pond, 2018,

				and as emergent in local garden pond pre-2018.
Black-tailed Skimmer	*Orthetrum cancellatum*	Increasingly common – widely distributed	Probable breeding as likely to have been an emergent/sub-adult	Female photographed in Coltsfoot Paddock near rushes, 2018
Banded Demoiselle Damselfly	*Calopteryx splendens*	Locally abundant by slow flowing streams and rivers	Probable breeding based on adults present close to the brooks that provide habitat for local breeding.	Photographed at Coltsfoot Pond and Coltsfoot Paddock, 2018
Beautiful Demoiselle Damselfly	*Calopteryx virgo*	Locally abundant by small, clear streams	Probable breeding based on adults present. 4 in one walk through, and 3 at one location.	Photographed at Gully Mead, Bridget Mary Gardens footpath, Goodalls Pond/brook, Coltsfoot Paddock, 2018
Azure Damselfly	*Coenagrion puella*	Common – widely distributed	Probable breeding as species is the most common & widespread.	10+ mating pairs photographed at Coltsfoot Pond, Goodalls Pond, Hogsty Pond, local garden, 2018
Common Blue Damselfly	*Enallagma cyathigerum*	Common – widely distributed	Probable breeding as species is common & widespread in WLNR.	Mating/egg-laying photographed Coltsfoot Pond, Coltsfoot Paddock, 2018
Blue-tailed Damselfly	*Ischnura elegans*	Common – widely distributed	Probable breeding as species is common & widespread in WLNR.	Mating photographed Coltsfoot pond, Hogsty Pond, local garden pond, 2018.
Large Red Damselfly	*Pyrrhosoma nymphula*	Common – widely distributed	Probable breeding as species is common & widespread in WLNR.	Photographed Coltsfoot Pond, Goodalls Pond, Hogsty Pond, in local garden pond and in the general area, 2018.

Emerald Damselfly	*Lestes sponsa*	Common – widely distributed	Adults present historically but no sightings in 2018.	NBN records form 2001 show observations of 2 each at Coltsfoot pond, and Merlin Gardens Pond (about 200 metres outside of the WNP area)
14+1 species. August 2018.			14 Probable/confirmed.	

* South Hampshire Status as defined by British Dragonfly Society.

^ Assessment as of August 2018 by Friends of Wildern Nature Park based on British DragonFly Society Proof of Breeding criteria.

~ Notes based on Friends of Wildern Nature Park monitoring. A possible sighting of male Black Darter (Sympetrum danae) in local garden on 25th October 2015 not included in these records as there is no tangible evidence and it is a scarce species. GB/TC December 2018.

III. Butterfly and Moth Species

Regular surveys are conducted in the Wildern Local Nature Reserve and the butterfly records are submitted to the Hampshire and Isle of Wight branch of Butterfly Conservation via iRecord online website. Hampshire Biodiversity Information Centre (HBIC) and the National Biodiversity Network also contain butterfly records but neither databases can provide historical records for this area.

Above: Purple Hairstreak, Goodalls Pond, 27th June 2018

The monitoring activities conducted in 2018 in or around the Wildern Nature Reserve have recorded 26 or 57% of the 46-butterfly species included on the Hampshire species list.

The Small Heath butterfly has been recorded in Coltsfoot Paddock. This is classified as a 'High Priority Butterfly Species' by Butterfly Conservation and is listed as a species of principal importance under section 41 of the NERC Act in England.

Above: Small Heath butterfly, Coltsfoot Paddock, 19th September 2018

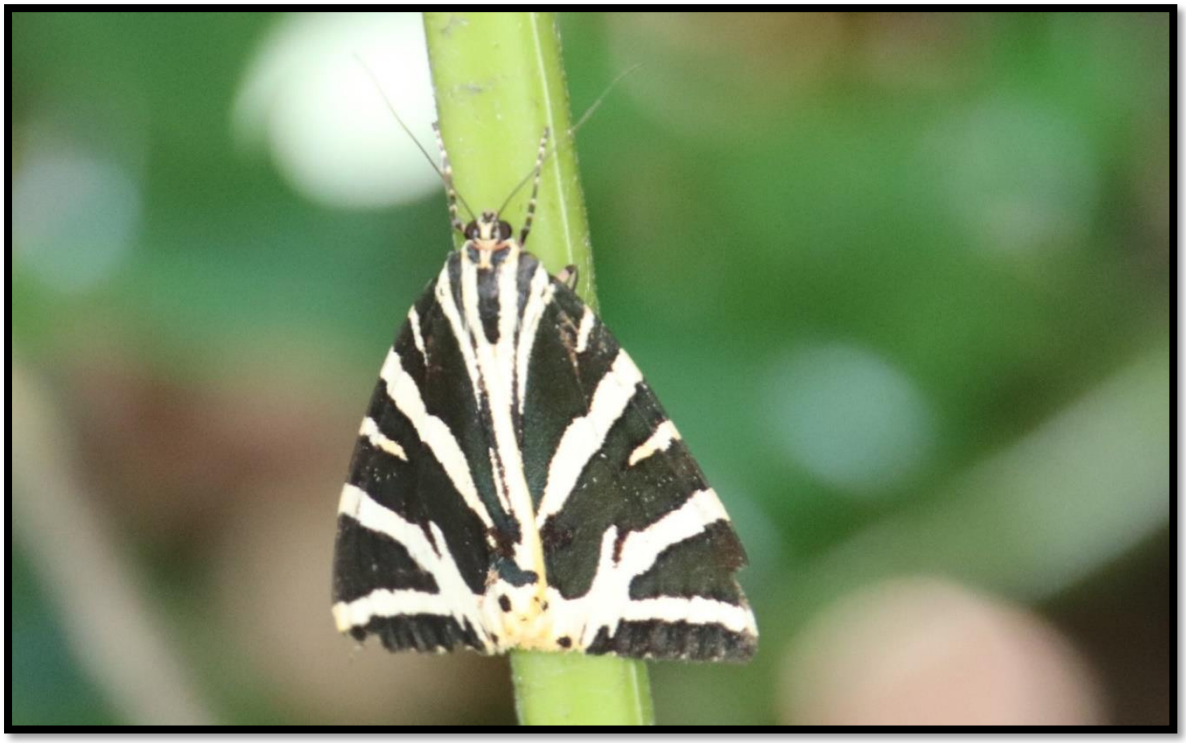
Wildern Local Nature Reserve is located between 2 Key Areas for Lepidoptera namely Southampton Water East and Botley Wood and therefore forms an effective wildlife link between these two important areas.

Above: Silver-washed Fritillary, Goodalls Meadow, 29th June 2018

As reported in the State of the UK's Butterflies 2011, butterflies are in serious decline with the ongoing deterioration of habitats as the main cause, particularly in relation to woodlands and meadows. The monitoring of the status of our butterflies will be used to determine specific aims for the management plan for the management of the woodlands and meadows in the reserve.

Above: Marbled White, Coltsfoot Paddock, 7th July 2018

A few more than 20 records of day time Moth species have been found in the Park, though comprehensive records have yet to be compiled. A moth trap has been purchased as part of a grant from Hampshire Councillor Grant scheme will enhance the moth surveys and the quality of our records.



Above: Jersey Tiger, woodland in Goodalls Meadow, 3rd August 2018. This sighting prompted a request to Butterfly Conservation in Hampshire to note this species is now regularly seen in the county.

Wildern Local Nature Reserve: Butterfly Species.

Common Name	Scientific Name	Hampshire Status*	Abundance in WLNR^	Notes
Small Skipper	*Thymelicus sylvestris*	Resident	Often seen singly in Coltsfoot Paddock	Photographed in Coltsfoot Paddock, 2018
Essex Skipper	*Thymelicus lineola*	Resident	Often seen singly in Coltsfoot Paddock	Photographed in Coltsfoot Paddock, 2018
Large Skipper	*Ochlodes sylvanus*	Resident	Often seen singly in Coltsfoot Paddock – the more numerous of the three Skippers	Photographed in Coltsfoot Paddock, 2018
Brimstone	*Gonepteryx rhamni*	Resident	Common & widespread	Photographed in Coltsfoot Paddock, 2018
Large White	*Pieris brassicae*	Resident	Common & widespread	Photographed in Coltsfoot Paddock, 2018
Small White	*Pieris rapae*	Resident	Common & widespread	Photographed in Coltsfoot Paddock, 2018
Green-veined White	*Pieris napi*	Resident	Common & widespread	Photographed in Coltsfoot Paddock, 2018
Orange-tip	*Anthocharis cardamines*	Resident	Occasional sightings.	Photographed in Coltsfoot Paddock, 2018
Purple Hairstreak	*Neozephyrus quercus*	Resident	Common & widespread	Photographed in Coltsfoot Paddock, 2018
Small Copper	*Lycaena phlaeas*	Resident	Often seen singly in Coltsfoot Paddock & Gully Mead.	Photographed in Coltsfoot Paddock, 2018
Brown Argus	*Plebeius agestis*	Resident	Often seen singly in Coltsfoot Paddock & Gully Mead.	Photographed in Coltsfoot Paddock, 2018
Common Blue	*Polyommatus icarus*	Resident	Common & widespread	Photographed in Coltsfoot Paddock, 2018
Holly Blue	*Celastrina argiolus*	Resident	Common & widespread	Photographed in Coltsfoot Paddock, 2018
Red Admiral	*Vanessa atalanta*	Resident	Occasional sightings throughout the year	Photographed in Coltsfoot Paddock, 2018
Painted Lady	*Vanessa cardui*	Immigrant	Occasional sightings	Photographed in Coltsfoot Paddock, 2018
Small Tortoiseshell	*Aglais urticae*	Resident	Occasional sightings	Photographed in Coltsfoot Paddock, 2018
Peacock	*Inachis io*	Resident	Occasional sightings	Photographed in Coltsfoot Paddock, 2018
Comma	*Polygonia c-abum*	Resident	Often seen singly.	Photographed in Coltsfoot Paddock, 2018
Silver-washed Fritillary	*Argynnis paphia*	Resident	One confirmed sighting	Photographed in Coltsfoot Paddock, 2018

Speckled Wood	*Pararge aegeria*	Resident	Common & widespread	Photographed in Coltsfoot Paddock, 2018
Marbled White	*Melanargia galathea*	Resident	Occasional sightings	Photographed in Coltsfoot Paddock, 2018
Gatekeeper	*Pyronia tithonus*	Resident	Common & widespread	Photographed in Coltsfoot Paddock, 2018
Meadow Brown	*Maniola jurtina*	Resident	Common & widespread	Photographed in Coltsfoot Paddock, 2018
Small Heath	*Coenonyrmpha pamphilus*	Resident	One confirmed sighting	Photographed in Coltsfoot Paddock, 2018
Clouded Yellow	*Colias croceus*	Resident	One confirmed sighting	Photographed in Coltsfoot Paddock, 2018
Ringlet	*Aphantopus hyperantus*	Resident	Common in Coltsfoot Paddock	Photographed in Coltsfoot Paddock, 2018
26 species				

* Status as determined by Butterfly Conservation.

^ Abundance as of August 2018 as determined by Friends of Wildern Nature Park.

GB/TC Dec 2018

IV. Other invertebrates

The recording of beetles, spiders, hoverflies and bees, etc within the Wildern Local Nature Reserve has started and records are being submitted to the county recorders using iRecord. Of particular note is the Stag Beetle which is classified as nationally scarce.
A growing number of invertebrate species, such as the spider Misumena vatia (found late September, rather than 'as late as August'), are being found outside the parameters of their usual season.

Above: Stag Beetle, Hogsty Corner, 7th June 2018

Above: Wasp Spider, originally from the Mediterranean area, now resident in Southern England – this and several others have been seen in Coltsfoot Paddock. Photo 30th July 2018.

Above: Dark Giant Horse-fly (can be an inch long), Goodalls Meadow, 21st July 2018.

Above: Golden-bloomed Grey Longhorn (beetle), Coltsfoot Paddock, 12th June 2108

V. Amphibians and Reptiles

Regular surveys are conducted in the Wildern Local Nature Reserve and the amphibian and reptile records are submitted to the county recorder via the iRecord online website. Hampshire Biodiversity Information Centre (HBIC) and the National Biodiversity Network also contain amphibian and reptile records for this area. A review of these databases confirms that 7 or 58% of the 12 native amphibian and reptile species recorded in Hampshire or 13 species (but discounting the now 2 distinct species of grass snake, as determined in 2017) in the UK have been recorded in or around Wildern LNR.

Above: Common Frog, Hogsty Corner Pond, 25th August 2018

There is anecdotal evidence from residents who have lived by the Wildern Nature Park area for some decades that Great Crested Newts were present in the Goodalls Pond area which prevented approval of a housing development. However, there are no available records to confirm this report. Further monitoring including eDNA testing on the ponds is required to establish the position definitively.

Above: Common Lizard, Coltsfoot Paddock, 15th June 2018

As reported in the Hampshire Amphibian and Reptiles report for 2012, the Common Toad, the Great Crested Newt and the Slow Worm are in serious decline with the ongoing deterioration of habitats as the main cause of this decline particularly ponds and meadows. The monitoring of the status of our amphibians and reptiles will be used to determine specific aims for the management plan for the ponds and meadows in the reserve.

Wildern Local Nature Reserve: Amphibians and Reptiles.

Common Name	Scientific Name	Hampshire Status*	Abundance in WLNR^	Notes
Common Frog	*Rana temporaria*	Widespread	Common & widespread	Photographed in 2018
Common Toad	*Bufo bufo*	Dramatic decline	No recent sightings	Local garden record 2011
Great Crested Newt	*Triturus cristatus*	Adversely affected by development	Locally extinct?	Anecdotal evidence from 25 years ago when planning permission turned down because of presence.
Smooth Newt	*Lissotriton vulgaris*	Widespread	Common & widespread	Photographed in 2018
Palmate Newt	*Lissotriton helveticus*	Widespread	Widespread but uncommon	Photographed in 2018
Common Lizard	*Zootoca vivipara*	Widespread but subject to predation by cats.	Common in Coltsfoot Paddock.	Photographed 2018. NBN & HBIC records 2014.
Slow Worm	*Anguis fragilis*	Adversely affected by development	Unconfirmed sightings in 2018	NBN & HBIC records 2014.
Grass Snake	*Natrix natrix*	Widespread	Unconfirmed sightings in 2018	HBIC record 2005.
7+1 species to August 2018.				

* Status determined from Hampshire Amphibian & Reptiles Group Herpetofauna Report 2012.

^ Abundance as of August 2018 as determined from surveys in the WLNR and local garden ponds conducted by Friends of Wildern Nature Park.

GB/TC August 2018.

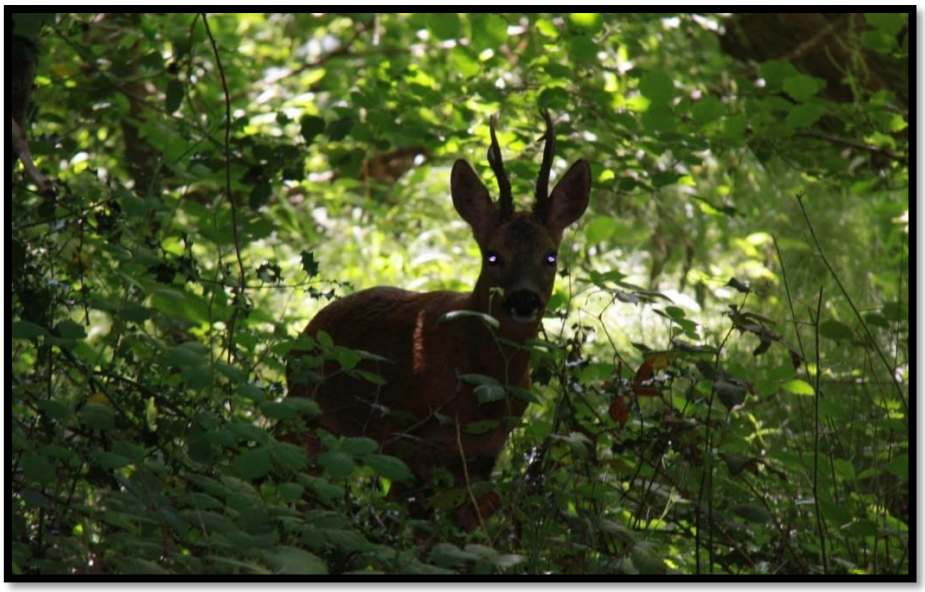
VI. Mammals including Bats

A review of the Hampshire Biodiversity Information Centre (HBIC) and National Biodiversity Network (NBN) records plus an analysis of local records, show the presence of around 15 mammals and 2 bat species in the reserve.

Several of these records are greater than 10 years old and cannot be supported by recent sightings.

Roe Deer are often recorded in Wildern Nature Park but the smaller mammals such as voles and shrews are very difficult to find. Though there are numerous sightings of bats across the area there are few definite or confirmed records of particular species. There are many Grey Squirrels in the Park and domestic cats are often seen hunting in the area.

Mammal surveys are difficult to conduct. The recent purchase of a trail camera and bat detectors as part of a grant from Hampshire Councillor Grant scheme will enhance the mammal surveys and the quality of our records.



Above: Roe Deer in woods by Goodalls Meadow, 21st June 2018

Above: Up to four Hedgehogs at a time have visited this residential garden in the Gully Mead area Photo 5th June 2018, 21.15 hours

Wildern Local Nature Reserve: Mammals including Bats.

Common Name	Scientific Name	Status in UK*	Abundance in WLNR^	Notes
European hedgehog	*Erinaceus europaeus*	Vulnerable	Resident in local garden. Thought to be declining due to road kill.	HBIC records from 1982
European mole	*Talpa europaea*	Least Concern	Common & widespread	Mole hills provide evidence
Grey squirrel	*Sciurus carolinensis*	EU Invasive Alien species.	Common & widespread	Recorded in all zones.
Wood mouse	*Apodemus sylvaticus*	Least Concern	Common	Photographed 2018.
Hazel dormouse	*Muscardinus avellanarius*	Vulnerable	No evidence as yet	Recorded in adjacent motorway woodland
House mouse	*Mus musculus*	Least Concern	Common	Recorded in local gardens
Pygmy shrew	*Sorex minutus*	Least Concern	Common & widespread	Photographed dead individuals 2018
Common shrew	*Sorex araneus*	Least Concern	Common & widespread	Dead individuals found plus reports of cats kills
Brown rat	*Rattus norvegicus*		Common & widespread	Photographed in 2018.
Field vole	*Microtus agrestis*	Least Concern	Common, especially in Coltsfoot Paddock	No records to date
Bank vole	*Myodes glareolus*	Least Concern	Common & widespread	Photographed 2018
Water vole	*Arvicola amphibius*	Endangered	Thought to be locally extinct	No evidence to date
Rabbit	*Oryctolagus cuniculus*		Thought to be locally extinct	No evidence in recent years
Red fox	*Vulpes vulpes*	Least Concern	Resident	Recorded in all zones. Scat often seen in Coltsfoot Paddock
Stoat	*Mustela erminea*	Least Concern	Thought to be locally extinct	Anecdotal evidence from local resident in Coltsfoot Paddock some years ago
European otter	*Lutra lutra*	Least Concern	No recent sightings	HBIC record 2006.

Badger	*Meles meles*	Least Concern	A possible resident with some circumstantial evidence	HBIC record 2007. Adult seen as road kill on adjacent road in 2017.
Roe deer	*Capreolus capreolus*	Least Concern	Resident up to 4 at a time.	Photographed 2018
Muntjac deer	*Muntiacus reevesi*	EU Invasive Alien species.	No recent sightings.	HBIC record 2008
Noctule Bat	*Nyctalus noctula*	Priority species in the UK Biodiversity Action Plan	No recent sightings or detections.	NBN record August 2016
Common pipistrelle bat	*Pipistrellus pipistrellus*	Least Concern.	Common and widespread. Numerous sightings across the area.	HBIC records from 1994. NBN record August 2016. Photographed (dead) 2017. Bat detector August 2018.
Feral cat	*Felis catus*	Considered to be a threat to small mammals and birds.		Several domestic cats present. At least 1 Feral cat recorded.

* Status determined from A review of the Population and Conservation Status of British Mammals from Natural England 2018.

^ Abundance assessment as of August 2018 based on surveys conducted by Friends of Wildern Nature Park.

GB/TC August 2018.

VII. Plants and Trees

A review of the Hampshire Biodiversity Information Centre (HBIC) records show the presence in Wildern Local Nature Reserve of 150 plant and tree species in the Wildern Nature Park SINC of which 2 are listed as notable and 2 as vulnerable. Detailed records for the Hogsty Corner SINC are currently not available. The HBIC records provide general locations for these plants and the classification status that determines the plants legal status.

Above: Ragged Robin and Buttercups, orchids and grasses, plus sphagnum moss (not visible) but also many sapling birch trees – this is Coltsfoot Paddock, 31st May 2018.

Wildern Nature Park SINC contains 12 Ancient Woodland Vascular Plants (AWVP) indicator species most strongly associated with ancient woodland and are typical components of botanically rich ancient woodland communities. Nine acid/neutral grassland indictors are present, these being species which seldom occur outside of unimproved acid/neutral grasslands or are indicative of a long period of uninterrupted grassland management.

Above: There are many different grasses in Coltsfoot Paddock. Photo 14th June 2018

The HBIC records also confirm the presence of BAP Priority Habitats of wet woodland, lowland mixed deciduous woodlands, Purple moor-grass and rush pasture together with a number of notable plants including the Bluebell, Common Cottongrass, Corn Spurrey and Lesser Spearwort. The presence of these habitats and species confirms the importance of the Coltsfoot Pond and Paddock to the biodiversity of the reserve and as such the need for appropriate aims to safeguard this habitat are prime considerations of the management plan.

Recent management of the woodlands has consisted of path clearance and tree lopping to protect adjacent housing with little work directed towards the long-term management of priority habitats. A main aim of the management plan will be to compile and implement a woodland management plan that provides suitable habitat for the biodiversity in the park yet provides safe public access. As such the plan will address the following issues:

- Identify and protect the Veteran and Ancient trees including those covered by Tree Protection Orders.
- Carry out clearance of some invasive non-native plants and aid natural regeneration as necessary.
- Carry out coppicing and tree clearance to open glade areas for wild flower growth and natural woodland re-generation.
- Seek grants from external organisations to support the woodland management plan.

Scientific Name	Common Name	Indicator Species*	Abundance in WLNR^	Notes
Acer pseudoplatanus	Sycamore		Rare	
Achillea ptarmica	Sneezewort	ANG Indicator	Rare	Photographed in 2018
Agrostis canina	Velvet Bent		Occasional	
Agrostis stolonifera	Creeping Bent		Frequent	
Alisma plantago-aquatica	Water-Plantain		Rare	
Alnus glutinosa	Alder		Occasional	
Alopecurus geniculatus	Marsh Foxtail		Rare	
Alopecurus pratensis	Meadow Foxtail		Frequent	
Anagallis tenella	Bog Pimpemel	ANG Indicator	Rare	
Angelica sylvestris	Wild Angelica		Frequent	Photographed in 2018
Anthoxanthum odoratum	Sweet Vernal Grass		Frequent	
Anthriscus sylvestris	Cow Parsley		Rare	
Apium nodiflorum	Fool's water-cress		Frequent	
Arum maculatum	Lords-and- Ladies		Occasional	
Aster	Michaelmas Daisy		Abundant	
Athyrium filix-femina	Lady Fern		Occasional	
Bellis perennis	Daisy		Frequent	
Betula pendula	Silver Birch		Rare	
Betula pubescens	Downy Birch		Occasional	
Brachypodium sylvaticum	False Brome		Occasional	
Callitriche stagnalis	Common Water Starwort		Frequent	
Calluna vulgaris	Heather	Notable species. NT	Hogsty Corner	
Calystegia sepium	Hedge Bindweed		Rare	Photographed in 2018
Cardamine flexuosa	Wavy Bitter Cress		Frequent	
Cardamine pratensis	Cuckooflower		Rare	

Carex canescens	White Sedge	Notable species. NT	Coltsfoot Pond	
Carex flacca	Glaucous Sedge		Frequent	
Carex laevigata	Smooth Stalked Sedge		Occasional	
Carex nigra	Common Sedge	ANG Indicator	Rare	
Carex ovalis	Oval Sedge		Rare	
Carex panicea	Carnation Sedge	ANG Indicator	Occasional	
Carex pendula	Pendulous Sedge	AWVP indicator	Occasional	
Carex remota	Remote Sedge	AWVP indicator	Frequent	
Carex viridula oedocarpa	Common Yellow Sedge	ANG Indicator	Occasional	
Centaurea nigra	Common Knapweed		Rare	Photographed in 2018
Cerastium fontanum	Common Mouse-ear		Occasional	
Cirsium palustre	Marsh Thistle		Rare	Photographed in 2018
Conopodium majus	Pignut	AWVP indicator	Rare	
Convolvulus arvensis	Field Bindweed		Rare	
Cornus sanguinea	Dogwood		Rare	
Corylus avellane	Hazel		Frequent	
Cotoneaster	Cotoneaster		Rare	
Crataegus monogyna	Hawthorn		Occasional	
Cynosurus cristatus	Crested Dog's tail		Frequent	
Dactylis glomerata	Cock's Foot		Occasional	
Dactylorhiza praetermissa	Southern Marsh Orchid	ANG Indicator	Rare	
Deschampsia caespitosa	Tufted Hair Grass		Rare	
Digitalis purpurea	Foxglove		Rare	
Dryopteris dilatata	Broad Buckler Fern		Occasional	
Dryopteris filix-mas	Common Male Fern		Rare	
Elytrigia repens	Common Couch		Rare	

Epilobium hirsutum	Great Willowherb		Frequent	Photographed in 2018
Epilobium montanum	Broad leaved Willowherb		Coltsfoot Paddock	Photographed in 2018
Epilobium palustre	Marsh Willowherb		Occasional	
Epilobium parviflorum	Hoary Willowherb		Rare	
Equisetum palustre	Marsh Horsetail		Rare	
Eriophorum angustifolium	Common Cottongrass	VU	Goodall's Meadow	
Eupatorium cannabinum	Hemp Agrimony		Rare	
Fagus sylvatica	Beech		Rare	
Festuca rubra	Red Fescue		Frequent	
Fraxinus excelsior	Ash		Rare	
Galium aparine	Cleavers		Frequent	
Galium palustre	Common Marsh bedstraw		Frequent	
Geranium dissectum	Cut leaved Cranes bill		Rare	
Geum urbanum	Herb Bennet		Occasional	
Geum urbanum	Herb Robert		Coltsfoot Paddock	Photographed in 2018
Glechoma hederacea	Ground Ivy		Rare	
Glyceria fluitans	Floating Sweet Grass		Abundant	
Hedera helix	Ivy		Abundant	
Heracleum sphondylium	Hogweed		Occasional	
Holcus lanatus	Yorkshire Fog		Abundant	
Hordeum secalinum	Meadow Barley	ANG Indicator	Rare	
Hyacinthoides	Hyacinthoides		Rare	
Hyacinthoides non-scripta	Bluebell	AWVP indicator	Frequent	
Hydrocotyle vulgaris	Marsh Pennywort	ANG Indicator. NT	Rare	
Hypericum elodes	Marsh St John's wort	NT	Coltsfoot Paddock	
Hypericum maculatum	Imperforate St John's Wort		Rare	

Ilex aquifolium	Holly	AWVP indicator	Occasional	
Iris pseudacorus	Yellow Iris		Rare	
Juncus acutiflorus	Sharp-flowered Rush		Abundant	
Juncus articulatus	Jointed Rush		Frequent	
Juncus effuses	Soft Rush		Frequent	
Juncus inflexus	Hard Rush		Frequent	
Lemna	Lemna		Rare	
Leontodon hispidus	Rough Hawkbit		Rare	
Lepidium campestre	Field Pepperwort	NT	Goodall's Pond	
Lolium perenne	Perennial Rye Grass		Abundant	
Lonicera periclymenum	Honeysuckle		Rare	
Lotus corniculatus	Common Bird's-foot Trefoil		Rare	
Lotus uliginosus	Greater Bird's-foot Trefoil		Frequent	Photographed in 2018
Lotus uliginosus	Greater bird's foot Trefoil		Coltsfoot Paddock	Photographed in 2018
Luzula campestris	Field Wood Rush		Rare	
Luzula multiflora	Heath Wood Rush		Rare	
Lychnis flos-cuculi	Ragged Robin		Occasional	Photographed in 2018
Lycopus europaeus	Gipsywort		Rare	Photographed in 2018
Lysimachia vulgaris	Yellow Loosestrife		Frequent	
Malus domestica	Apple		Rare	
Melampyrum pratense	Common Cow-wheat	NT	Goodall's Meadow	
Mentha aquatica	Water Mint		Frequent	Photographed in 2018
Molinia caerulea	Purple Moor-grass	ANG Indicator	Occasional	
Myriophyllum aquaticum	Parrots Feather		Abundant	
Narcissus	Garden Daffodil		Rare	
Oenanthe crocata	Hemlock Water Dropwort		Rare	

Oxalis acetosella	Wood-sorrel	NT	Bridget Mary Gardens	
Phalaris arundinacea	Reed Canary Grass		Rare	
Phyllitis scolopendrium	Harts Tongue	AWVP indicator	Rare	
Pinopsida	Pinopsida		Rare	
Plantago lanceolata	Ribwort Plantain		Rare	
Plantago major	Greater Plantain		Rare	
Poa trivialis	Rough Meadow Grass		Occasional	
Pontederia cordata	Pickerel Weed		Coltsfoot Paddock	Photographed in 2018
Potamogeton	Pondweed		Occasional	
Potentilla anserina	Silverweed		Rare	
Potentilla erecta	Tormentil	NT	Frequent	Photographed in 2018
Potentilla reptans	Creeping Cinquefoil		Rare	
Prunella vulgaris	Selfheal		Rare	
Prunus avium	Wild Cherry	AWVP indicator	Rare	
Prunus domestica	Wild Plum		Rare	
Prunus laurocerasus	Cherry laurel		Rare	
Prunus spinosa	Blackthorn		Occasional	
Pteridium aquilinum	Bracken		Occasional	
Pulicaria dysenterica	Common Fleabane		Coltsfoot Paddock	Photographed in 2018
Quercus robur	Pedunculate Oak		Frequent	
Ranunculus acris	Meadow Buttercup		Rare	
Ranunculus ficaria	Lesser Celandine		Occasional	
Ranunculus flammula	Lesser Spearwort	VU	Rare	
Ranunculus repens	Creeping Buttercup		Frequent	
Ribes nigrum	Black Currant	AWVP indicator	Frequent	
Ribes rubrum	Red Currant	AWVP indicator	Frequent	

Rosa arvensis	Field Rose	AWVP indicator	Rare	
Rosa canina	Dog Rose		Occasional	
Rubus fruticosus agg	Bramble		Frequent	
Rubus idaeus	Raspberry		Occasional	
Rumex acetosa	Common Sorrel		Frequent	
Rumex crispus	Curled Dock		Occasional	
Rumex obtusifolius	Broad-leaved Dock		Frequent	
Salix caprea	Goat Willow		Rare	
Salix cinerea	Grey Willow		Frequent	
Sambucus nigra	Elder		Occasional	
Scrophularia nodosa	Common Figwort		Rare	
Senecio aquaticus	Marsh Ragwort	NT	Frequent	
Senecio jacobaea	Common Ragwort		Rare	
Silene dioica	Red Campion		Rare	
Solanum dulcamara	Bittersweet		Occasional	Photographed in 2018
Sorbus aucuparia	Rowan		Rare	
Sparganium erectum	Branched Bur-reed		Occasional	
Spergula arvensis	Corn Spurrey	VU	Goodall's Lane	
Sphagnum	Sphagnum		Abundant	
Stachys sylvatica	Hedge Woundwort		Rare	
Stellaria holostea	Greater Stitchwort		Rare	
Stellaria uliginosa	Bog Stitchwort		Rare	
Succisa pratensis	Devil bit Scabious		Coltsfoot Paddock	Photographed in 2018
Trifolium pratense	Red Clover		Occasional	
Trifolium repens	White Clover		Frequent	
Typha latifolia	Bulrush		Abundant	

Urtica dioica	Common Nettle		Abundant	
Veronica beccabunga	Brooklime		Rare	
Veronica hederifolia	Ivy leaved Speedwell		Occasional	
Veronica montana	Wood Speedwell	AWVP indicator	Rare	
Veronica scutellata	Marsh Speedwell	NT	Coltsfoot Meadow	
Viburnum opulus	Guelder Rose	AWVP indicator	Rare	
Vicia cracca	Tufted Vetch		Occasional	Photographed in 2018
Vicia sativa	Common Vetch		Rare	
Vicia tetrasperma	Smooth Tare		Rare	
Viola riviniana	Common Dog Violet		Rare	

* Indicator Species as determined in HBIC Site Surveys dated 2008 and 2009 for Wildern Nature Park only.

^ Abundance as determined from local surveys and HBIC Site Surveys dated 2008 and 2009 for Wildern Nature Park only. Highest level shown. Ancient Woodland Vascular Plants (AWVP) indicator species.

Acid/Neutral Grassland (ANG) indicator species.

VU Vulnerable. NT Non-threatened.

GB/TC August 2018.

VIII. Fish species

The only water body in the reserve that holds fish that we are aware of is Coltsfoot Pond as Hogsty Corner Pond dries out in the summer and Goodalls Pond has only been reinstated for a couple of seasons. Sticklebacks that were present in the brook at that location were wiped out in a diesel spillage circa 5-6 years ago.

Some fish in Coltsfoot Pond have been introduce through human intervention, which is why we have a significant, though young, population of coarse fish, mainly Rudd and Roach**.** Large carp that were present in the past however were killed a year or so ago. There is recent photographic evidence of Sticklebacks in Coltsfoot Pond.

Above: Rudd, possibly and/or hybrids, Coltsfoot Pond, 8th May 2018

Above: Stickleback, Coltsfoot Pond, 22nd April 2018

Interestingly, particularly because iRecord has no record of such in these co-ordinates, we have at least one, possibly two European Eels which are classified as Critically Endangered. First sighted whilst looking for Great Crested Newts on an April evening, by torchlight, we have subsequently obtained a poor photo of the dorsal ridge of one of the Eels protruding through mud near the edge of the pond. It is surmised that the Eel (or Eels) came up the Hamble, and with the wet weather earlier in the year, followed our brook upstream, and clambered out to the pond, sensing the presence of fish (which Eels eat).

IX. Invasive and Non-native Plants

A review of the Hampshire Biodiversity Information Centre (HBIC) records show the presence in Wildern Local Nature Reserve of 19 plant species classified as invasive non-native plants. The HBIC records provide general locations for these plants and the classification status that determines the plants legal status and corrective actions.

Japanese Knotweed has been recorded in Hogsty Copse, but further records indicate this plant was treated as part of the housing development in the area. Coltsfoot Pond is listed as a prime location for several water bound plants including Curly Waterweed and Parrot's Feather. The most common non-native plant is the Cherry Laurel which is in each of the main areas of the reserve.

Above: The Parrot's Feather pondweed is an invasive, non-native species. Coltsfoot Pond, 25th June 2018

The ongoing monitoring of the invasive non-native plants will be used to determine specific aims for the management plan for the reserve.

Wildern Local Nature Reserve: Invasive and Non-native plants.

Common Name	Scientific Name	Status*	Location in WLNR^	Notes
Italian Alder	*Alnus cordata*	Plantlife: Urgent	Wildern Nature Park	HBIC record for 2014
Butterfly Bush	*Buddleja davidii*	Plantlife: Critical	Hogsty Corner	HBIC record for 2014
Tibetan Cotoneaster	*Cotoneaster conspicuus*	Plantlife: Urgent	Wildern Nature Park	HBIC record for 2014
Cotoneaster sp.	*Cotoneaster sp.*	Plantlife: Urgent	Wildern Nature Park	HBIC record for 2014
New Zealand Pigmy weed	*Crassula helmsii*	Plantlife: Critical	Coltsfoot Pond	HBOC record for 2002
Spurge	*Euphorbia amygdaloides subsp. robbiae*	Plantlife: Critical	Wildern Nature Park	HBIC record for 2015
Japanese Knotweed	*Fallopia japonica*	Plantlife: Critical	Hogsty Corner	Treated as part of housing development in 2014
Curly Waterweed	*Lagarosiphon major*	Plantlife: Critical	Coltsfoot Pond	HBIC record for 1998
Bay	*Laurus nobilis*	Plantlife: Critical	Coltsfoot Pond	HBIC record for 2006
Garden Privet	*Ligustrum ovalifolium*	Plantlife: Critical	Wildern Nature Park	HBIC record for 2014
Parrot's-feather	*Myriophyllum aquaticum*	Plantlife: Critical	Coltsfoot Pond	HBIC record for 2008
Corsican Pine	*Pinus nigra*	Plantlife: Critical	Wildern Nature Park	HBOC record for 2014
Pickerelweed	*Pontederia cordata*	Plantlife: Urgent	Coltsfoot Pond	HBIC record for 2006
Cherry Laurel	*Prunus laurocerasus*		Wildern Nature Park, Hogsty Copse, Bridget Mary Gardens.	HBIC records for 2004 -2015
Turkey Oak	*Quercus cerris*	Plantlife: Critical	Wildern Nature Park	HBIC record for 2014
Evergreen Oak	*Quercus ilex*	Plantlife: Critical	Wildern Nature Park	HBIC record for 2014
Red Oak	*Quercus rubra*	Plantlife: Critical	Wildern Nature Park	HBIC record for 2014
False-acacia	*Robinia pseudoacacia*	Plantlife: Critical	Wildern Nature Park	HBIC record for 2014
Bamboo	*??*		Bridget Mary Gardens	Present 2018
19 species as of August 2018				

* Status references extracted from HBIC records for Invasive Non-native Species Records dated August 2018.

^ Locations extracted from HBIC records for Invasive Non-native Species Records dated August 2018.

X. Other categories

We are mindful that a host of species such as molluscs are not dealt with here, not to mention the whole Fungus kingdom.

We are recording ALL species (within limits), and will, over time, turn our attention to areas that are not currently in focus, as a further guide to action in the LNR area.

Credits

Wildern Farm House picture – Frances Welsh.
All other photographs - Terry Crow, Friends of Wildern Nature Park.

Photographic records of the various species details on these appendices can be viewed on the Friends of Wildern Nature Park Facebook page:
https://www.facebook.com/media/set/?set=oa.2123701174543793&type=3