

Site Management Plan

2018 - 2022

Nazeing Triangle Local Nature Reserve



Epping Forest
Countrycare

a service provided by Epping Forest District Council

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1.0 General Information

1.1 Location (See appendix 1 section 6.1 for a location map)

Name: Nazeing Triangle LNR **Area:** 0.6 ha
Grid Reference: TL 414 065 **Warden:** Epping Forest Countrycare
County: Essex **District:** Epping Forest
Parish: Nazeing **Local Planning Authority:** Epping Forest District Council

Conservation Status: Statutory Local Nature Reserve (14/06/2001), Essex Wildlife Trust, Local Wildlife Site (EP33) in Epping Forest District Council Local Plan January 1998.

Nature of legal interest: Nazeing Parish Council owns the site freehold. Managed in partnership with Epping Forest District Council under section 39 of The Wildlife and Countryside Act 1981.

1.2 Site Description

The site is roughly triangular in shape and is enclosed by a hedge consisting mainly of Hawthorn (*Crataegus monogyna*). The south-eastern corner is mainly dry consisting of neutral grassland. The remainder of the site is predominantly wet and is dominated by Common Reedmace (*Typha latifolia*), soft rush (*Juncus effuses*) and Great Willowherb (*Epilobium hirsutum*). Several Grey Willows (*Salix cinerea*) of varying ages also exist in this area.

The main feature of the site is its pond. There is a large amount of emergent vegetation around its perimeter, mainly consisting of Common Reedmace and Soft Rush. Slightly more unusual species include Creeping Jenny (*Lysimachia nummularia*), Lady's Smock (*Cardine pratensis*) and Gipsywort (*Lycopus europaeus*). The section of the pond in the southwest corner is surrounded by mature vegetation (mainly willow) and receives very little light. It is possibly this difference in habitats which attracts the valuable population of amphibians and reptiles. The Great Crested Newt (*Triturus cristatus*), a Biodiversity Action Plan 'Flagship species' is present in this pond in large numbers along with the Smooth Newt (*Triturus vulgaris*) and Grass Snakes (*Natrix natrix*).

There are a few mature/semi-mature trees found on the site, those most notable being a large White Willow (*Salix alba*) on the western boundary and a Grey Willow (*Salix cinerea*) on the eastern boundary. There is also an area of mature Hawthorn (*Crataegus monogyna*) coppice stools located on the eastern boundary.

1.3 Owners

Chairman
Nazeing Parish Council
Greenleaves
Hoe Lane
Nazeing
Essex
EN9 2RG

Managed by Epping Forest Countrycare,
c/o Neighbourhoods,
Civic Offices,
High Street,
Epping,
Essex,
CM16 4BZ

01992 564224

contactcountrycare@eppingforestdc.gov.uk www.eppingforestdc.gov.uk/countrycare

1.4 Rights of Access

There is free public access over the whole site which is accessed via a gate. A boardwalk leads around part of the edge of the pond.

1.5 Boundaries (See Appendix 1 section 6.1 for a boundary map)

The site has roads running along all its sides, and is buffered by a dense mainly hawthorn hedge which is flailed by Nazeing Parish Council during the winter months.

1.6 Maps and Photographic Coverage

The following are available from Epping Forest District Council, Planning Services, Epping, (EFDC): 1920 OS Map Scale 25 inches to the mile (EFDC) 1880 - <http://www.oldmaps.co.uk>.

2.0 Environmental Information

2.1 Physical Information

2.1.1 Topography

Nazeing Triangle is a low-lying area within the Nazeing catchment. Its highest point is 79.6m Above Ordnance Datum (AOD) on top of the embankment.

2.1.2 Climate

Month	Max. temp.	Min. Temp.	Days of air frost (days)	Sunshine (Hours)	Rainfall (mm)	Days of rainfall >1mm(days)
Jan	7.9	2.4	7.4	45.9	51/9	10.9
Feb	7.2	2.2	7.4	66.1	34.0	8.1
Mar	10.9	3.8	2.9	103.2	42.0	9.8
Apr	13.3	5.2	1.1	147.0	45.2	9.3
May	17.2	8.0	0.1	185.4	27.2	8.5
Jun	20.2	11.1	0.0	180.6	53.0	8.4
Jul	22.8	13.6	0.0	190.3	38.3	7.0
Aug	22.6	13.3	0.0	194.4	47.3	7.2
Sep	19.3	10.9	0.0	139.2	56.9	8.7
Oct	15.2	8.0	0.3	109.7	61.5	9.3
Nov	10.9	4.8	3.0	60.6	52.3	9.3
Dec	8.8	3.3	6.9	37.8	54.0	10.1
Annual	14.8	7.2	29.1	1540.4	583.6	106.5

This table is information for Greenwich which is approximately 20 miles South of Nazeing

Source: <http://www.metoffice.gov.uk/public/weather/climate/gcpv7fnqu>

2.1.3 Geology, Soils, Hydrology

The surface geology consists of glacial boulder clay, overlying London clay.

2.2 Biological Information

2.2.1 Flora

There has been no formal survey of flora undertaken. However it is clear that the main flora found onsite are varied, although small this site has many transitional habitat types in various states of succession, making the floral diversity relatively high.

2.2.1.1 Wetland

The wetland habitats as discussed make this site unique and ideal for its large population of Great Crested Newts. The pond has two very different types of habitat. The main area of the pond is open and due to a pollution event in recent years has very little vegetation. The south west corner of the pond however, is under dense shade. The pipe leaking into the pond has since been repaired and it is hoped the pollutant levels will drop allowing aquatic vegetation to recolonise. To aid in this pre planted coir mats have been put down along the southern edge of the pond (for a species list see Appendix II section 7.1.1) and *phragmites* cuttings have been planted beside the boardwalk.

The findings of a presence and absence invertebrate survey carried out during summer 2007 highlighted the water was suitable to sustain fresh water invertebrates such as water stick insect (*Ranatra linearis*), diving beetles and various caddis fly larva, indicating that the water quality is good. Anecdotal evidence suggests the invertebrate population has decreased since the 2007 survey, however this is probably due to the pollution event and the diminishing vegetation. It is hoped the population will start to recover. For a copy of the 2016 survey results see Appendix II section 7.2)

2.2.1.2 Willow Coppice

The main woody species found is coppiced Goat Willow, with very few standard trees of any significant age. The Goat Willow particularly prefers water logged soils and for this reason this site is ideal. The Goat Willow is found as emergent vegetation, in full sun and shallow waters. This species also has a varied age range within this site and the management in the past has promoted this varied age sward.

The site also has hawthorn, blackthorn, dog rose and elm. The elm is found in the north east corner of the site and mainly consists of elm at variant stages of decay. This area offers a contrast to the rest of the site as standing dead wood would be beneficial for a variety of wildlife. Elm in this situation found so close to a water body is excellent as a decaying biomass as it takes longer to break down when in contact with water, unlike willow which will break up in a few seasons.

The hedge found around the whole site mainly consists of hawthorn, making an excellent thicket between the road and the main body of the site.

2.2.1.3 Grassland

The neutral grassland area is mainly found in the south west corner of the site consisting of Ox-eye daisy, Meadow vetchling and Self heal. Although floristically not very significant it creates an ideal contrasting habitat for newts to use during summer months. Cuckoo flower, uncommon on this site, but not within the region, is also found adjacent to the beginning of the board walk, but in no great number. Sulphur Clover (*Trifolium ochroleucon*) which has been designated by the BSBI as scarce, is present in small numbers in the area of grassland to the west of the boardwalk. (For a full species list see Appendix II section 7.1.2)

2.2.2 Fauna

From observation large numbers of dragon fly species have been noted and countless breeding Great Crested Newts were observed during training days in summer 2007. However since 2007 carp have colonised the pond and in 2016 a newt survey was undertaken and no Great Crested Newts were found. There is still a small population of smooth newts present. Due to the presence of carp it is unlikely that Great Crested Newts will re-colonise the pond.

Grass snakes and slow-worms have also been recorded on this site.

3.0 Cultural Information

3.1 Historical & Land Use

At the end of the 1800s Nazeing Triangle was referred to as the Upper Recreation Ground. It was used by the school as a playing field and by parishioners for grazing stock. It came to the parish under the Enclosure Act of 1861. The villagers drew their water from the pond until after WWI when it was filled in as it was deemed to be dangerous. Four decades of deterioration followed: diseased willows and horse chestnuts, overgrown hedges, heavily saturated and overrun with water rats. In 1961 the council decided to restore it to its former use. For more information on the history of Nazeing see David Pracey's book 'The story of Nazeing: Five miles from everywhere'.

In 1988 Epping Forest Countrycare, Epping Forest District Council's Countryside Management Service installed a kissing gate, seat, and stile, and in 1990 it took on the management of the Triangle. In 1999, after an estimated 537 hours of work, the Triangle was opened officially as a Nature Reserve. Countrycare began a redevelopment that included a boardwalk over the pond for wheelchair access and an information panel, which featured artwork by pupils at Nazeing County Primary School. On 12th June 2001 the area was designated as a Local Nature Reserve.

3.2 Public Interest

There is limited public interest in this site, and its linear path doesn't really make it appealing to dog walkers or ramblers. Epping Forest Countrycare has had a great deal of local interest in relation to management of the site. The Parish Council are happy to keep this Reserve as a relatively 'undisturbed' area, which in turn will benefit wildlife and education. In 2017 Countrycare received a Tesco Bags of Help grant to replace the rotting dipping platform and encourage more visitors into the reserve.

3.3 Past management

A full history of past management can be found in Appendix III, Section 8.1.

4.0 Aims and Operations

4.1 Management Aims

- 4.1.1 To maintain and enhance the biodiversity of the grassland.
- 4.1.2 To maintain and enhance the biodiversity of the pond.
- 4.1.3 To safeguard the populations of notable species with appropriate management, monitoring and review of management works.
- 4.1.4 To maintain the educational value of the site.

4.2 Management Operations (see Appendix 1 section 6.2 for a site map)

4.2.1 To maintain and enhance the diversity of the grassland

- 4.2.1.1 The grassland diversity can be enhanced by carrying out an annual grass cut of the terrestrial area during September, leaving areas of grass for invertebrates to take refuge.
- 4.2.1.2 Cut areas of rank vegetation e.g. Hogweed every month to eradicate it from site.
- 4.2.1.3 Seed western end of meadow with wetland species.
- 4.2.1.4 To enhance the population of Sulphur Clover an early cut should be carried out in late April to cut down the amount of competitive species and encourage the Sulphur Clover to thrive. All cuttings must be removed to reduce nutrients in the soil.
- 4.2.1.5 Lay the southern hedgerow to allow more light into the meadow area.
- 4.2.1.6 Cut the hedgerow along the grassland edge every three years.

4.2.2 To maintain and enhance the biodiversity of the pond

- 4.2.2.1 Plant up old reedbed with *phragmites* cuttings.
- 4.2.2.2 Monitor *phragmites* plantings.
- 4.2.2.3 Coppice the willows from around the pond edge on a 4 year rotation.
- 4.2.2.4 Use coppiced willow to create a woven willow hide at the end of the boardwalk.
- 4.2.2.5 Turn rotten dipping platform into a wildfowl platform.

4.2.3 To safeguard populations of notable species with appropriate management, monitoring and review of management works.

- 4.2.3.1 Presence absence surveys should also be carried out on the following:
 - Flora (terrestrial and freshwater)
 - Amphibians/Reptiles
 - Freshwater invertebrates
- 4.2.3.2 Management should be amended depending on the results of these surveys.

4.2.4 To maintain and enhance the site for visitors.

- 4.2.4.1 Use the site for educational days, such as practical conservation days and pond dipping.
- 4.2.4.2 Inspect and maintain the boardwalk, gates and signs on the site.

5.0 Work Schedule

5.1 Key

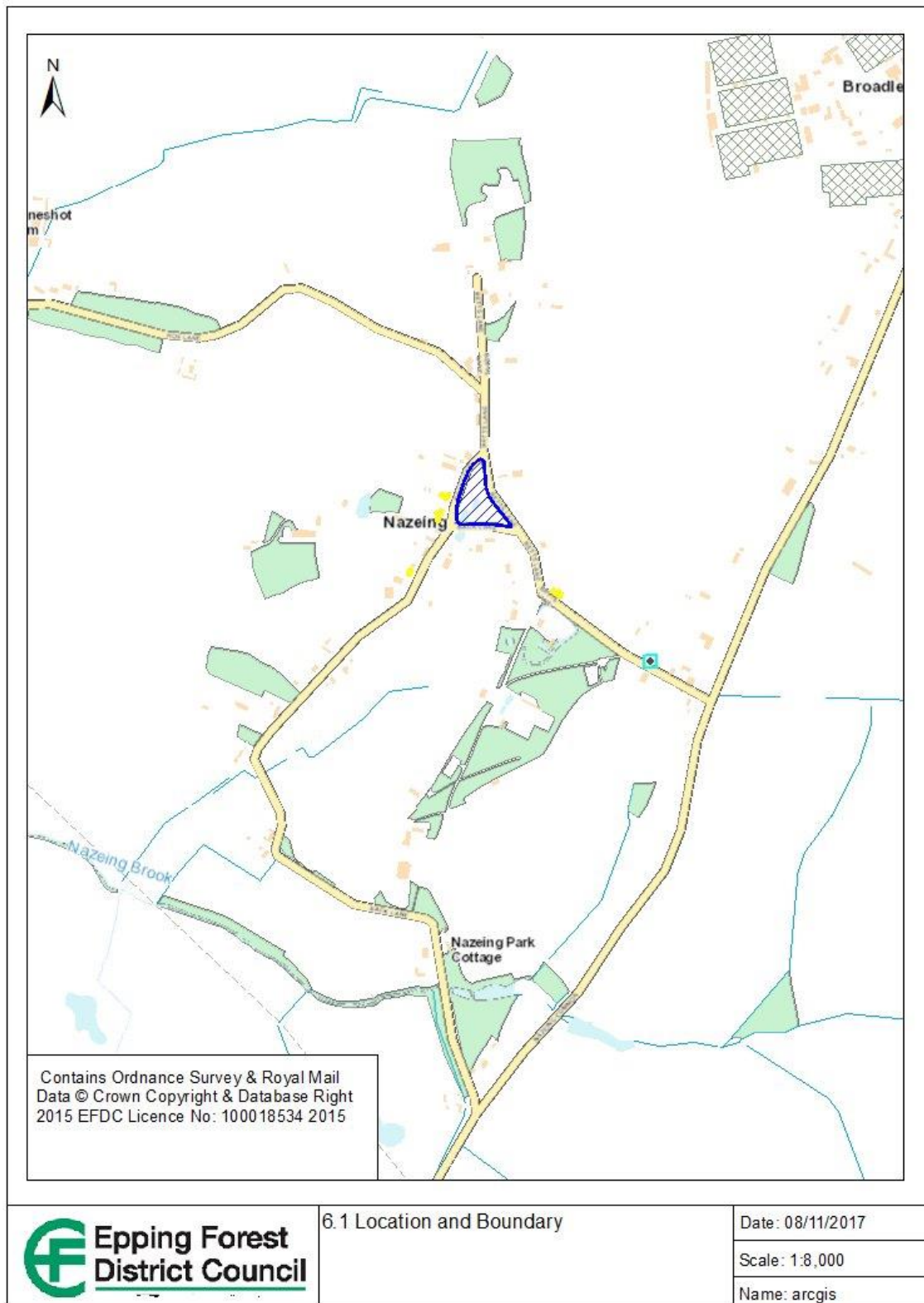
Key			
1	Jan, Feb, Mar	S	Staff
2	Apr, May, Jun	V	Volunteers
3	Jul, Aug, Sep		
4	Oct, Nov, Dec		

5.2 Work Programme: Five Year Period

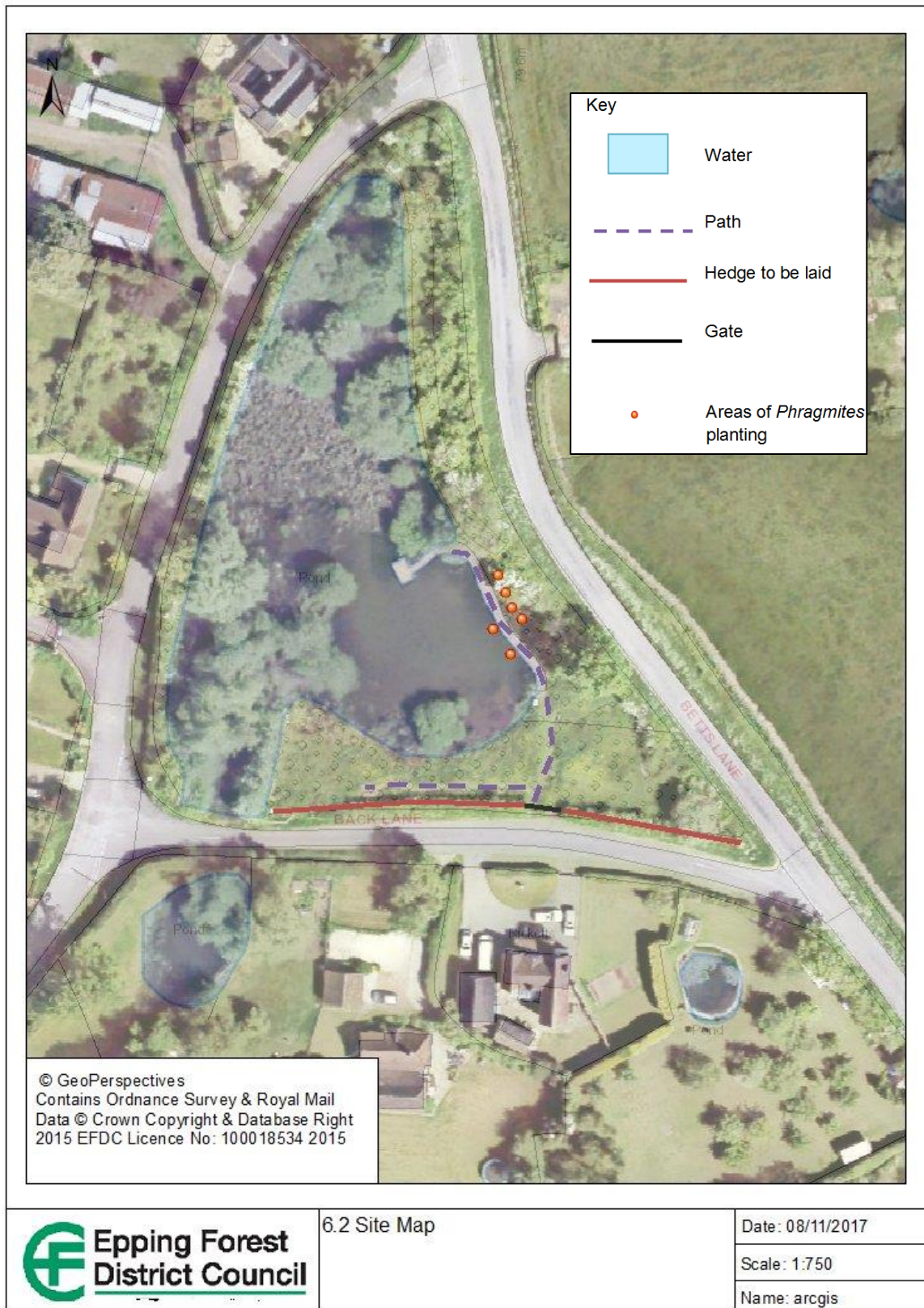
	Projects	2018				2019				2020				2021				2022				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
4.2.1.1	Cut grassland area annually			V				V				V				V					V	
4.2.1.2	Cut rank vegetation monthly	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
4.2.1.3	Seed western end of meadow.	V																				
4.2.1.4	Lay southern hedgerow	V																				
4.2.1.5	Cut hedgerow along southern edge on three year rotation.													S								
4.2.2.1	Plant up old reedbed with phragmites		S				S															
4.2.2.2	Monitor phragmites plantings			S				S				S				S					S	
4.2.2.3	Coppice willow	V				V				V				V				V				
4.2.2.4	Use coppiced willow to create woven willow hide	V																				
4.2.2.5	Turn rotten dipping platform into a wildfowl platform				S																	
4.2.3.1	Species surveys		S	S			S	S			S	S			S	S				S	S	
4.2.4.1	Education days			S				S				S				S						S
4.2.4.2	Maintain countryside furniture	Ongoing																				

APPENDIX I

6.1 Location and Boundary Map



6.2 Site Map



APPENDIX II

Section 7.1 Species List

7.1.1 Coir matting June 2017

Common Name	Scientific Name
Lesser Pond Sedge	<i>Carex acutiformis</i>
Soft Rush	<i>Juncus effuses</i>
Purple Loosestrife	<i>Lythrum salicaria</i>
Yellow Flag Iris	<i>Iris pseudacorus</i>
Water plantain	<i>Alisma plantago-aquatica</i>
Water mint	<i>Mentha aquatic</i>
Brooklime	<i>Veronica beccabunga</i>
Flowering rush	<i>Butomus umbellatus</i>

7.1.2 Full Species List

7.1.2.1 Wildflowers - survey undertaken in 2015 by Martin McCleary

Common Name	Scientific Name	Common Name	Scientific Name
Black Knapweed	<i>Centaurea nigra</i>	Bristly ox-tongue	<i>Picris echioides</i>
Black Medic	<i>Medicago lupulina</i>	Red clover	<i>Trifolium pratense</i>
Creeping Buttercup	<i>Ranunculus repens</i>	Red veined doc	<i>Rumex sanguineus</i>
Creeping Thistle	<i>Cirsium arvense</i>	Self heal	<i>Prunella vulgaris</i>
Greater Willow Herb	<i>Epilobium hirsutum</i>	Sheep sorrel	<i>Rumex acetosella</i>
Hedge bedstraw	<i>Galium mollugo</i>	Sulphur clover	<i>Trifolium ochroleucon</i>
Hedge Woundwort	<i>Stachys sylvatica</i>	Tare	<i>Vicia hirsute</i>
Hogweed	<i>Heracleum sphondylium</i>	Tufted vetch	<i>Vicia cracca</i>
Ladies Bedstraw	<i>Galium verum</i>	Water figwort	<i>Scrophularia auriculata</i>
Meadow Vetchling	<i>Lathyrus pratensis</i>	Wavy bittercress	<i>Cardaminen flexuosa</i>
Ox-eye daisy	<i>Leucanthemum vulgare</i>	Yarrow	<i>Achillea millefolium</i>
Prickly lettuce	<i>Lactuca serriola</i>		

7.1.2.2 Grasses sedges and Rushes - survey undertaken in 2015 by Martin McCleary

Common name	Scientific Name	Common Name	Scientific Name
Brome spp	<i>Bromus spp</i>	Meadow barley	<i>Hordeum secalinum</i>
Cocks foot	<i>Dactylis glomerata</i>	Meadow foxtail	<i>Alopecurus pratensis</i>
Common Reed	<i>Phragmites communis</i>	Perennial rye grass	<i>Lolium perenne</i>
False oat grass	<i>Arrhenatherum elatius</i>	Timothy grass	<i>Phleum pratense</i>
Flowering rush	<i>Butomus umbellatus</i>		

7.1.2.3 Amphibians and Reptiles – survey undertaken in 2016 by Countrycare staff

Common Name	Scientific Name
Smooth Newt	<i>Triturus Lissotriton vulgaris</i>
Grass snake	<i>Natrix natrix</i>
Slow-worm	<i>Anguis fragilis</i>

7.1.2.3 Invertebrates – Adhoc records from 2015-2017 recorded by Countrycare staff

Common Name	Scientific Name	Common Name	Scientific Name
Brimstone Butterfly	<i>Gonepteryx rhamni</i>	Small tortoiseshell butterfly	<i>Aglais urticae</i>
Burnet Companion Moth	<i>Euclidia glyphica</i>	Small white butterfly	<i>Artogeia rapae</i>
Cinnebar Moth	<i>Tryia jacobaeae</i>	Greater water boatman	<i>Notonecta glauca</i>
Comma butterfly	<i>Polygonia c-album</i>	Lesser water boatman	<i>Corixa punctata</i>
Common Blue butterfly	<i>Polyommatus icarus</i>	Common water fleas	<i>Daphnia</i>
Five spot burnet moth	<i>Zygaena trifolii</i>	Ramshorn snail	<i>Planorbidae</i>
Green veined white butterfly	<i>Artogeia napi</i>	Water hog-louse	<i>Asellus aquaticus</i>
Holly blue butterfly	<i>Celastrina argiolus</i>	Beetle larvae spp	<i>Coleoptera</i>
Large skipper butterfly	<i>Ochlodes venata</i>	Damselfly larvae	<i>Zygoptera</i>
Large white butterfly	<i>Pieris brassicae</i>	Mayfly larvae	Ephemeroptera
Meadow brown butterfly	<i>Maniola jurtina</i>	Phantom Midge larvae	<i>Chaoboridae</i>
Orange tip butterfly	<i>Anthocharis cardamines</i>	Water stick insect	<i>Ranatra linearis</i>
Peacock butterfly	<i>Inachis io</i>	Water scorpion	<i>Nepa cinerea</i>
Ringlet butterfly	<i>Aphantopus hyperantus</i>	Emperor Dragonfly	<i>Anax imperator</i>
Small heath butterfly	<i>Coenonympha pamphilus</i>	Common blue damselfly	<i>Enallagma cyathigerum</i>
Small skipper butterfly	<i>Thymelicus sylvestris</i>		

7.2 Newt Survey results 2016 - Undertaken by Countrycare staff

Date	Smooth Newt Male	Smooth Newt Female	Total
17/05/2016	1	2	3
18/05/2016	1	1	2
19/05/2016	1	0	1
20/05/2016	2	0	2
Totals	5	3	8

APPENDIX III

8.1 Past Management

Date	Task
23/03/06	Cut grass and coppiced willow and hawthorn
26/05/06	Cut paths
06/09/06	Cut paths
05/10/06	Cut and raked grassland area, coppiced willow adjacent to boardwalk and in front of gate. Cleared reedmace in front of sign board and minimal scrub clearance undertaken
07/12/06	Cleared bramble to right of boardwalk, coppiced willow stools and opened up reedbed to left of boardwalk.
30/08/07	Pulled reedmace at end of boardwalk and cleared grass area.
09/10/07	Pulled reed mace around pond and boardwalk.
14/01/08	Pond clearance .
22/01/08	Pond clearance.
30/09/08	Cut meadow and pulled out bridle way gate.
02/10/08	Installed field gate, raked grass, coppiced willow and pulled reed mace.
28/11/08	Pulled reeds and dup out rush along boardwalk.
20/01/09	Pulled reeds and rushes.
18/05/09	Cut & raked grassland.
24/06/09	Cut pathways.
20/07/09	Cut meadow area.
16/11/09	Felled Willows.
23/11/09	Felled willow with contractor.
24/11/09	Felled willow & cleared reedmace with contractor.
25/11/09	Finished pond area & graded banks
26/11/09	Cleared along boardwalk, coppiced willow, erected newt fencing around soil bank and planted up gaps in hedgerow.
16/04/10	Contractors moved sediment.
12/05/10	Levelled & seeded meadow.
24/05/10	Cut grass, mended kick rail on boardwalk and took out newt fencing.
09/09/10	Cut reeds and winched out willows.
24/01/11	Put in memorial bench.
23/03/11	Trimmed hedge.
09/08/11	Cut and raked meadow.
06/12/11	Pond clearance by boardwalk.
13/06/12	Cut paths and around benches.
26/07/12	Replaced broken rail on dipping platform, renewed mesh, raked grass and installed new access gate.
20/11/12	Pulled reeds.
25/07/12	Cut meadow.
24/05/13	Strimed the footpaths.

8.1 Past Management continued

Date	Task
14/05/13	Installed new hand rail along boardwalk 18 metres completed.
21/05/13	Carried on with hand rail installation.
12/08/13	Strimmed and raked meadow and finished off hand rail.
25/09/13	Cutting meadow at culvert end.
12/11/13	Coppiced willow. 71 binders harvested for hedgelaying.
09/07/14	Cut part of meadow and raked off.
12/08/14	Cut meadow .
13/08/14	Raking up meadow.
18/11/14	Pulled reeds.
20/04/15	Cut and raked part of meadow left of gate.
02/06/15	Cut and raked paths
05/10/15	Strimmed paths.
01/12/15	Removed a section of boardwalk.
13/06/16	Planted <i>Phragmites</i> cuttings.
28/06/16	Put in willow woven baffle to help prevent drain getting blocked up with reeds.
29/06/16	Put down black matting to prevent spread of <i>crassula</i> .
08/08/16	Stimmed and raked meadow.
20/02/17	New dipping platform constructed by contractors.
01/03/17	Coppiced willow & Strimmed reeds.
04/05/17	Installed hardened ramp up to dipping platform cut and raked meadow, put down pre-planted coir matting and put up hand rail on board walk.
14/06/17	Planted <i>Phragmites</i> cuttings.
14/09/17	Raked meadow, started new hardened path from gate to boardwalk path, put in new interpretation panel, cleared along hedge by meadow and put in a new hibernaculum.