Watnall Spinney

Management Plan

2011 - 2015

Prepared by Nottinghamshire Wildlife Trust for Broxtowe Borough Council

Broxtowe Borough COUNCIL

THE wildlife TRUSTS NOTTINGHAMSHIRE

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INTRODUCTION

This management plan was produced by Nottinghamshire Wildlife Trust on behalf of, Broxtowe Borough Council and the local community. The management proposals contained within this plan have been agreed in consultation with the representatives of Broxtowe Borough Council and the local community.

Local Nature Reserve (LNR) status will be sought for Watnall Spinney during the period of this plan. LNR status will not only protect the area's habitats and wildlife from development and damaging operations but will also increase people's awareness of their environment and issues relating to the site and its long term management. It will be a place where children can learn about nature, and the local community can become involved in the management of their natural environment.

Local Nature Reserves are protected open green spaces for local people, which are designated by councils after guidance by Natural England.

The production and implementation of a management plan demonstrates a commitment by the local authority and the local community to manage the area for the benefit of wildlife, local communities and schools and aims to implement 5 main management objectives:

- Maintain and enhance the habitat types and species present
- Combine habitat enhancement and management with education, recreation and access provision
- Encourage public understanding and awareness of issues relating to the site
- Conserve and interpret the archaeological and historical elements on the site
- Monitor effects of management on the wildlife on the site

The purpose of the Management Plans is to describe each site and to decide what prescriptions or actions are required, by whom and by what date, so that the sites can be improved in line with the Management Objectives.

Public consultation and support for the designation of Local Nature Reserves is an important element of the designation process. We have therefore tried to keep this Management Plan short and simple and easy to understand to encourage community feedback and engagement. Where local volunteering, enthusiasm and ideas for improving our local environment are developed, we will adjust our Management Plan accordingly.

ROLES AND RESPONSBILITIES OF PARTNER ORGANISATIONS

i Broxtowe Borough Council

Section 21 of the National Parks and Access to the Countryside Act 1949, gives principal local authorities the power to acquire, declare and manage nature reserves. In using these powers, local authorities must consult with Natural England.

The designation of a Local Nature Reserve means that the local authority accepts a commitment to manage the land as a nature reserve and to protect it from inappropriate uses or development.

Broxtowe Borough Council will oversee management of the sites and will undertake a strategic role in bringing interested partners together through a local Friends group.

Broxtowe Borough Council will lead on a review of current operational practices in partnership with Nottinghamshire Wildlife Trust and make changes to support habitats, where this is practical.

As landowner of Local Nature Reserves, Broxtowe Borough Council has a duty of reasonable care to ensure people's safety.

Broxtowe Borough Council is keen to support partners who can commission and/or undertake site work to enhance and create wildlife and habitats as laid out in the management plan.

Where Friends Groups, community, voluntary or business organisations wish to carry out independent events or work on Local Nature Reserves, the Council requires a signed indemnity form which provides proof of :-

- Public Liability Insurance to a value of at least £2 million
- A Risk Assessment for each activity held on the site

ii Natural England

Natural England is government agency whose overall objective is to maintain and enrich the characteristic wildlife and natural features that comprise England's natural heritage. Local Nature Reserves are important to help meet this objective.

Natural England believes that local authorities should consider the provision of natural areas as part of a balanced policy to ensure that local communities have access to an appropriate mix of greenspaces providing for a range of recreational needs. Natural England recommends that provision should be made of at least 2ha of accessible natural greenspace per 1000 population according to a system of tiers into which sites of different sizes fit:

- no person should live more than 300m from their nearest area of natural greenspace;
- there should be at least one accessible 20ha site within 2km from home;
- there should be one accessible 100ha site within 5km;

- there should be one accessible 500ha site within 10km.

Broxtowe Borough Council is working towards these targets.

iii Nottinghamshire Wildlife Trust

The Nottinghamshire Wildlife Trust's is largest charitable environmental organisation in Nottinghamshire. The Trust works to promote nature conservation through the work of its officers and volunteers and works closely with other organisations and communities throughout Nottinghamshire to maintain and enhance biodiversity. The Trust is committed to supporting projects that facilitate participation of local communities in improving their local environment and quality of life including:-

- Encourage the participation of our membership through the local group, in the community participation and management of the Local Nature Reserves.
- Promoting Local Nature Reserves as an important resource for the improvement of the quality of life for local communities to ensure social, health and environmental well being.
- Providing high quality ecological advice via our Conservation Policy & Planning Staff to local authorities and friends of groups at local nature reserves.
- Sharing our experience as the manager of 68 nature reserves and over 1200ha of land, with local authorities and communities.
- Support efforts to identify funds and mechanisms to continue delivery of both environmental/conservation restoration and management works on and community engagement with LNRs

iv Local Friends Groups

It is vital to encourage and support the local Friends Groups, interested schools and community groups for each Local Nature Reserve.

The role of local friends groups can include:-

- Information on what site improvements are most important for local people
- Assist in species and habitat monitoring
- Raise awareness and public support for Local Nature Reserves
- Carry out practical management tasks on sites

v Environmental Organisations

Environmental organisations are taking a lead role in the borough of Broxtowe to improve wildlife habitats. The Nottinghamshire Biodiversity Action Group has the responsibility for overseeing and monitoring the Nottinghamshire target habitats and species.

vi Local Businesses

Local businesses are to be invited to contribute to delivery of the Local Nature Reserve Management Plan, which could include supporting the Friends Group on volunteering days or providing technical or other assistance with enhancing the site for nature conservation.

PART 1: DESCRIPTION

1.1 Location

Watnall Spinney (also known as Spinney Wood) lies immediately to the west and adjacent to Trough Road in Watnall, in the Broxtowe Borough of Nottinghamshire (Vice County 56).

The site can be located on an Ordnance survey map at grid reference is SK 500 459

1.2 Map Coverage

Ordnance Survey Landranger map no.129 (1:50 000 scale) & Ordnance Survey Explorer map no. 260 (1:25 000 scale).

1.3 Owner

The site has recently come into the ownership of Broxtowe Borough Council.

1.4 Size

Watnall Spinney is 0.93 hectares in size.

1.5 Soil and geology

Geology – Watnall Spinney occurs on the very southern-most tip of the Magnesian Limestone Ridge. As a result, the spinney overlies Magnesian Limestone at the north east of the site, but overlies Red Marl at the South West end of the site (Geological Survey of England and Wales, sheet No. 125 Derby (1963); & Nottinghamshire sheet 17NE (1921))

Soil – The soil is shallow, locally brashy, well drained calcareous fine loamy soils over limestone with some deeper calcareous soils in colluvium (Soil Survey of Engalnd and Wales (1983))

1.6 Aspect, topography and altitude

The spinney lies approximately 122 metres above sea level and slopes quite gently to the east. The topography of the wood is generally quite flat but some undulations occur, mainly created by the footprint of a number of buildings which no longer exist.

1.7 Access

See Appendix 1 & 2 for site location and boundary.

The Robin Hood Way Public Right of Way passes through Watnall Spinney with access points at the north/east (from Trough Road) and south/west end (from Trough Lane) of the site. The Robin Hood Way is one of 2 long distance

paths in Nottinghamshire. It is a 105-mile linear route starting at Nottingham Castle, meanders its way around the County and finishes at Edwinstowe Church

The footpath entrance to the NE of the site is via a set of recently improved wooden steps off Trough Road. However, access for less able people can be gained from the footpath to the SW of the wood. Paths within the site are crushed gravel and generally smooth and level.

There is ample car parking on the roads adjacent to the site.

1.8 Surrounding land use

Watnall Spinney's immediate surrounding land use is housing to the north (Rolleston Crescent), south (Trough Lane) and east (Trough Road) whilst to the west lies open pasture and green space.

The built up area of Watnall is small compared to the larger urban area of Kimberley to the south (to which it is joined) and the wider surrounding land use is predominantly rural in nature with open agricultural land bordering the west of the site and as close as 60m to the north east.

Nearby Sites of Importance for Nature Conservation (SINC) include Watnall Wood SINC 400m to the north west, Watnall Meadow SINC 170m to the north east and Holly Road Grassland SINC 170m to the south.

1.9 Site Description

Watnall Spinney is small mixed ash dominated woodland. Mixed Ash Dominated Woodlands are a Nottinghamshire Biodiversity Action Plan Priority Habitat, which has been notified in recognition of the decline in this habitat in the county. For more information about Biodiversity Action Plans go to: http://www.nottsbag.org.uk/projects.htm#bap.

The woodland has a diverse range of tree and shrub species, many naturally occurring and characteristic of the types of woodland found in this area, but many have been introduced. Native tree species include ash, lime, holly, elm, yew, beech and field maple. Non native tree species include horse chestnut and sycamore - the dominant tree species in many places.

Understorey shrub species include hawthorn, wych elm, elder, holly, raspberry and hazel. There are some non-native shrub species within the wood such as laurel, which will have been introduced by planting or dumping of garden waste.

The ground flora is varied and includes nettle, bramble, dog's mercury, ivy, wood avens, lords and ladies, ransoms and lesser celandine (a full species list can be seen in Appendix 3). The presence of some of the species suggests that this woodland has been in existence for several hundred years.

Woodland grasses included wood false-brome (*Brachypodium sylvaticum*) and wood millet (*Milium effusum*).

The spinney also contains two ponds, which are purported to be old Koi Carp ponds, with what looks like a third dried up pond present to the NE of the larger pond. They are currently in need of some attention for them to successfully function as ponds, as they are overshadowed by trees and have therefore, over the years, filled with leaves and other organic matter. Ponds are also a Nottinghamshire Biodiversity Action Plan Priority Habitat in recognition of the loss of this type of habitat, particularly farm ponds, throughout the county in recent decades. For more information go to http://www.nottsbag.org.uk/projects.htm#bap and click on the Eutrophic and Mesotrophic Standing Water link.

The woodland has quite good structural diversity, with the presence of a good canopy layer, shrub layer and ground flora layer. This could be further enhanced through the strategic removal of some trees to allow more light into the wood benefitting the ponds, shrub and ground layers of the woodland, allowing them to flourish and support a diverse range of wildlife.

The woodland also supports a good resource of deadwood on the ground. This is very beneficial to wood boring insects and fungi and therefore birds and small mammals.

The presence of sycamore could become a problem on this site if left unmanaged, but reversing the regeneration of this species by the removal of saplings and seedlings should halt its spread.

The site has a recently established level hardcore path which provides a circular walk within the wood, whilst a new access point off the public footpath off Trough Lane allows access for less able people.

1.10 Statutory Designations

There are no statutory designations on this site.

It is proposed to seek designation as a Local Nature Reserve (LNR) in the near future.
LNR status applies to land of at least local wildlife interest, and allows the local authority (which must have close involvement through ownership or written agreement) to protect that interest through creation of special bye-laws. LNRs are usually close to or within urban areas and provide considerable opportunities for introducing large numbers of people to sustainable enjoyment of the countryside.

1.11 Non-statutory Designations

There are no non-statutory designations on this site.

PART 2: EVALUATION & OBJECTIVES

2.1 Evaluation of site features (Ratcliffe's criteria)

Site evaluation is carried out through a long established and widely accepted method of determining the nature conservation value of a site. This method is known as the 'Ratcliffe Criteria' (Ratcliffe, 1977). The Ratcliffe Criteria provide a standardised and objective way of assessing the value of a site using the attributes of Size, Naturalness, Representativeness, Rarity, Diversity, Position, History, Fragility, Potential, Value and Intrinsic Appeal.

2.1.1 Size

The reserve is approximately 1 hectare in size. This is obviously quite a small area of woodland with very little of the site inaccessible to visitors. However the site adjoins a considerable area of open pasture and green space which enhances the value of the site to wildlife.

2.1.2 Diversity

The reserve contains two distinct habitats:

- ✓ Deciduous woodland
- ✓ Ponds

Woodland – the species composition of the woodland is quite diverse. This allows the woodland to support a more diverse range of species of insects, small mammals and birds, as the plants will flower and fruit at different times throughout the year providing food over a long period. A diverse range of plants should also provide suitable roosting sites for a wide range of species; however, as this woodland is small and can be easily accessed throughout the site, this is likely to affect the sites ability to support species which are vulnerable to disturbance.

The woodland has quite good structural diversity, with the presence of a good canopy layer, shrub layer and ground flora layer. This could be further enhanced through the strategic removal of some trees to allow more light into the wood benefitting the ponds, shrub and ground layers of the woodland, allowing them to flourish and support a diverse range of wildlife.

The diversity of the woodland may be increased by the selective removal of some trees, the creation of standing deadwood, the creation of habitat piles and the provision of more nest boxes and some bat boxes to allow the wood to support more species.

Ponds – the ponds are currently in poor condition and have very little plant species present within them and therefore support very little wildlife. They differ in shape in that one is round with sloping sides and one is rectangular with what appears to be quite straight sides. Neither

of them has been managed for many years with the result that they are currently overshadowed by some large trees and saplings and they are quite full of leaf litter, silt and fallen deadwood.

Further work will need to be carried out to identify a water source to maintain water levels within the pond, and if the existing pond liner, which appears to be concrete, is functional. If the lining has failed and is not repairable, consideration could be given to allowing a seasonally wet bog area to establish.

2.1.3 Naturalness

It is unclear whether this woodland occurred naturally initially. It has certainly been in existence for a considerable time as it appears on Sanderson's map of 1835 in the same shape and size as today.

Many of the species within the wood are uncharacteristic of woodlands occurring naturally in this area. It is therefore certain that even if the woodland originally occurred naturally, it has been supplementary planted by man in recent years. The presence of horse chestnut, sycamore and yew would confirm this. However, the woodland has quite a natural feel to it and has good structure.

The ponds have been created within the woodland and are therefore not naturally occuring.

2.1.4 Rarity

The site and its habitats could not be considered rare or uncommon; however the Nottinghamshire Biodiversity Action Plan (www.nottsbag.org.uk) identifies both habitats; Eutrophic Standing Water and Mixed Ash Dominated Woodland as priority habitats, in recognition of their decline in Notts in recent years. Each habitat is the subject of Biodiversity Action Plans which detail measures for their protection and enhancement. This management plan should therefore aim to restore these habitats to a favourable condition.

2.1.5 Fragility

The spinney is vulnerable because of its small size and lack of connectivity to other similar woodland habitats. Woodlands of small size are also more vulnerable to deterioration if left unmanaged for long periods of time. Fortunately, Broxtowe Borough Council have recently acquired this woodland and are committed to undertaking the management detailed in this management plan to improve the woodland for the local community and for wildlife. However, the woodland's small size means that it is less able to support species which require undisturbed areas of habitat, as footpaths allow access into most areas of the site.

The ponds in their current condition are not fragile as they are already in seriously sub-optimal condition to support flora or fauna. Once re-instated, cleaned out and with good plant communities, they could be vulnerable to pollution events or nutrient enrichment if the adjoining pasture land is ever fertilised or if there are direct spills into the waterbodies.

2.1.6 Typicalness

The spinney is not currently typical of mixed ash dominant woodland as it has a number of introduced species within it and contains a number of artificially created ponds. However, it is typical of small farm woodlands or coverts which were often planted with fast growing species such as sycamore, as a crop to be used for burning or furniture making in the farm or are created and used as game cover.

In time, with some removal of trees and some introductions, it is hoped that the woodland will become more typical of a mixed ash dominant wood.

2.1.7 Recorded history

The woodland exists in the same proportions as today on Sanderson map of 1835 (Sanderson 1835) (see Appendix 3). It is therefore likely that the woodland has been in existence for much longer than this. The site is likely to have been used to rear fish in the past, possibly Koi Carp. The woodland also has the footprint and some brickwork of a number of structures which has been said to be bunkers of some kind but they could be cellars of buildings also. These structures need to be investigated further to ensure that they are not a Health & Safety hazard, but also to determine their historical significance and if they have potential as bat hibernacula.

Other recorded history includes the Rolleston Family grave which is located close to the wood.

2.1.8 Position in an ecological/geographical unit

The woodland is an important wildlife and community resource in its own right. Its value is further enhanced by its connectivity to the open countryside consisting of open pasture and green space in the immediate vicinity and predominantly agricultural land in the wider landscape. This connectivity to rural areas greatly enhances the reserves value to wildlife. Enhancing the diversity of the site and therefore the number of species it is able to support also enhances the reserves position in the wider ecological unit.

2.1.9 Potential value

With appropriate management, Watnall Spinney has great potential value as a recreational, wildlife and educational resource.

The spinney is used and enjoyed by the local community for quiet recreation including dog walking and wildlife watching. Its recreational and educational value could be enhanced through the provision of interpretation material species and individual plants of interest which can be found on site. Engaging local communities in addressing issues relating to this site and the management of the site should help to promote a culture of involvement and ownership in the site and increased interest and knowledge about the local natural environment. Local community involvement should provide lifelong learning opportunities in practical woodland and wetland management, faunal and floral surveying techniques and running a friends group.

The site also has great potential as an educational resource and links should be fostered with schools and local community groups to promote the use of the site for formal and informal environmental education. This could eventually involve the inclusion of a dipping area near one of the ponds.

Further ecological potential could be realised through positive management of the habitats and the creation or re-creation of additional habitats such as the ponds, bringing about an increase in biodiversity. An increase in the biodiversity in the reserve has the potential to increase the biodiversity in the wider landscape.

2.1.10 Intrinsic appeal

The sites intrinsic appeal lies in its resource to the local community as a local recreational resource as well as providing the opportunity to experience nature. It is a gateway to the surrounding countryside along the Robin Hood Way.

2.2 Objectives

- Maintain and enhance the habitat types and species present including the restoration of two Nottinghamshire priority habitats; Mixed Ash Dominant Woodland and Eutrophic Standing Water

- Combine habitat enhancement and management with education, recreation and access provision

- Encourage public understanding and awareness of issues relating to the site

- Conserve and interpret the archaeological and historical elements on the site

- Monitor effects of management on the wildlife on the site

2.3 Factors Influencing Management

- Safety - the entire site is accessible at all times, therefore in the interest of public safety, all possible measures should be taken to ensure public safety whilst work is being carried out, particularly around water. A health & safety check will also be required on the bunker which is currently screened from general view.

- Community involvement - local community and interest groups should be involved in and consulted upon the practical and strategic management of the woodland at every possible opportunity.

- Funding - for the management identified cannot be guaranteed for the full term of the plan. It may therefore be necessary for some tasks to be rolled over into subsequent years, to be completed when funding becomes available or for grant funding to be raised for specific projects. It may be necessary for the organisations proposed to undertake the work to change, depending on current partnership arrangements.

- Legal obligations - work likely to cause disturbance to breeding birds i.e. felling and scrub clearance cannot be undertaken during the bird breeding season (March to September). Therefore all felling and scrub clearance must be undertaken during the autumn and winter as it is an offence to disturb any wild bird (with the exception of pest species) while it is tending a nest containing eggs or chicks, until the chicks have *successfully* fledged. To do so would be a criminal offence under The Wildlife & Countryside Act 1981.

- Protected species - mature trees identified for felling, likely to provide roosting opportunities for bats should be surveyed by a licensed bat worker prior to felling. All species of British bat plus their roosting sites

are protected by The Wildlife & Countryside Act 1981, the CROW Act 2000 and the Conservation (Natural Habitats, &c.) Regulations 1994.

- Management - annual or bi-annual meetings regarding the implementation of the management plan for the site are required to identify work programme and schedule of works. Meetings should involve Broxtowe Borough Council, Notts Wildlife Trust and BTCV who are likely to carry out work on site.

- Only native species characteristic of the area should be introduced to the site.

2.4 Management proposals

2.4.1 Install appropriate site sign identifying the sites ownership and status

2.4.2 Install interpretation boards identifying things like plant and animal species visitors might encounter at the site and / or the importance of woodland and pond habitats to biodiversity. This should also include the history of the site (See 2.1.7)

2.4.3 Clear overhanging vegetation and trees from the two ponds

2.4.4 De-silt and re-establish both the round and the rectangular pond

2.4.5 Plant up the ponds with plant species characteristic of the area but also visually pleasing

2.4.6 Coppice sycamore saplings and pull seedlings by hand.

2.4.7 Fell a proportion of the stems on the multi-stemmed sycamore towards the north of the spinney

2.4.8 Fell the two diseased cherry trees adjacent to the houses on Rolleston Cresent

2.4.9 Create log and brash habitat piles or windrows, using wood and brash generated by coppicing and felling

2.4.10 Ring bark one or two semi-mature or mature sycamore, away from the footpath, to create standing deadwood

2.4.11 Coppice a proportion of elder (particularly in the region of the defunct 3rd pond) and wych elm to encourage bushier growth

2.4.12 Investigate the remaining bunker structures found within the wood to ensure that they are safe, determine their historical significance and investigate their potential as bat hibernacula.

2.4.13 Install more bird nesting boxes and bat boxes on mature trees

2.4.14 Maintain checks on tree condition to ensure that there are no trees or limbs likely to pose health and safety issues. Any trees fallen in areas not likely to cause health and safety issues should be left *in situ* to enhance the deadwood habitats. Standing dead trees should also be left *in situ* unless they are likely to cause a health and safety risk

2.4.15 Initiate and support a Friends of Group to oversee and participate in management and events on both Watnall Spinney and Watnall Green and to monitor species and habitats on both sites.

2.4.16 Replace the front retaining wall bordering onto Trough Road.

PART 3: MANAGEMENT DETAILS

3.1 Management Projects and Prescriptions

Reference Number	Project Title	Prescription
3.1.1	Install site identification sign	• Sign should be positioned at an appropriate location and should identify the owner of the site, its status and contact details for persons responsible for the site to allow visitors to report management issues or vandalism etc.
3.1.2	Install interpretation boards	• Install interpretation boards identifying things like the history of the site, plant and animal species visitors might encounter and / or the importance of woodland and pond habitats to biodiversity
3.1.3	Clear vegetation in the vicinity of both ponds	• Fell trees in close proximity to both ponds. Trees to be felled will consist of those casting shade over the ponds and those introducing leaf litter into the ponds. • Trees for felling will be identified by NWT and Broxtowe BC prior to felling and will be felled during the winter i.e. outside of the bird breeding season. • Any tree thought to have bat roosting potential will be check for bats prior to felling or will be soft felled to avoid injury to bats.
3.1.4	De-silt and restore both ponds	• Clear fallen debris / wood from ponds • Desilt ponds • Check the integrity of the pond linings and repair or replace if necessary
3.1.5	Plant up ponds	• Source a selection of the plants identified in Appendix 5 to plant up the margins of the ponds once restoration work has been completed. • The plants should consist of a selection of oxygenators, emergent, and floating leaved plants to ensure that pond dwelling species can complete their lifecycle in the pond. • Any plants introduced into the pond should be of local provenance. • Plants can be established in the ponds from May onwards until October. • Care should be taken when working near or in water; persons caring out planting work should be accompanied by at least one other person at all times.
3.1.6	Control sycamore encroachment	• Coppice sycamore saplings to prevent them growing into trees and to prevent them introducing more seed • Treat coppiced stumps with herbicide to prevent regrowth if possible • Pull small sycamore seedlings by hand as they occur.
3.1.7	Reduce shading caused by multi-stemmed sycamore	• Remove a proportion of the stems on the multi-stemmed sycamore to the north of the spinney to increase the light, benefitting shrubs and ground flora. • The stems to be retained should be selected for their ability to grow on as single stemmed trees. • The regrowth from the felled stems should be coppiced on an annual or biennial basis. • Felling should take place between November and March. • Felled stems should be retained and stacked within the spinney to provide habitat for fungi and wood-boring beetles. • The brash from the felled stems should be chipped and the woodchip used to improve paths throughout the spinney.

3.1.8	Fell diseased cherry trees	• Fell the two diseased cherry trees adjacent to the houses on Rolleston Cresent • The stems appear to harbour a canker and should probably be burnt or removed from site. However, these trees appear to be garden varieties which may be more susceptible to canker than the native wild cherry (*Prunus avium*) • Wild cherry could be planted in areas of the wood where felling has occurred (except by the ponds) to compensate for the loss of these trees
3.1.9	Create log and brash piles	• Create log and brash habitat piles or windrows, using wood and brash generated by coppicing and felling • Brash piles should be positioned in areas where it will not suppress the growth of desirable ground flora and where shrubs are sparse as it will provide nesting habitat for wrens and robins • Log piles should be positioned in both light and dark and damp positions to allow them to support species with different requirements. • Log piles can be wired together to prevent wood being strewn around the wood or being taken for firewood.
3.1.10	Ring-bark one or two sycamore	• Ring bark one or two semi-mature or mature sycamore to create standing deadwood • A 6 inch band of bark should be removed around the circumference of the tree approximately 1 ft from the base of the tree. • Trees identified for ringbarking should be located well away from the footpaths to avoid creating Health & Safety hazards in the future. • Standing dead wood will provide habitat for wood boring insects, hole nesting birds, bats and fungi.
3.1.11	Coppice elder and wych elm (*Ulmus glabra)*	• Coppice a small amount of elder and wych elm each year to encourage bushier growth and improved structural diversity. • Brash created by coppice should be used to form habitat stacks or windrows depending on the amount available. • Priority should be given in the earlier years of the plan, to coppicing areas of scrub in the region of the defunct 3rd pond.
3.1.12	Investigate bunker structures	• Investigate the remaining bunker structures found within the wood to ensure that they are safe • determine their historical significance and, • investigate their potential to act as bat hibernacula.
3.1.13	Install bird and bat boxes	• Install bird nesting boxes with a variety of hole sizes and shapes. • Bird boxes should be able to be open for cleaning each winter. • Boxes should be placed in a variety of directions but not facing south • Install bat roosting boxes made from untreated timber or woodcrete. • Bat boxes should be placed around the circumference of mature trees. • All boxes should be erected on mature trees away from footpaths and at a height that does not allow interference from visitors to the spinney

3.1.14	Maintain annual health & safety check on trees	• Trees close to footpaths and close to areas that visitors are encouraged to use should be checked annually, outside of the bird breeding season for sign of instability or dead limbs. • Trees identified for health & safety work should be scheduled into work programmes outside of the bird breeding season (March to September) • If felling is essential during the period March to September, the tree subject to felling plus and all other trees and shrubs likely to be affected by the felling should be checked for nests by a suitably qualified person prior to work commencing. If active nests are found, these areas should be taped off avoided until chicks have successfully fledged. If trees are naturally retrenching (dying back) they should be de-limbed rather than felled. • Felled branches should be retained on site and placed at the base of the trees if possible.
3.1.15	Establish and support a Friends Group	• Initiate and support a Friends of Group to oversee and participate in management and events on both Watnall Spinney and Watnall Green • Encourage the local community through the Friends Group to record species and habitats on both sites to monitor the effects of management
3.1.16	Repair boundary wall	• Repair the retaining wall that forms the boundary with Trough Road, to prevent erosion of the soil onto the highway footpath.

3.2 Five Year Work Plan

Reference Number	Prescription	Years				
		1	2	3	4	5
		2011	2012	2013	2014	2015
3.1.1	Install site identification sign	1				
3.1.2	Install interpretation boards			2	2	2
3.1.3	Clear vegetation in the vicinity of both ponds	1	1			
3.1.4	De-silt and restore both ponds		1	1	1	
3.1.5	Plant up ponds			2	2	2
3.1.6	Control sycamore encroachment	1	1	1	1	1
3.1.7	Reduce shading caused by multi-stemmed sycamore				1	1
3.1.8	Fell diseased cherry trees		1	1		
3.1.9	Create log and brash piles	3	3	3	3	3
3.1.10	Ring-bark one or two sycamore			2	2	
3.1.11	Coppice elder (*Sambucus nigra*) and Wych elm (*Ulmus glabra)*			2	2	2
3.1.12	Investigate bunker structures	1 H & S	2 History/ bat potential			
3.1.13	Install bird and bat boxes		3	3	3	3
3.1.14	Maintain annual health & safety check on trees	1	1	1	1	1
3.1.15	Establish and support Friends Group	1	1	1	1	1
3.1.16	Repair retaining boundary wall	1				

Priority - 1 is high, 3 is low

3.3 Annual Work Plan

Year 1 – 2011

Reference Number	Priority (1-3)	Compartment / Prescription Detail	Season (Sp/Su/Au/Wi)	Who (contractor, Broxtowe BC, volunteer group)
3.1.1	1	Install site identification sign	Sp/Su/Au/Wi	Broxtowe BC
3.1.3	1	Clear vegetation in the vicinity of both ponds	Winter	Broxtowe BC / Contractor
3.1.6	1	Control sycamore encroachment	Winter	Friends Group / BTCV
3.1.9	3	Create log and brash piles	Winter	Friends Group / BTCV
3.1.2	1	H & S checks on bunker structures	Sp / Su	Broxtowe BC
3.1.14	1	Maintain annual health & safety check on trees	Sp/Su/Au/Wi	Broxtowe BC
3.1.15	1	Establish and support Friends Group	Sp/Su/Au/Wi	Broxtowe BC / NWT
3.1.16	1	Repair retaining wall	Sp	Broxtowe BC / Contractor

Year 2 - 2012

Reference Number	Priority (1-3)	Compartment / Prescription Detail	Season (Sp/Su/Au/Wi)	Who (contractor, Broxtowe BC, volunteer group)
3.1.3	1	Clear vegetation in the vicinity of both ponds	Winter	Broxtowe BC / Contractor
3.1.4	1	De-silt and restore both ponds	Winter	Broxtowe BC / Contractor
3.1.6	1	Control sycamore encroachment	Winter	Friends Group / BTCV
3.1.8	1	Fell diseased cherry trees	Winter	BTCV / Broxtowe BC
3.1.9	3	Create log and brash piles	Winter	BTCV / Friends Group
3.1.12	2	Investigate history and bat roosting potential of bunkers	Sp / Su	Broxtowe BC / NWT
3.1.13	3	Install bird and bat boxes	Winter	Friends Group / BBC
3.1.14	1	Maintain annual health & safety check on trees	Sp/Su/Au/Wi	Broxtowe BC
3.1.15	1	Establish and support Friends Group	Sp/Su/Au/Wi	Broxtowe BC / NWT

Year 3 - 2013

Reference Number	Priority (1-3)	Compartment / Prescription Detail	Season (Sp/Su/Au/Wi)	Who (contractor, Broxtowe BC, volunteer group)
3.1.2	2	Install interpretation boards	Sp/Su/Au/Wi	Broxtowe BC / BTCV
3.1.4	1	De-silt and restore both ponds	Winter	Broxtowe BC / Contractor
3.1.5	2	Plant up ponds	Su/Au	BTCV / Friends Group
3.1.6	1	Control sycamore encroachment	Winter	Friends Group / BTCV
3.1.8	1	Fell diseased cherry trees	Winter	BTCV / Broxtowe BC
3.1.9	3	Create log and brash piles	Winter	BTCV / Friends Group
3.1.10	2	Ring-bark one or two sycamore	Winter	BTCV / Friends Group

3.1.11	2	Coppice elder and Wych elm	Winter	BTCV / Friends Group
3.1.12	3	Install bird and bat boxes	Winter	Friends Group / BBC
3.1.13	1	Maintain annual health & safety check on trees	Sp/Su/ Au/Wi	Broxtowe BC
3.1.14	1	Establish and support Friends Group	Sp/Su/ Au/Wi	Broxtowe BC / NWT

Year 4 – 2013

Reference Number	Priority (1-3)	Compartment / Prescription Detail	Season (Sp/Su/Au/Wi)	Who (contractor, Broxtowe BC, volunteer group)
3.1.2	2	Install interpretation boards	Sp/Su/Au/Wi	Broxtowe BC / BTCV
3.1.4	1	De-silt and restore both ponds	Winter	Broxtowe BC / Contractor
3.1.5	2	Plant up ponds	Su/Au	BTCV / Friends Group
3.1.6	1	Control sycamore encroachment	Winter	Friends Group / BTCV
3.1.7	1	Reduce shading caused by multi-stemmed sycamore	Winter	Broxtowe BC / Contractor
3.1.9	3	Create log and brash piles	Winter	BTCV / Friends Group
3.1.10	2	Ring-bark one or two sycamore	Winter	BTCV / Friends Group
3.1.11	2	Coppice elder and Wych elm	Winter	BTCV / Friends Group
3.1.12	3	Install bird and bat boxes	Winter	Friends Group / BBC
3.1.13	1	Maintain annual health & safety check on trees	Sp/Su/Au/Wi	Broxtowe BC
3.1.14	1	Establish and support Friends Group	Sp/Su/Au/Wi	Broxtowe BC / NWT

Year 5 - 2015

Reference Number	Priority (1-3)	Compartment / Prescription Detail	Season (Sp/Su/Au/Wi)	Who (contractor, Broxtowe BC, volunteer group)
3.1.2	2	Install interpretation boards	Sp/Su/Au/Wi	Broxtowe BC / BTCV
3.1.5	2	Plant up ponds	Su/Au	BTCV / Friends Group
3.1.6	1	Control sycamore encroachment	Winter	Friends Group / BTCV
3.1.7	1	Reduce shading caused by multi-stemmed sycamore	Winter	Broxtowe BC / Contractor
3.1.9	3	Create log and brash piles	Winter	BTCV / Friends Group
3.1.11	2	Coppice elder and Wych elm	Winter	BTCV / Friends Group
3.1.12	3	Install bird and bat boxes	Winter	Friends Group / BBC
3.1.13	1	Maintain annual health & safety check on trees	Sp/Su/Au/Wi	Broxtowe BC
3.1.14	1	Establish and support Friends Group	Sp/Su/Au/Wi	Broxtowe BC / NWT

This plan may need to be altered in response to site monitoring and should be reviewed after a 3 year period.

PART 4:

APPENDICES

Site Location

Appendix 1

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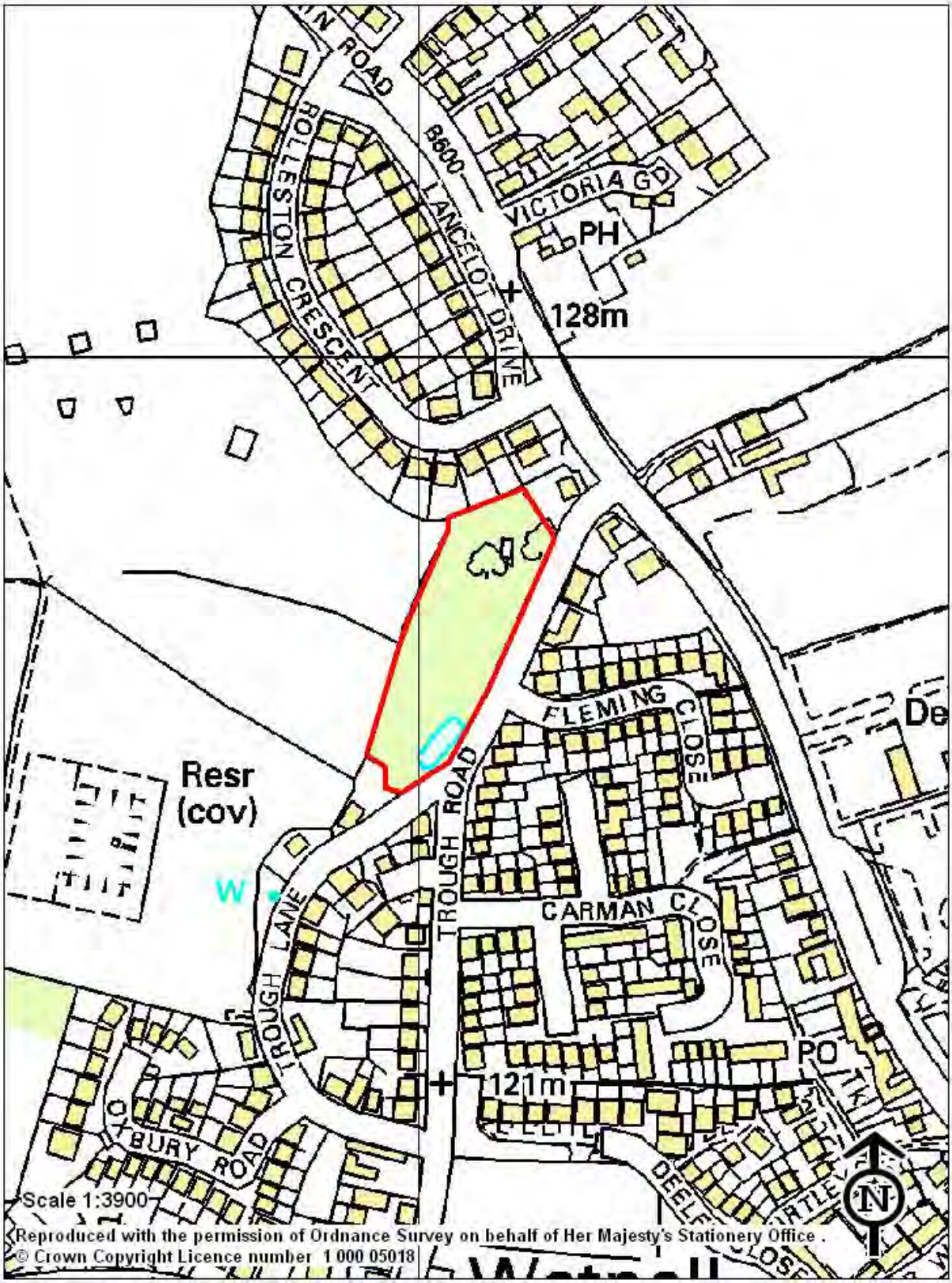
Boundary of proposed Local Nature Reserve **Appendix 2**



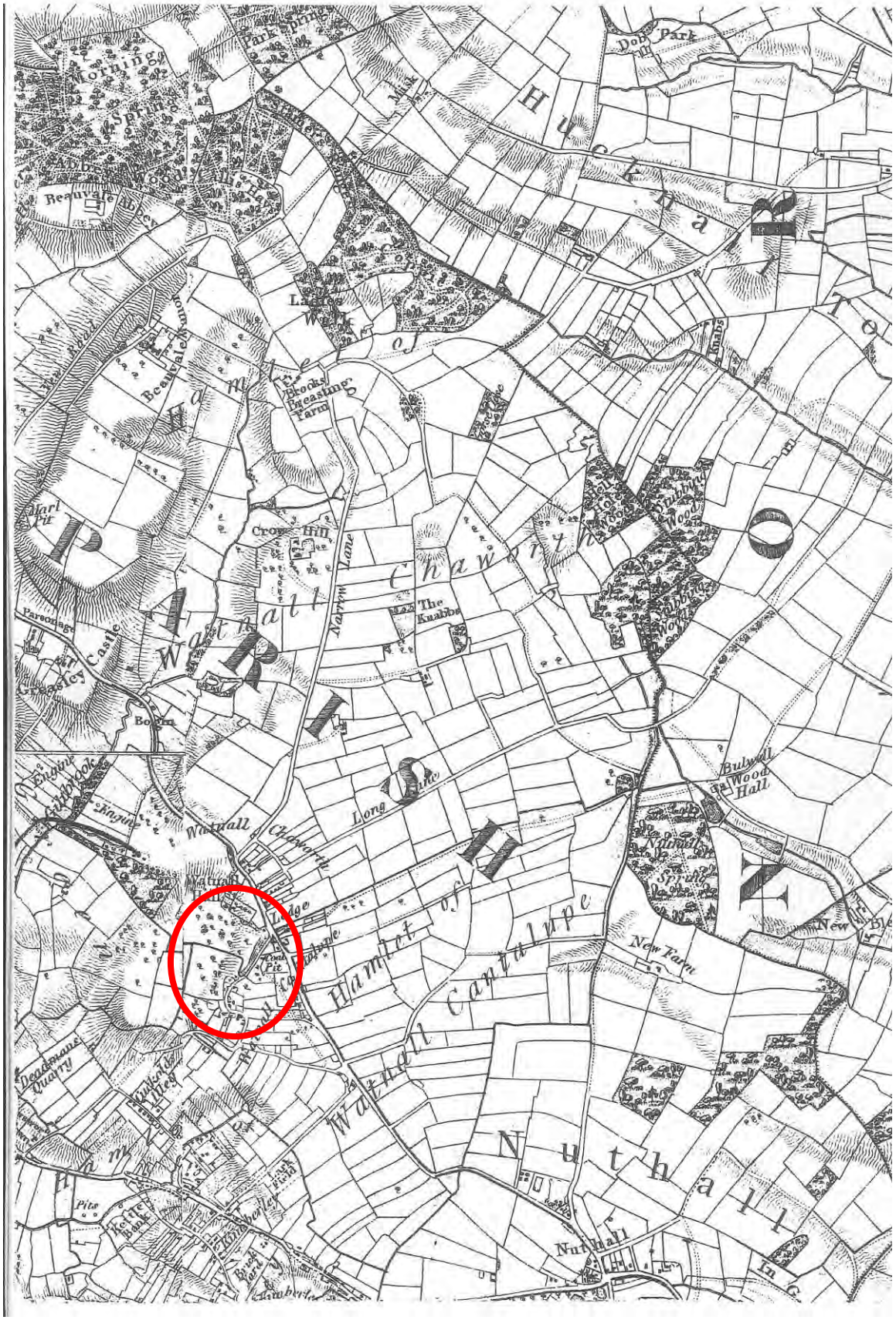
Watnall Spinney Botanical Survey 08/05/09

Ash	*Fraxinus excelsior*
Beech	*Fagus sylvatica*
Bramble	*Rubus fruticosus agg.*
Broad Buckler-fern	*Dryopteris dilatata*
Broad-leaved Dock	*Rumex obtusifolius*
Bulbous Buttercup	*Ranunculus bulbosus*
Cleavers	*Galium aparine*
Cock's-foot	*Dactylis glomerata*
Common Field Speedwell	*Veronica persica*
Cow Parsley	*Anthriscus sylvestris*
Creeping Buttercup	*Ranunculus repens*
Dandelion	*Taraxacum officinale agg.*
Dog's Mercury	*Mercurialis perennis*
Elder	*Sambucus nigra*
Enchanter's nightshade	*Circaea lutetiana*
English Elm	*Ulmus procera*
False-brome	*Brachypodium sylvaticum*
Field Maple	*Acer campestre*
Garlic Mustard	*Alliaria petiolata*
Goldilocks Buttercup	*Ranunculus auricomus*
Hawthorn	*Crataegus monogyna*
Hazel	*Corylus avellana*
Hedge Woundwort	*Stachys sylvatica*
Herb Bennet (Wood Avens)	*Geum urbanum*
Herb-robert	*Geranium robertianum*
Hogweed	*Heracleum sphondylium*
Holly	*Ilex aquifolium*
Horse-chestnut	*Aesculus hippocastanum*
Hybrid Bluebell	*Hyacinthoides x massartiana*
Ivy	*Hedera helix*
Lesser Celandine	*Ranunculus ficaria*
Lime	*Tilia sp.*
Lords-and-ladies	*Arum maculatum*
Ramsons	*Allium ursinum*
Raspberry	*Rubus idaeus*
Rhododendron	*Rhododendron sp.*
Rowan	*Sorbus aucuparia*
Sycamore	*Acer pseudoplatanus*
White Dead-nettle	*Lamium album*
Wild Cherry	*Prunus avium*
Wood Dock	*Rumex sanguineus*
Wood Millet	*Milium effusum*
Wych Elm	*Ulmus glabra*
Yellow Iris	*Iris pseudacorus*

This should not to be considered a comprehensive list of the vegetative species at this site. The list will be amended as species are discovered.

Yew	*Taxus baccata*

Sanderson's Map of Watnall Area 1835 **Appendix 4**



Sanderson, G. (1935). **Sanderson's Map, Twenty Miles round Mansfield.** Technical Print Services Ltd, Notts

Nottinghamshire
Wildlife Trust

Pond Plants for Wildlife Ponds

To create a balanced pond a variety of pond plants are needed incorporating at least one plant from each category i.e. oxygenator, floating leaved plant, strappy leaved plant etc.

Plants to be planted in water 1ft deep and over

Oxygenators - to be planted in water as deep as you can manage without needing a snorkel (!) to 1ft deep water

Spiked or Whorled Water Milfoil (*Myriophyllum spicatum or verticullatum*)
Rigid or Soft Hornwort (*Ceratophyllum demersum or submersum*)

Plant a few bunches of any combination of the above.

Floating-leaved plants - to be planted in water about 2ft deep
Amphibious bistort (*Polygonum amphibia*)
Arrowhead *(Sagittaria sagittfolia)*
Water crowfoot (*Ranunculus sp.)*
Fringed Water Lily *(Nymphoides peltata)*

Strappy-leaved emergent plants - plant in about 1 ft of water, maybe a bit deeper
Flowering rush (*Butomus umbellatus*)
Branched burr reed (*Sparganium erectum*)
Common Water-plantain (*Alisma plantago-aquatica*)
Yellow Iris (*Iris pseudacorus*)

Marginal plants

To be planted in shallow water & along waters edge
Water mint (*Mentha aquatica*)
Water forget-me-not (*Myosotis scorpiodes*)
Marsh marigold (*Caltha palustris*)
Brooklime (*Veronica beccabunga*)
BogBean (*Menyanthes trifoliata*)
Pendulous Sedge (*Carex pendula*) – requires damp not inundated soil