

**A Conservation Management Plan
for Riverside Road Watercress Beds,
St. Albans**

2009 – 2014



Watercress Wildlife Association
Registered Charity: 1011944

<http://www.watercress-net.org.uk>

Management Plan 2009 - 2014

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Introduction

1.1 Background

This plan is for the Riverside Road Watercress Beds, St. Albans (**Appendix 1**). The site is one of former watercress beds and allotments. The land lies along the east bank of the river Ver on the southern edge of St. Albans (**Appendix 2**). It has residential areas around it but is also part of the Ver valley which has some important wetland sites remaining although partially degraded. It has been managed as a Reserve for 17 years. **Appendix 3** contains a summary of the Reserve history.

The plan includes a site description and a site assessment. It sets out the vision for the site over the next 20 years and identifies the management proposals to be implemented over the next 5 years.

1.2 Site information

Site Name: Riverside Road Watercress Beds

Location: Access is from Riverside Road. The site is centred around TL 153063

Size: 1.38 ha.

Status: The site was designated a Local Nature Reserve by English Nature in 2003. It is also a County Wildlife site and falls within one of the Hertfordshire's key biodiversity areas: Ver Valley and Gorhambury designated for wetland and woodland.

Ownership: St. Albans District Council, Civic Centre, St. Peter's St. St. Albans

Tenure: A 20 year lease to Watercress Wildlife Association (WWA). The current lease ends in 2024.

Lease restrictions: No sub letting, no development, no auctions on site, maintenance as a Local Nature Reserve.

Organisation: WWA is a charity founded and run by the local community. It is a membership based organisation, run by its committee. It currently has over 200 households as members. There is an elected chair, treasurer, secretary and site manager. All management is done on a voluntary basis.

Trustees: All committee members are trustees of the charity and operate under the Charity Commission's rules. The trustees have the ultimate responsibility for directing the affairs of the charity and ensuring that it is solvent, well run, and meeting the needs for which it has been set up.

1.3 Purpose

To provide an urban sanctuary for wildlife with access for local people.

2. Environmental and other information

2.1 Site description

At the heart of the site are the former watercress beds (now called The Mere) fed by artesian wells (**Appendix 4**). These provide clean, fairly warm, but slow flowing groundwater. Some parts are deep and potentially dangerous. The water exits to the River Ver via a bund and tunnel system at the south western end of the site. This can become partially blocked and help to keep the water level high but The Mere is vulnerable to drought and has dried out in some summers (most recently in 2006). Reductions in local water abstraction have helped some recovery of the water table over the last 5 years. This situation may not continue as pumping upstream has recommenced and the effects of climate change become increasingly evident. The basin is in part exposed chalk and elsewhere covered with gravel and/or fine sediments. It provides a range of habitats and some aquatic wildlife including kingfisher, water rail, wildfowl, dragonflies and some fish.

The other main wetland habitat is The Bog which is fed by a small water inlet from the Ver at the northern end of the site. This has some old pollarded Crack willows along its margins. This creates a long marshy area which joins The Mere at the southern end of The Spit which is low lying land constructed of dredged sediment with willow, bramble and nettle. There is a range of aquatic and marginal flora.

The Ver runs along the western boundary of the site. Access to the banks is limited by a recently planted hedge containing a mix of natural species. This has been designed to limit disturbance, in particular to safeguard potential habitat for the water vole. A similar buffer zone has recently been created by the Council on the far bank.

The rest of the site is a mosaic of habitat, with mainly native tree and shrubs including alder and hornbeam. There is an orchard with neutral grassland which contains both old apple trees and more recently planted traditional varieties of fruit trees. Some of this grassland is becoming dominated by nettles and hogweed or

returning to scrub. The Pyghtle area has nettle/bramble scrub with two recently created small ponds and a few orchard trees. Several large saplings have been recently felled. The Sanctuary has several mature alder trees which are attractive to siskin and redpoll.

The entrance area besides the bird hide is now maintained as an area of butterfly friendly flowers. There has also been some planting of grasses in this area and around the ponds to widen the variety of grass species on site. The Shady area is a woodland patch with woodland flora such as ramsons, woodruff, bluebells and ferns. The bluebells are not the native species. Although not formally part of the site, the southern margin comprises a woodland bank along the route of an old railway line with standards of oak and ash with much bramble scrub and ivy. The soils are generally neutral becoming more acidic nearer to the Ver.

There is one remaining allotment site within the Reserve boundary. This becomes under Reserve management from the start of 2010. A supplementary management plan will be developed for this area.

The site is well used by the local community. It attracts other visitors although it is not actively promoted beyond the local area. There are clear paths around the site although some paths have a soft surface. The Mere margins, in particular the south western parts of the site and the banks of the Ver have no visitor access and are maintained as wildlife refuges. Members have access to a hide overlooking the Mere. There are good, regularly updated, interpretative notices around the site. All management is undertaken by volunteers.

Appendix 5 contains species lists that were compiled in the mid to late 1990's. These lists are incomplete. The dates of sightings are not recorded; there are no estimates of numbers and in the case of birds and mammals no breeding records. Some phyla are not recorded at all. However, the records, together with recent observations recorded on the site blog, indicate that the site maintains a good diversity of species which is believed to be growing. On site are song thrush (UK priority shortlist, local flagship species), kingfisher (long list and local flagship species) and water rail (rapidly declining species and locally scarce). There is also a colony of sparrows (a declining species) and the site contains bullfinch and reed bunting (UK middle list priority species). Bluebells are also a local flagship species. It is thought the site may have held water vole but currently there are no water vole in the Ver Valley. There are also the species records from an invertebrate survey in 2001. Two locally important species were recorded: the soldier fly larvae (*Oxycera nigricornis*) and the crawling water beetle

(*Haliphus wehncke*). Another crawling water beetle (*Haliphus laminatus*) (nationally notable B) was also recorded. Recently the recording of species has improved with both a sightings board and blog (<http://wwasightings.blogspot.com>) set up and to which the public can contribute. Butterfly and bird surveys have also been started.



2.2 Conservation Management

Table 1 2004-2009 management achieved

Area	Management	Conservation Benefit
1 – The Pyghtle	Native species hedges planted, bird feeding station created, well capped and covered by logs, 2 new ponds dug. New grass species introduced. Plan for hide revised.	Greater habitat diversity created. More bird and insect species noted
2 – Mere & Bog	Silt cleared and some vegetation cut back Willows pollarded Mallard numbers controlled	More fish and bird species attracted. Extension of tree life Other species attracted
3 – Orchard & Meadow	Control of some scrub. Recent pruning of trees.	Maintained as habitat for garden birds
4 – Paths & Boundaries	Paths and fences maintained – new fence at northern boundary	Visitor access and site security maintained
5 – General Management	Tree pruning and scrub control	Habitats maintained
6 – Interpretation	Information points updated, web-site being re-developed including new sightings blog and notice board	Visitors well informed, records of new species sightings
7 – Monitoring & Review	Review of management plan by committee on annual basis. Some bat monitoring, butterfly monitoring introduced, bird and other key species board set up.	Management plan fully implemented

2.3 Table 2 Features influencing the current Management of the Site

Important feature	Influencing Management
Former watercress beds	<p>Historic feature, typical of Hertfordshire but scarce</p> <p>Important for several key species (see below)</p> <p>Key habitat of Reserve – requires management to arrest succession but also to further increase diversity and manage water levels and quality</p>
Mosaic of habitats	<p>Includes orchard with old fruit trees, small woodland, wet and dry grassland and scrub, butterfly friendly flower beds, hedges with native species, new ponds. Diversity provides interest for Reserve users. Management required to control growth of scrub and trees.</p>
Wildlife refuge in urban area	<p>Priority/declining/flagship Species:</p> <ul style="list-style-type: none"> • Kingfisher • Water rail • Song thrush • Sparrow • Bullfinch • Reed bunting • Sedge warbler • Bats • Soldier fly larvae (<i>Oxycera nigricornis</i>); the crawling water beetle (<i>Haliphus wehncke</i>); Nationally Notable B Crawling Water Beetle (<i>Haliphus laminatus</i>) • bluebell <p>Water vole has been lost but management has created conditions for re-introduction.</p> <p>Regular recording will help to identify trends in populations and passage species</p>
Local access	<p>Valued 'wild area' for local residents and visitors. Important to retain welcoming, educative, approach with need to maintain a quiet natural environment for wildlife. Also maintain an active volunteer support.</p>

2.4 Visitor information

No formal visitor numbers are recorded. Numbers vary but most days will have at least 20 visitors and considerably more at weekends and on fine days. Many are local, spending, on average, up to 30 minutes on site.

There is a circular trail around the Reserve. Most is underlain by hardcore and accessible in all weathers. Between the bridges, the path is muddy and sometimes flooded in winter. There are three bird feeding points (one overlooked by the Hide, the other two with seating). Another seating area, in The Shady Place, overlooks The Bog and a seat overlooks The Mere. The hide is available for members and an information board is maintained outside the hide. Other information points are provided around the site. The Blog and web site (currently under re-development) is also a source of information and news. Members receive a quarterly newsletter, available electronically or paper format.

Two public events are held annually – a winter wassail and a summer celebration. Each attracts over 100 visitors. **Appendix 6** provides a summary of a recent visitor survey

2.5 Management

All site management is undertaken by volunteers. They are lead by a volunteer site manager. There are monthly working parties on the last Sunday of the month and these working parties attract around a dozen members. Refreshments are provided at the end of the session and this provides an opportunity for both meeting socially and discussing wildlife and management issues. Working parties provide about 15 -25 hours labour a month. In addition the site managers undertake additional work within the week and there is sometimes a Wednesday working party.

Key stakeholders are St. Albans District Council, Herts & Middlesex Wildlife Trust and the Environment Agency. The Council determines the terms of the lease but also is the lead agency of the environmental management of the Ver valley around the Reserve. The Association plays a role in the Nunnery Green Flag open space management committee. The Association aims to contribute to the county plan for biodiversity. The Association also works with the wildlife trust to monitor for mink and to create suitable habitat for water vole. The Association also aims to maintain its river banks and manage the Reserve in a manner which meets the standards set by the Environment Agency.

2.6 Finance

Core income is provided by member subscriptions (currently £10 p.a. per household). There are over 200 member households. Additional income is provided by fund raising at the two annual public events. In addition grant income is achieved in some years for specific projects.



Sightings board

3 Vision and Objectives

3.1 Vision

A rich and diverse wetland site which conserves the historic interest of the watercress beds and provides a valued wildlife amenity for local residents.

The site benefits from and will continue to contribute to the wildlife within the Ver valley.

3.2 Objectives and Management

3.2.1 To maintain the Mere and further increase its interest as a site for wildlife

3.2.2 To reduce the scrub and improve the range of grassland habitats within the woodland, orchard and grassland areas

3.2.3 To maintain or increase the range of bird, mammal, butterfly and plant species on site

3.2.4 To maintain visitor enjoyment and awareness of the site

3.2.5 To improve the monitoring and recording of species on site

3.2.6 To consider and plan opportunities to extend the wildlife refuge and widen the range of habitats on site when the allotment site becomes available.

*See **Appendix 9** for key measures*



4 Habitat Management

4.1 Woodland Bank

The base (not the bank itself) is the responsibility of the WWA. The orchard area at the entrance to be maintained and consideration given to enhancing it by removing non-orchard species, planting one or two additional trees and further improving the ground flora with some additional spring bulbs such as wild daffodils in the Medieval Triangle. The middle section of 'Pioneer Woodland' has now out grown this status. This will be left to mature (with periodic cutting to prevent the path being overgrown) along with the mature oak stands on the bank above the Mere. Actions to discourage access from the railway line e.g. planting of prickly scrub or blocking access points with scrub cuttings to create a deep litter layer will be implemented as necessary.

4.2 Butterfly and herb beds

The butterfly beds have now been established in addition to the herb garden. They are designed to attract butterflies and other insects. They will require regular action to control 'weed species' and replanting of gaps. The grasses on the margins should only be weeded but not cut to create a deep litter layer and refuge for wildlife. The herb garden will aim to reflect a wide range of different herbs. (Over the course of this plan it may need to be replanted if weeds become too invasive). Replacement of the current raised bed would be desirable. A possibility would be the creation of a rocky/sandy corner patch to attract invertebrates or the construction of overwintering habitat for solitary bees, lacewings etc. The brambles around the bird hide will be maintained as valuable cover for birds but will be trimmed to maintain sight lines from the hide to feeders and The Mere.

4.3 The Mere

The Mere is visually attractive as open water but would benefit from additional submerged and floating vegetation to create more suitable habitat for invertebrates and fish. An option will be to try to encourage more native species to establish themselves now the number of mallards has been reduced. The marginal vegetation will be maintained with periodic cutting/clearance of up to 15% in any year, if required, to maintain diversity and sight lines(**Appendix 7**). Overall up to 30% of the Mere surface can be allowed to become vegetated but with maintained sightlines. The increased vegetation may help to control algal blooms. Other methods to be tried and evaluated include the addition of Siltex, increasing the use of barley

straw in both Autumn and Spring and allowing rotten bark from fallen trees to remain in the Mere shallows. We will take opportunity of any dry summers to remove excessive silt. The outlet point should be monitored and action taken, if required, to ensure it does not become blocked.

4.4 The Bog

The bog vegetation has become established. The willows and other trees require regular coppicing (every 5-7 years) to prevent them becoming dominant and utilising too much water and light. Other management will require a cycle of weed/scrub clearance to control scrub encroachment and reed clearance on a rotational 5 year plan to maintain the habitat (**Appendix 7**). Clearance of 20% annually will spread workload and retain a suitable habitat for the wildlife. The maintenance of a small open stream(s) through the bog will also provide structure and maintain successional plants. The aged Crack willows on the banks will be retained as long as possible. If necessary they will be replaced. The lower part of the bog by the Russo Bridge will be maintained as a pond dipping area. The upper part of the bog will be allowed to maintain the bramble scrub as cover for birds.

4.5 The Orchard and surrounding areas

Management of the trees themselves will follow guidance obtained from orchard specialists. Some failing trees should be considered for removal. The damsons are becoming mature and young replacements should be accommodated elsewhere on site e.g. small orchard area within the Pyghtle. The main priority is to maintain the grass paths, where possible routing away from the trees and to allow the areas between paths to be managed as meadow areas. This will include the need for scrub/nettle clearance and some reseeding. The meadow area could have its fertility partially reduced by scraping some top soil to a bank at the back as well as usual methods of removing cuttings and incorporating yellow rattle into the seed mix. Appendix 8 shows the planned areas and these will be gradually developed over the lifetime of the plan. Cutting will be rotational to protect food sources and habitat for birds, insects and small reptiles and mammals. Where appropriate, cutting will be timed to fit into the needs of a space for the public events. Key bramble patches on the Reserve e.g. bordering the Mere, at the north ends of the Bog and the Pyghtle to be maintained by occasional rotational cutting.

4.6 The Pyghtle

This a quiet area managed mainly for wildlife but also an area for composting, burning etc. It is surrounded by hedges which restrict both access and sightlines and creates a buffer zone for the bank. The Pyghtle is regularly used by a variety of wildlife, especially birds but including deer. The Pyghtle also provides access to the river bank but visitor access is only during the summer event. Bank cutting is times to coincide with this event. The bank is managed in accordance with Environment Agency guidelines which includes removal of overhanging or fallen branches and maintaining the integrity of the banks. Recent addition of 2 ponds has increased the habitat diversity. The hedges planted within the lifetime of the previous plan are now maturing and at their maximum height (2m along river, low 1.3m around bird feeders). All need to be cut annually (in winter) to maintain their size and structure. Ideally the cutting will be staggered over the period of the winter to maintain, until spring, a supply of food and shelter. The hedge bordering the bog would be suitable for laying. This would increase the density of the hedge, lengthen its life and would reduce the frequency of cutting required. In the meantime the paling fence to be moved from the path to the other side where it is less visible but maintains the security of the Pyghtle. Leave 0.5 m margin to hedge within Pyghtle for benefit of wildlife – cut every 2-3 years.

Options for the development of the Pyghtle

- 1 **Continue to limit visitor access but develop a gap in hedge as a viewing point. Manage the south and west sides of the ponds as short meadow to increase visibility. Coppice and or remove selective trees and scrub to control succession as required. Put in gates at access points.** This option retains the Reserve for wildlife, restricts potential misuse, quick & cheap to implement.
- 2 **As for option 1 but create a viewing point 3-4 m nearer the pond from the hedge gap.** Would allow some closer viewing from a higher and closer point, making it more of a focal point. Slightly longer and more construction costs. Limited access to ponds for groups could still be possible.
- 3 **Manage the northern area as 'wild' with restricted visitor access but open route along southern edge of the pond.** Increase public access to the pond (hands on dipping opportunities), may disturb bird watching at feeders, requires viewing platform to be constructed, increased cost and effort, possible damage and disturbance to pond margins and general disturbance of wildlife. Health and safety concerns would need to be taken into account.

- 4 **Separate or in addition to other options – open up circular route along river bank – either permanently -** increase views of river bank, but would create quiet unobserved areas which may create a security problem and could lead to damage along fragile banks **or occasionally** through managed access. The current path may need upgrading if open on permanent basis.

In all options the northern end to be maintained as wild, dense scrub, maintained by removal or coppicing of saplings and rotational cutting of bramble.

4.7 The Sanctuary

Maintain the area as a partially shaded area with meadow. Open by selective felling and coppicing on the margins to ensure light levels support grass growth and to provide sunny enclaves to attract butterflies. The stand of alders is to be maintained.

4.8 The Shady Place

Maintain at the present levels of light. Remove as required invasive brambles and nettles. Monitor spread of horsetails. Replace non-native bluebells with native variety.

4.9 The Allotment

The WWA does not yet have management access to this site – awaiting the end of the tenancy agreement. When access is obtained, initial clearance and a habitat survey will be undertaken to inform planning of this area. This area offers the opportunity to manage better the outlet area of the Mere, to provide some new sightlines of the Mere, to create access to the river bank, to create a water meadow. An additional plan will be created once the site is accessible and the environmental assessment is complete.

5.0 Paths, fences, bridges etc

Annually check, by 2 committee members, for structural safety and accessibility for users with disabilities and to inform regular routine maintenance. In particular, to undertake an additional review for wheelchair, pushchair and mobility scooter access with regard make suitable, practical adjustments particularly around the main gate and where the path is liable to waterlogging. N.B. there may be times when some paths are closed to all users.

Maintain all fences, paths, buildings and seats in a state of good repair.

6.0 Trees

Undertake a survey of the structural stability of trees and implement recommended actions. This survey is now due and should be undertaken as soon as possible.

7.0 Species Management

There is already good provision of additional nesting, shelter and feeding to encourage a range of species. There are 3 bird feeding stations, bird boxes, bat boxes purchased and about to be installed, 2 hibernacula and various log piles. These will be maintained as required and we will seek to create a new log feature using logs in an upright position. There is regular monitoring of mink, and trapping if necessary, to create a safe environment to encourage the return of water voles. Additional desirable activities within the plan's lifetime will be to create a feature using vertically buried logs, to build an overwintering site for solitary bees, and other insects such as lacewings, and to create more perches for kingfishers to improve their visibility. Monitoring of mallard numbers will be maintained and feeding will continue to be discouraged in order to encourage other species. There will also be regular monitoring for invasive/alien species and prompt action taken to eliminate where possible.

Both visitor interest and management could be enhanced by more regular surveys and recording of species. Already, volunteers regularly count butterflies over the summer months and a bird survey is planned. It is recommended that during the life of the plan there is a repeat of the aquatic invertebrate survey, and a plant survey is undertaken to update the current species lists together with an indication of frequency of occurrence. When suitable opportunities arise, for occasional sampling of moths, bats, small mammals and invertebrates, these will be taken and also for contributions to regional and national species surveys. There is also a need to review the arrangements for the storage and availability of species records.

8.0 Community Engagement

The visitor survey (for summary see **Appendix 6**) shows high levels of satisfaction from users of the site. In particular, they value the quietness and the focus on wildlife within the Reserve.

The newsletter and AGM together with the revised (but not yet launched web site) will remain the chief means of communication and information. The web site requires regular updating to

maintain interest. It is recommended that content should be a regular item for committee meetings. In addition, the blog provides timely news of sightings and this is supplemented by the species board on the bird hide. The interior of the bird hide will be updated from time to time with relevant wildlife identification resources. Committee members wear a WWA polo shirt when working on site so they can easily be identified and to assist in welcoming visitors. In addition, information points and tree labels around the Reserve will be updated or replaced as necessary.

There will continue to be 2 events annually primarily for members: The Winter Wassail and the Summer Event. In addition it is planned to publish annually a series of dates when visitors can come to a specific wildlife event e.g. pond dipping, bug hunt, moth night, bat watch or walk with a committee member. We will also seek to develop and make available quizzes for children to enhance their enjoyment of the wildlife. In addition we will aim to make the 20th anniversary year (2012) of the Reserve special.

After a successful pilot we will continue to make available surplus fruit from the orchard available to the public. This attracts donations and helps to discourage indiscriminate picking.

Volunteers will be encouraged to assist on specific jobs, e.g. leading on management of part of the Reserve, monitoring species, assisting in some administrative or other capacity. We will advertise specific tasks in the newsletter, at the AGM and on the web site to encourage people to become active in the Association. We will use working parties as an opportunity to share skills e.g. the safe use of specialist equipment, techniques for coppicing. This will allow volunteers to become more confident and knowledgeable about the Reserve and help to ensure there can be a smooth succession when members retire or move away.

We will continue to engage with organisations e.g. Ver Valley Society, Herts & Middlesex Wildlife Trust and the local Council, to promote wildlife within the Ver Valley. It will also maintain close and co-operative links with neighbouring organisations where we have interests in common.

Our members will continue through membership subscriptions to be the chief source of funding but we will remain grateful for additional donations from individuals and local companies. We will, where appropriate, seek grant funding for specific projects.

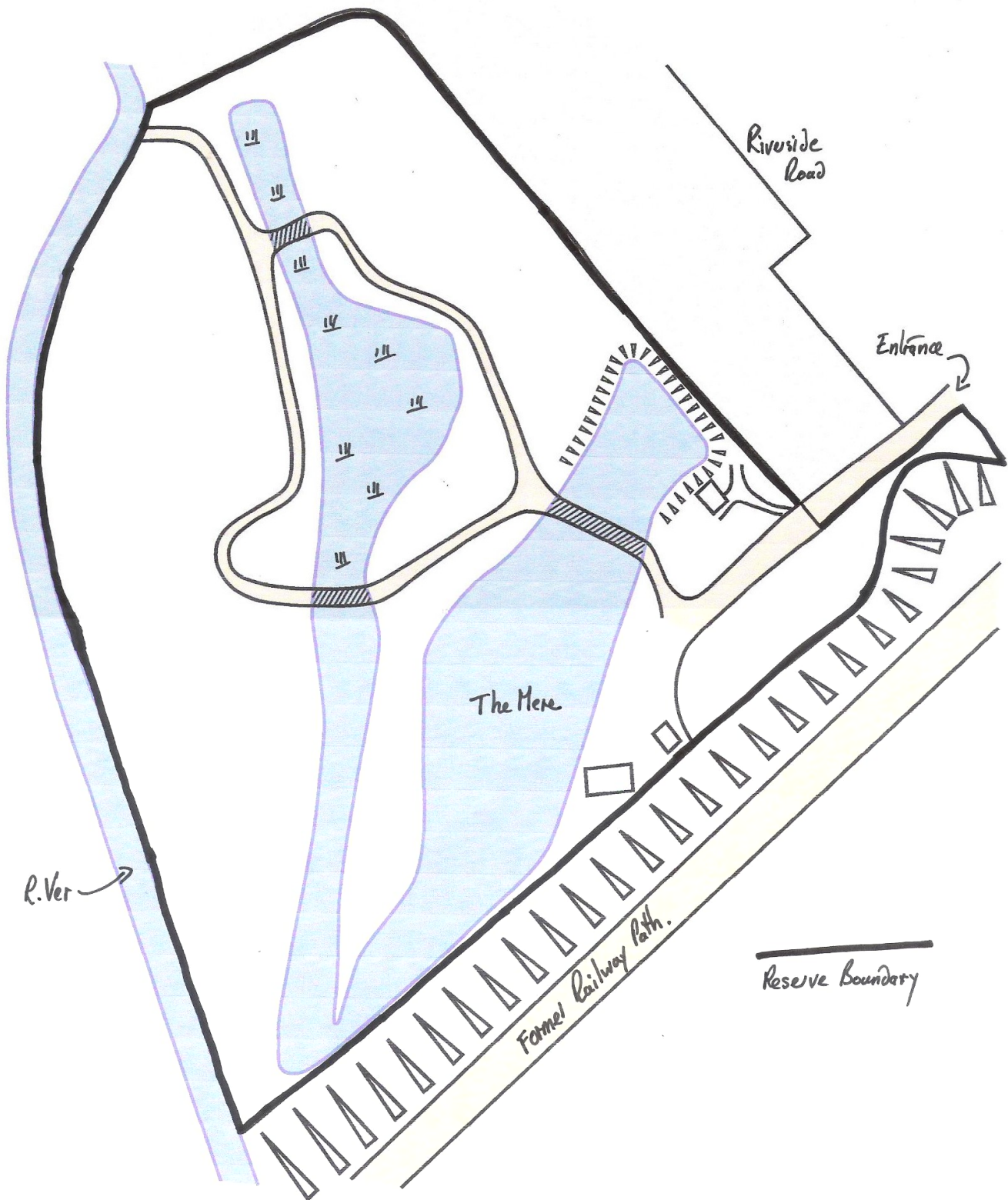
9.0 Implementation Plan and timescale

These are set out in **Appendices 9 and 10** and cover the priorities over the next 5 years.



The Annual Wassail

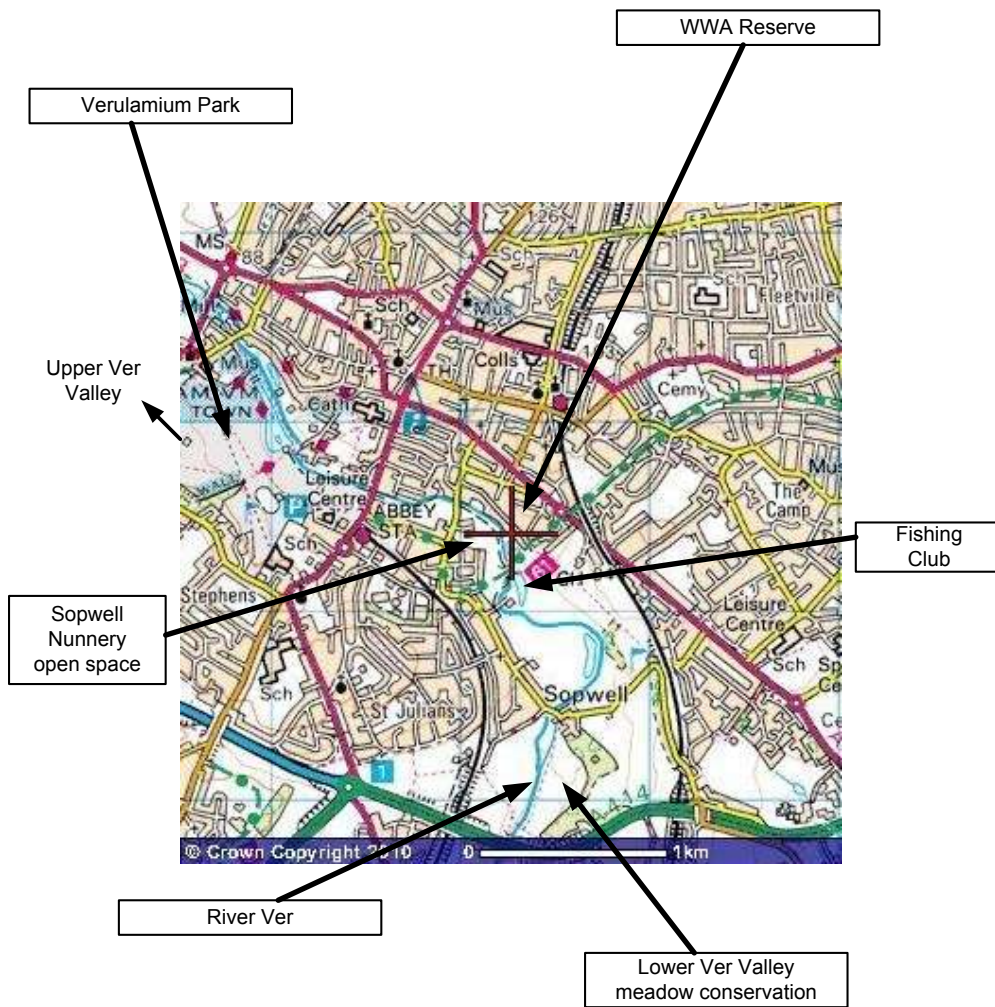
APPENDIX I



RIVERSIDE ROAD, WATERCRESS BEDS

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Appendix 2



Position of Reserve in Ver Valley

Appendix 3

A brief history of the Watercress Wildlife Association

The site was one of the many small commercial watercress beds in Hertfordshire based on fast flowing chalk streams. The watercress was picked at dawn and pulled on trolleys to the nearby old station so that it could be on London restaurant tables for lunch. Production ceased in 1972. The site fell into disrepair and was used in part for fly tipping. Part of the site has also used for allotments.

In 1990, the Council took action and invited expressions of interest for local amenity development. Four bids were submitted in December 1991 and the W.W.A. won, based on 82 local households paying £5 each. The annual rent was £50.

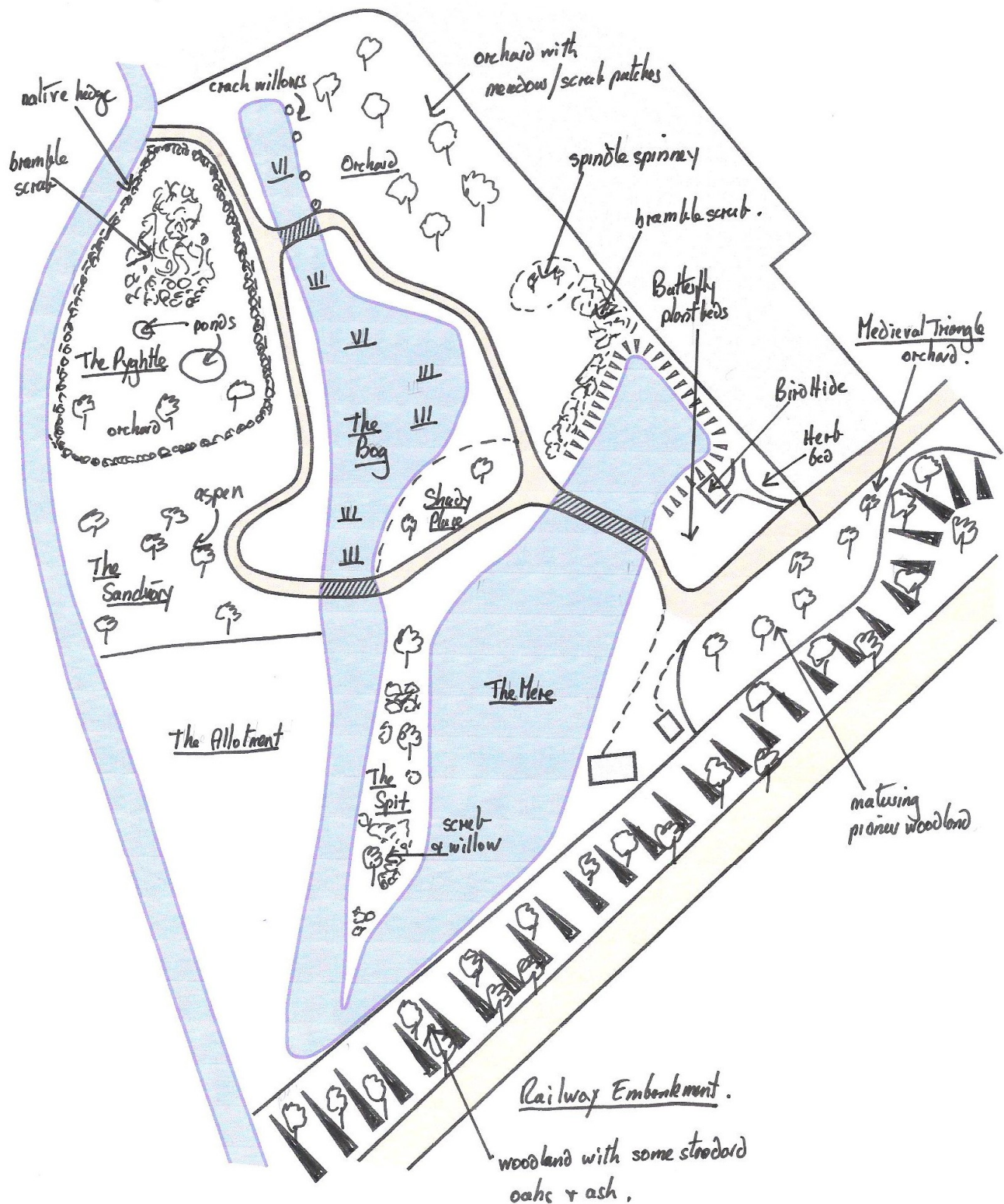
The W.W.A. supported the remaining allotment holders to retain their sites. They started clearing the main site by hand filling many skips.

The site was opened officially by David Bellamy on 12th September 1992. The site plan was much as it is today. The orchard was developed in 2002 with the planting of new native Hertfordshire fruit trees and the medieval triangle (by the front entrance) in 2005.

Other key dates:

- Bird hide - 1992
- Bridges and paths – 1993
- Blockhouse – 1995
- Civic Award - 2000
- Local Nature Reserve status – 2003
- St. Albans in Bloom special award - 2003
- Council granted an extended lease in 2004
- Acquired the Pyghtle (formerly an adjacent allotment) - 2004
- Railway sleeper signs – 2005
- WaterWheelers established with Lottery funding – 2005
- Mayor's Civic Award (joint winner with Earthworks) – 2006
- Acquire final allotment site 2010

APPENDIX 4



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KEY HABITATS.

Appendix 5 Species List

These lists are outdated – this plan contains action to update lists

INSECTS

Butterflies

Brimstone	Comma	Common blue
Gatekeeper	Green-veined white	Holly blue
Large white	Meadow brown	Orange tip
Painted lady	Peacock	Red Admiral
Skipper	Small tortoiseshell	Small white
Speckled Wood		

Moths

Birds wing	Bright-line brown-eye	<i>Brimstone</i>
Buff arches	Buff ermine	<i>Burnished brass</i>
Common emerald	Common marbled carpet	<i>Common pug</i>
Common rustic	Common wainscot	<i>Flame</i>
Flame shoulder	Dark arches	<i>Dark dagger</i>
Elephant hawk moth	Feathered gothic	<i>Garden carpet</i>
Gothic	Heart and dart	<i>Hummingbird hawk moth</i>
Large yellow underwing	Least yellow underwing	<i>Lesser broad bordered yellow underwing</i>
Lesser yellow underwing	Light arches	<i>Middle-barred minor</i>
Mother of pearl	Plume moth	<i>Poplar hawk</i>
Red underwing	Riband wave	<i>Rosy rustic</i>
Ruby tiger	Setaceous hebrew character	<i>Shuttle-shaped dart</i>
Silver. Y	Small clouded brindle	<i>Small square spot</i>
Small magpie	Snout	<i>Spectacle</i>
Straw dot	Swallow prominent	<i>Treble lines</i>
<i>Vines rustic</i>	<i>Willow beauty</i>	

Dragon and Damselflies

Brown hawker (dragonfly)	Common darter (dragonfly)	Emperor dragonfly
Banded demoiselle (damselfly)	Beautiful demoiselle (damselfly)	Blue-tailed damselfly
large red damselfly		

Other

Bumble bee

MAMMALS

Bank vole	Brown rat	Common shrew
Fox	Grey squirrel	Hedgehog
Muntjac deer	Pipistrelle bat	Water vole
Weasel		

REPTILES AND AMPHIBIANS

Common frog	Common toad	Smooth newt
Grass snake	Slow worm	

BIRDS

Black headed gull	Blackbird	Blackcap
Blue tit	Bullfinch	Canada goose
Carrion crow	Chaffinch	Chiffchaff
Coal tit	Collared dove	Coot
Cuckoo	Dunnock	Fieldfare
Garden warbler	Goldfinch	Goldcrest
Great tit	Grey wagtail	Heron
Herring gull	House martin	Jay
Kestrel	Kingfisher	Little grebe; Dabchick
Long-tailed tit	Magpie	Mallard
Mallard - cross	Mistle thrush	Moorhen
Mute swan	Nuthatch	Pheasant
Pied wagtail	Red kite (overfly)	Redpoll
Redwing	Reed bunting	Reed warbler
Robin	Siskin	Song thrush
Sparrow	Sparrowhawk	Starling
Swallow	Swift	Tawny owl
Treecreeper	Water rail	Woodpecker - green
Woodpecker - lesser spotted	Wood Pigeon	Wren
Yellowhammer		

PLANTS

Alder	<i>Alnus glutinosa</i>
Ash	<i>Fraxinus exelsior</i>
Apple	<i>Malus domestica</i>
Birch, Silver	<i>Betula pendula</i>
Birds Foot Trefoil	<i>Lotus corniculatus</i>
Bittersweet	<i>Solanum dulcamara</i>
Blackberry, Bramble	<i>Rubus and ssp.</i>
Blackthorn, Sloe	<i>Prunus spinosa</i>
Bluebell	<i>Hyacinthoides non-scripta</i>
Box	<i>Buxus sempervirens</i>
Broom	<i>Cytisus scoparius</i>
Burdock	<i>Arctium lappa</i>
Buttercup, Creeping	<i>Ranunculus repens</i>
Buttercup, Meadow	<i>Ranunculus acris</i>
Campion, Red	<i>Silene dioica</i>
Campion, White	<i>Silene pratensis</i>
Celandine, Lesser	<i>Ranunculus ficaria</i>
Cherry, Bird	<i>Prunus padus</i>
Cherry, Wild	<i>Prunus avium</i>
Cleavers,	<i>Galium aparine</i>
Clover, Red	<i>Trifolium pratense</i>
Clover, White	<i>Trifolium repens</i>
Coltsfoot	<i>Tussilago farfara</i>
Columbine	<i>Aquilegia vulgaris</i>
Comfrey, Common	<i>Symphytum officinale</i>
Comfrey, Russian	<i>Symphytum uplandicum</i>
Common Knapweed	<i>Centaurea nigra</i>
Common Vetch	<i>Vicia sativa</i>
Cow-parsley	<i>Anthriscus sylvestris</i>

Cowslip	<i>Primula veris</i>
Crab Apple	<i>Malus sylvestris</i>
Cranesbill, dovesfoot	<i>Geranium molle</i>
Daffodil	<i>Narcissus pseudonarcissus</i>
Daisy	<i>Bellis perennis</i>
Dandelion	<i>Taraxacum officinale</i>
Dead-nettle, Red	<i>Lamium purpureum</i>
Dead-nettle, White	<i>Lamium album</i>
Dogrose	<i>Rosa canina</i>
Dogwood	<i>Cornus sanguinea</i>
Dock, Broad leaved	<i>Rumex obtusifolius</i>
Duckweed	<i>Lemna minor</i>
Elder	<i>Sambucus nigra</i>
Feverfew	<i>Tanacetum parthenum</i>
Field Maple	<i>Acer campestre</i>
Field Scabious	<i>Knautia arvensis</i>
Field Rose	<i>Rosa arvensis</i>
Forget-me-not	<i>Myosotis sylvatica</i>
Forget-me-not, Water	<i>Myosotis scorpioides</i>
Foxglove	<i>Digitalis purpurea</i>
Fritillary	<i>Fritillaria meleagris</i>
Great Burdock	<i>Arctium lappa</i>
Gooseberry	<i>Ribes uva-crispa</i>
Greater Stitchwort	<i>Stellaria holostea</i>
Great Lettuce	<i>Lactuca virosa</i>
Ground ivy	<i>Glechoma hederacea</i>
Ground Elder	<i>Aegopodium podagraria</i>
Guelder Rose	<i>Viburnum opulus</i>
Hawthorn	<i>Crataegus monogyna</i>
Hazel	<i>Corulus avellana</i>
Hedge woundwort	<i>Stachys sylvatica</i>
Herb Robert	<i>Geranium robertianum</i>
Hogweed	<i>Heracleum sphondylium</i>
Holly	<i>Ilex aquifolium</i>
Honeysuckle	<i>Lonicera periclymenum</i>
Hornbeam	<i>Carpinus betulus</i>
Horse-radish	<i>Armoracia rusticans</i>
Ivy	<i>Hedera helix</i>
Ladies Bedstraw	<i>Galia verum</i>
Lords and Ladies	<i>Arum maculatum</i>
Marsh Marigold, Kingcup	<i>Caltha palustris</i>
Mallow, Common	<i>Malva sylvestris</i>
Mallow, Dwarf	<i>Malva neglecta</i>
Mallow, Musk	<i>Malva moschata</i>
Meadow Cranesbill	<i>Geranium pratense</i>
Mint, spear	<i>Mentha spicata</i>
Mint, water	<i>Mentha aquatica</i>
Mugwort	<i>Artemisia vulgaris</i>
Oak	<i>Quercus robur</i>
Osier	<i>Salix viminalis</i>
Oxeye Daisy, Moon Daisy	<i>Leucanthemum vulgare</i>
Periwinkle, Lesser	<i>Vinca minor</i>
Plantain, ribwort	<i>Plantago lanceolata</i>
Perforate St. John's Wort	<i>Hypericum perforatum</i>
Primrose	<i>Primula vulgaris</i>
Purple Loosestrife	<i>Lythrum salicaria</i>
Ramsons	<i>Allium ursinum</i>
Reed mace	<i>Typha latifolia</i>
Rowan, Mountain Ash	<i>Sorbus aucuparia</i>
St. Johns Wort	<i>Hypericum perforatum</i>

<i>Salad Burnet</i>	<i>Sanguisorba minor</i>
<i>Snowdrop</i>	<i>Galanthus nivalis</i>
<i>Speedwell, Germander</i>	<i>Veronica chamaedrys</i>
<i>Spindle</i>	<i>Euonymus europaeus</i>
<i>Stinging Nettle</i>	<i>Urtica dioica</i>
<i>Tansy</i>	<i>Tanacetum vulgare</i>
<i>Teasel</i>	<i>Dipsacus fullonum</i>
<i>Violet, Common Dog</i>	<i>Viola riviniana</i>
<i>Violet, Sweet</i>	<i>Viola odorata</i>
<i>Water Dock</i>	<i>Rumex hydrolapathum</i>
<i>Watercress</i>	<i>Nasturtium officinale</i>
<i>White Bryony</i>	<i>Bryonia dioica</i>
<i>Wild Carrot</i>	<i>Daucus carota</i>
<i>Wild Privet</i>	<i>Ligustrum vulgare</i>
<i>Wild Service Tree</i>	<i>Sorbus torminalis</i>
<i>Willow, Crack</i>	<i>Salix fragilis</i>
<i>Willow, Goat</i>	<i>Salix caprea</i>
<i>Willowherb, Great</i>	<i>Epilobium hirsutum</i>
<i>Willowherb, Rosebay</i>	<i>Epilobium angustifolium</i>
<i>Wood Avens</i>	<i>Geum urbanum</i>
<i>Yarrow</i>	<i>Achillea millefolium</i>
<i>Yellow flag</i>	<i>Iris pseudacorus</i>
<i>Yellow Toadflax</i>	<i>Linaria vulgaris</i>
<i>Yew</i>	<i>Taxus baccata</i>

Plant list from surveys in September 2004 and April 2005 by Liz Anderson, Herts.
Biological Records

Appendix 6

Summary of Visitor Survey 2009

Members and Visitors were invited to complete a questionnaire. Over 8% of members responded which is quite a high response rate. In addition 10 visitors completed and returned a form.

Frequency of Visits

	%
Weekly	12
Once per month	42
Quarterly	15
Once in 6 months	4
Annually	4
More rarely	23

Main Reason for Visit

	%
Wildlife	30
Peace and Quiet	40
Walk	26
Family Outing	4

Main attraction

	%
Peace & Quiet	25
Wildlife	20
Diversity	20
Naturalness	10
Secret Places	20
Events	5

Some Comments:

- Well managed (over 50%)
- Keep it peaceful. Sometimes too rowdy
- Good newsletter
- Too much hogweed/stinging nettles
- Lack of birds on Mere
- Would like access to Pygthle
- Would like some toilets on site
- Good idea to sell apples
- Would love to live in one of the houses overlooking the Reserve
- Thanks for all your hard work

Appendix 7 Key Measures

Objectives and Management

4.2.1 To maintain the watercress beds and increase their interest both as a site for wildlife and as an historic feature

Species Targets

- Nos. of aquatic bird species at least 12
- Nos. of mallards reduced to less than 5
- 4 new aquatic plant species
- Maintain a patch of watercress near the bridge

Habitat Targets

- Water quality BMWP score of 10 or above

Management Summary

- Maintain sight lines from key vantage points
- Maintain outflow from Mere
- Monitor and reduce silt and algal levels
- Keep Bog channel free on 4 year cycle
- Cut Bog vegetation 20% per year
- Cut banks – 20% per year
- Maintain notices concerning duck feeding and discourage activity
- Create 2 sheltered marginal areas to support breeding fish

Monitoring Summary

- Monitor numbers wildfowl species (monthly counts)
- Monitor duck feeding (on-going)
- Monitor (in summer) water quality through invertebrate survey on 5 year cycle or if there is a pollution incident
- Monitor aquatic vegetation (early summer) every 3 years

4.2.2 To further develop the range of habitats within the woodland, orchard and grassland areas

Species Targets

- Grassland contains 20% of target species (annual grasses, wild flowers) including 4 new species of butterfly food grasses (Bent, Red Fescue, Yorkshire Fog, False Broome)

Habitat Targets

- Reduce incidence of hogweed and nettles in grassland
- Reduce scrub but maintain 4 major bramble patches
- Number of woodland species maintained

Management Summary

- Reduce fertility of grassland in orchard area by one year of regular monthly mowing, vegetation removal and where necessary weeding, followed by annual cut between July and November). Re-seed if necessary. Cutting should only be 50% of large patches or only one small patch at any one time. Leave some areas uncut for 2-3 years especially adjacent to hedges for a soft margin
- Maintain scrub areas by the Mere, bird hide, in Pyghtle and northern end of Bog - cut up to 20% per year, creating sheltered sunny bays where possible
- Coppice or prune 10% of trees a year to maintain light levels and encourage ground flora in Sanctuary/ Shady Place/Pyghtle/Bog
- Winter prune orchard trees
- Cut 20% of hedges per year, lay part of hedge around Pyghtle
- Re-site paling fence around Pyghtle behind hedge
- Maintain butterfly beds and herb garden
- Cut river bank annually
- Tree structural survey

Monitoring Summary

- Composition and area of grassland every 5 years
- % scrub every 5 years
- Survey tree species and maintain monitoring every 5 years (DAFOR measure)
- Monitor health of orchard every 3 years: disease, size and quality of fruit, size of trees

4.2.3 To maintain or increase the range of bird, mammal, butterfly and plant species on site

Species Targets

- 15 species of butterfly
- 65 species of birds
- 2 species of bats
- 1 breeding pair of water rail
- 1 breeding pair song thrush
- 5 breeding pairs of sparrows
- No mink on site

Habitat Targets

- Create insect overwintering habitat
- Bury group of logs vertically and maintain existing log piles

Management Summary

- Maintain mink survey rafts
- Carry out species surveys (see below)
- Manage and develop specialist habitat sites e.g. bird and bat boxes, as required
- Plant new damson trees
- Replace non-native bluebell species
- Add to spring bulbs in Medieval triangle

Monitoring Summary

- Nos. butterfly species – survey
- Nos. bird species including kingfisher plus breeding pairs of: water rail, song thrush and sparrow - survey
- Nos. bat species - Summer survey annually
- Nos. flora species – survey (May and August) every 5 years (DAFOR measure)
- Nos. other species including water vole – record sightings and carry out survey for moths, dragonflies, aquatic invertebrates, mosses and lichens, fungi, ferns , 1 Taxon per year
- Check mink survey rafts weekly

4.2.4 To increase visitor enjoyment and awareness of the site

Visitor Targets

- Visitors report wildlife sightings
- 10 attend a wildlife event e.g. bat watch per year
- 2 volunteers recruited per year as species monitors

Management Summary

- Annual health & safety check of site and review arrangements for disability access
- Maintain paths, fences and other structures
- Launch new web site and update at least quarterly
- Maintain blog
- Maintain bird hide including wildlife identification resources
- Develop a children's trail/quiz
- Site kingfisher post in Mere near hide
- Maintain sightings and flowering plants list by hide and on web site
- Run a bat watch or similar species sighting event per year
- Take opportunities to update and extend information boards

Monitoring Summary

- Membership numbers maintained

4.2.5 To improve the monitoring and recording of species on site

Management summary

- Undertake planned monitoring surveys listed above
- Encourage members to volunteer for survey work
- Run survey training course
- Publish results of surveys on newsletter

Monitoring summary

- Numbers of surveys completed per year
- Numbers of published surveys per year

4.2.6 To consider and plan opportunities to extend the wildlife refuge and widen the range of habitats on site if the allotment site becomes available.

Management Summary

- Review opportunities and extend management plan for allotment site within 12 months of gaining access.



Appendix 8 Site Evaluation and rationale for management

Table 3 Key features, Attributes and Management factors

Important feature	Characteristic	Current state	Target for characteristic	Key actions	Target for Key Actions	Comments
The Mere	Water depth	Variable but levels rising as outflow becomes blocked Can become dry in hot summers	Maintain outflow at level of concrete bund at outflow Minimum of 10cm	Clearance of outlet tunnel Not controllable	Monitor and plan action if required	Need liaison with fishing club and to be aware of Environment Agency requirements. Some drawdown desirable in summer to increase resources for birds, dragonflies etc. Drying may assist germination of seeds of aquatic vegetation. Public perception is that high water levels good – may need information on value of shallow water and drying
	Water quality	BMWP score 10	BMWP score 10	Control silt/algal growth if excessive by mechanical or other suitable controls.	Monitor water quality (BMWP) every 5 years. Monitor algal blooms and silt depth annually.	Provides list of key invertebrate families present and hence informs both biodiversity and water quality. Water quality on entry to site not controllable

Important feature	Characteristic	Current state	Target for characteristic	Key actions	Target for Key Actions	Comments
	Bank vegetation	N/A	0.5 – 2m high	<p>Cut and remove vegetation</p> <p>Pollard trees to increase light</p>	<p>20% pa - outside breeding season Maintain sight lines</p> <p>As required</p>	<p>Maintain succession at current levels</p> <p>Where branches fall into water these can be left to provide shelter for fish and if willow as a counter to algal growth. Standing dead wood will also support increased biodiversity</p>
	Aquatic and Marginal Flora	N/A but attempts to widen species including floating vegetation not successful	10 native species	<p>Knowledge of current species</p> <p>Encourage up to 25% cover with floating/submerged vegetation – try fencing to protect from feeding ducks</p> <p>Maintain watercress in visible locations e.g. near bridge</p> <p>Maintain low mallard population by discouraging feeding</p>	<p>Survey</p> <p>Introduce native species</p> <p>5+ m²</p> <p>< 5 resident</p>	<p>Provide basis for further introductions and monitoring of management actions</p> <p>Increases cover for fish, invertebrates. Need to maintain balance between aesthetic for open water and improved biodiversity when vegetated</p>

Important feature	Characteristic	Current state	Target for characteristic	Key actions	Target for Key Actions	Comments
	Nos. aquatic bird sp.	N/A	12+	Monitor	Annual species list	
Mosaic of habitats	No. grass species	N/A	4 new species of butterfly food grasses	Weed nettles and other invasive species from grassy areas	Annual weed, no cut for butterfly bank Annual cut elsewhere except where controlling weeds where monthly	Allow deep litter rich grassland to develop (support small mammals, insects that like no disturbance)
	% grassland	N/A	25% of area maintained as grassland	Control scrub, weed invasive species, cut annually but leaving some patches for 2/3 years especially hedge margins	Grass patches of variable height from short turf to 0.5 m+	Cut only 50% of patch at one time, from July to October. Ensure some disturbance of soil to create micro-habitats. Consider opportunities for removal of some top soil, addition of sand, crushed concrete, planting of yellow rattle to reduce nutrient value
	% standing water	0	2%	Maintain ponds		
	% scrub incl. bramble and nettle patches	N/A	15%	Maintain major patches by bird hide, in Pyghtle, near Mere and in N. Bog	Control bramble growth elsewhere at cut up to 20% p.a of major patches	High value for birds
	Nos. species of woodland flora	N/A	maintain	May monitoring survey	5 yr. survey with DAFOR scale in May	
	Woodland	N/A	Maintain	Cut back on 10 year cycle to maintain		Consider coppicing where appropriate to open up new light, create new habitat and to prolong tree life

Important feature	Characteristic	Current state	Target for characteristic	Key actions	Target for Key Actions	Comments
Wildlife refuge in urban area	Nos. species butterflies	12	15	Food plants Sheltered sunny areas Public awareness	See grass species 2 sheltered scrub glades Recent sightings board updated weekly	
	Nos. species bats	N/A	2	Maintain bat boxes Monitoring survey Public awareness	Annual survey Bat watch event	
	Nos. species of flora	163	165	Monitoring Survey Public awareness	Monitoring - May and August with DAFOR Weekly flowering list	
	Nos. 'other species'	N/A	5 monitored species	Monitoring surveys for other less visible species Recording of mammal sightings Public awareness Introduce wintering habitat for bees, other insects	One survey per year Taxon every 5 years Casual list 1 site	

Important feature	Characteristic	Current state	Target for characteristic	Key actions	Target for Key Actions	Comments
Key species						
Kingfisher	Nos. on site	N/A	2+	Bank management Improve viewing	See above Site pole as perch near hide	
Water rail	Nos. breeding pairs	N/A	1	Bank/bog management	See above	
Song Thrush	Nos. breeding pairs	N/A	1 pair	Manage hedges & scrub to maintain fruits & seeds	20% cut per year early spring	
Sparrow	Nos. breeding pairs	N/A	5 pairs	Maintain dense scrub near feeders	20% cut per year early spring	
				Survey		
Water vole	presence	0		Survey		
	Nos. mink (negative factor)	0	0		Weekly check	Site maintained for potential for re-introduction programme

Appendix 9 Implementation Plan

- 1 – Essential work**
2 – Important work
3 – Desirable work

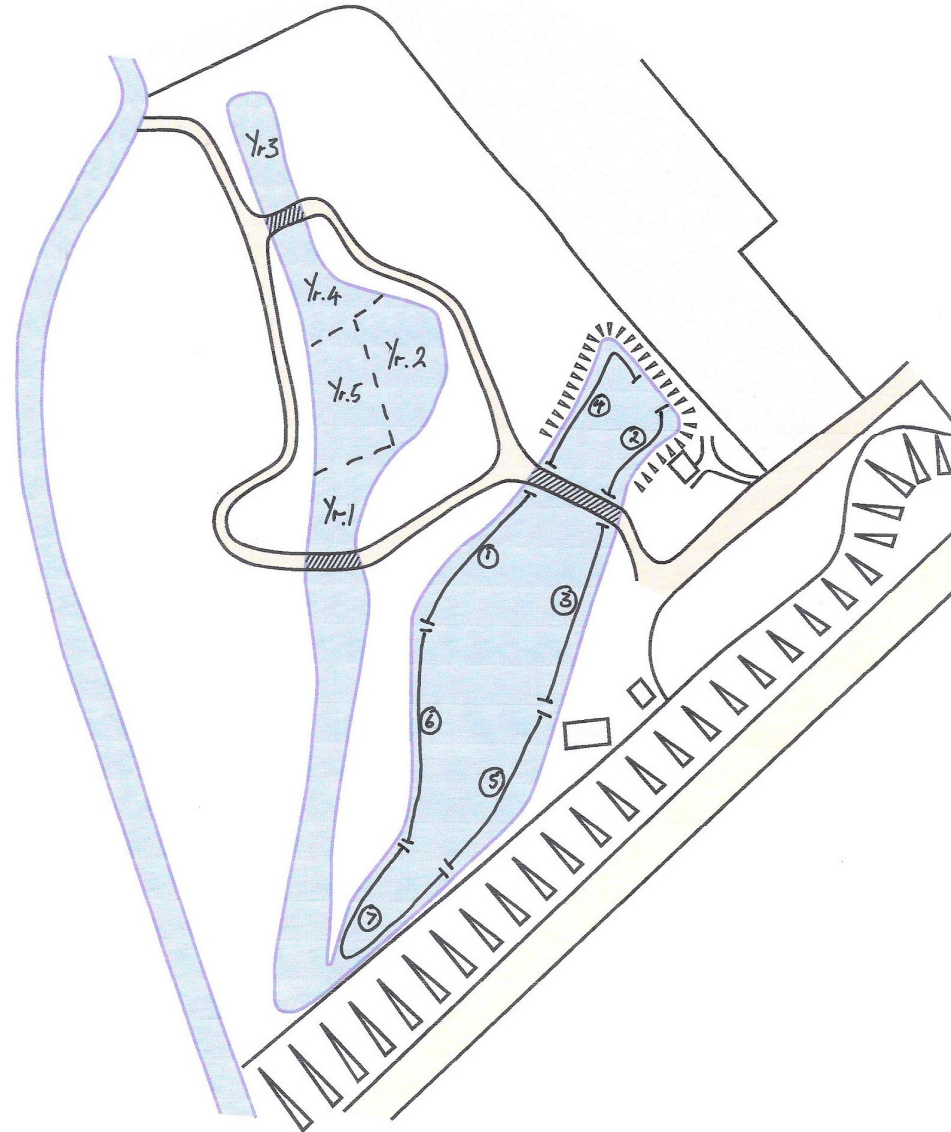
Objectives	Activity	09	10	11	12	13
4.2.1 (see page 120)	Maintain notices concerning duck feeding and discourage activity	2	2	2	2	2
	Create 2 sheltered marginal areas to support breeding fish				2	
	Monitor Mere outflow	3		3		3
	Remove silt if opportunity arises Take measures to prevent algal blooms	1	1	1	1	1
	Keep Bog channel free on annual cycle	2	2	2	2	2
	Cut Bog vegetation 20% per year, maintain sight lines	2	2	1	2	2
	Cut Bog and Mere banks – 20% per year Cut river bank annually	2 1	3 1	2 1	2 1	3 1
4.2.2	Annual mow – late summer of meadow areas	1	1	1	1	1
	More frequent mow of areas with nettles/hogweed	3	3	3	3	3
	Re-sow or plant plug plants/bulbs to widen diversity	3	3	3	3	3
	Plant new damson trees		2	2	3	
	Re-locate paths around orchard to avoid trees					
	Maintain scrub by cutting 20% per year.	1	2	1	2	1

Objective	Activity	09	10	11	12	13
	Coppice or prune 10% of trees a year	2	2	3	2	3
	Winter prune orchard trees	2	3	2	3	2
	Weed and replant if needed butterfly and herb beds	1	1	2	2	1
	Structural survey of trees	1				
4.2.3	Maintain mink raft	1	1	1	1	1
	Cut hedges in rotation Lay hedges where appropriate Re-locate paling fence	2	2 2 2	2	2	2
	Create insect hotel/reptile area		2	2		
	Create a vertical log pile feature				3	
	Monitor and remove alien/invasive species Take opportunities for introductions of native species	1 3	2 3	1 3	2 3	1 3
4.2.4	Select and implement option for Pyghtle		2			
	Site kingfisher post in Mere			3		
	Maintain sightings and flowering plants list by hide and on web site	2	2	2	2	2
	Run 2 public events annually	1	1	1	1	1
	Run a bat watch or similar species sighting event per year	3	3	3	3	3
	Run a species monitoring course per year	2	2	2	2	2
	Review and update information points		2		2	
	Develop children's trail/quiz			3		
	Maintain bird hide and identification resources		3			3
	Encourage members to volunteer for survey work	3	3	3	3	3
	Publish newsletter quarterly	1	1	1	1	1

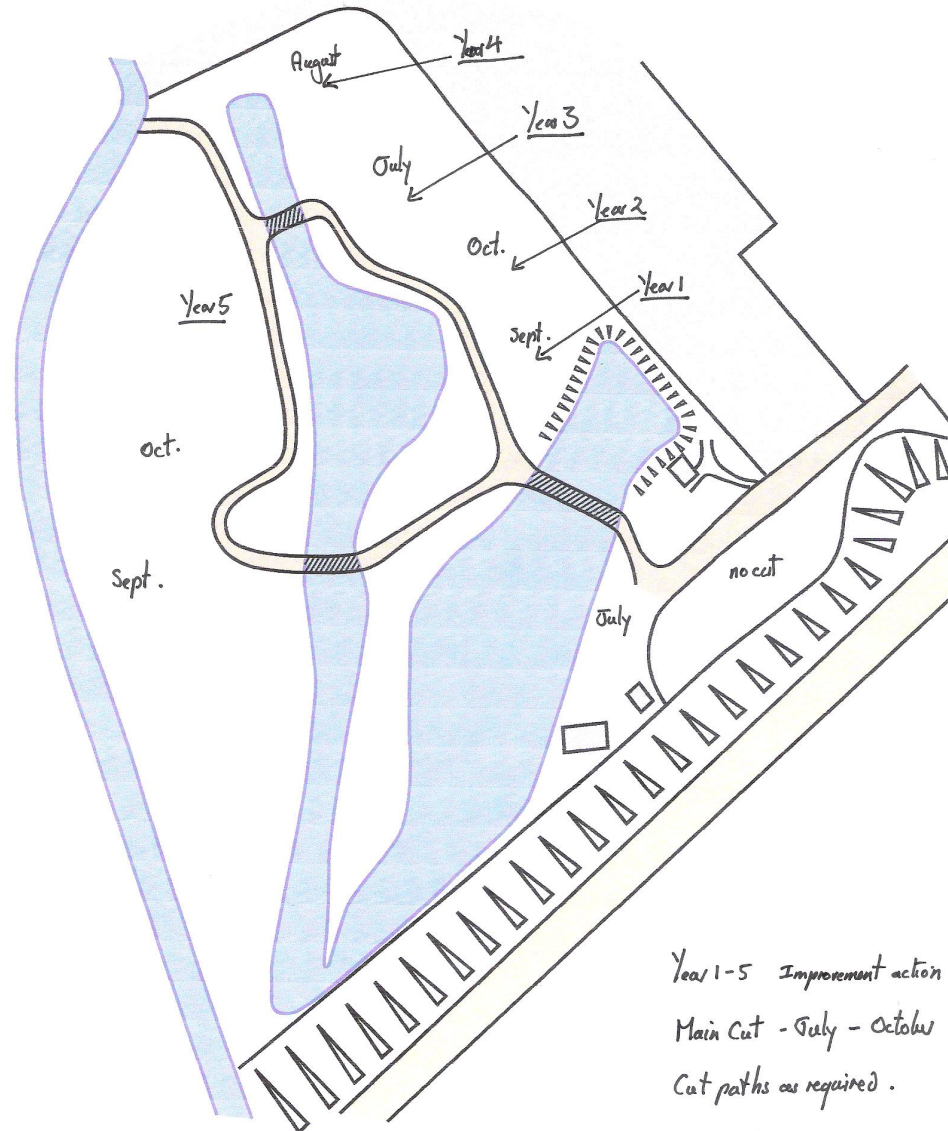
Objective	Activity	09	10	11	12	13
	Re-launch web site		1			
	Update blog and web site	1	1	1	1	1
	Make surplus fruit available to public	3	3	3	3	3
	Management Plan for allotment site		1			
4.2.5	Butterfly survey summer	2	2	2	2	2
	Bird survey	2	2	2	2	2
	Plant survey			3		
	Bat survey	3	3	3	3	3
	Other taxon 1 per year	3	3	3	3	3
	Monitor silt and algal levels	3	3	3	3	3
Other	Maintain paths, boundaries and other structures including annual H&S survey	1	1	1	1	1



		Management Plan Timescale																			
Management		2010				2011				2012				2013				2014			
		Year 1				Year 2				Year3				Year 4				Year 5			
		S	Su	A	W	S	Su	A	W	S	Su	A	W	S	Su	A	W	S	Su	A	W
Mere	Clear sightlines																				
	Manage margins																				
	Monitor outflow																				
	Algal control																				
	create sheltered margins																				
Habitat	reseed a meadow area																				
	grass cut/weed																				
	re-locate paths in Orchard																				
	bramble clearance																				
	bog clearance																				
	channel clearance																				
	coppicing																				
	hedgerows cut																				
	lay hedge and re-site paling fence																				
	weed butterfly/herb beds																				
	Pond maintenance																				
	river bank cut																				
	prune orchard																				
	survey trees																				
	Plant damsoms																				
Species	Replace bluebells																				
	Plant new bulbs																				
	Insect hotel																				
	Reptile habitat																				
	Vertical log pile																				
	Kingfisher post																				
	Inspect bird/bat box																				
Community	Pygthle access																				
	Newsletter																				
	Website launched																				
	Website/blog maintained																				
	Public events																				
	Wildlife event																				
	Children's resource																				
	Safety check																				
	Path maintenance																				
	20th anniversary celebrations																				
	AGM																				
	Working groups																				
	Update info. Boards																				
	Mink monitoring																				
	Butterfly monitoring																				
Monitoring	Bird monitoring																				
	aquatic inverts survey																				
	plant survey																				
	small mammal survey																				
	bat survey																				
	moth survey																				
	survey reports																				
Allotment	survey site																				
	action plan																				
	clearance																				
		Year 1				Year 2				Year3				Year 4				Year 5			



APPENDIX 12



Year 1-5 Improvement action
Main Cut - July - October
Cut paths as required.

ROTATIONAL MANAGEMENT OF GRASSY AREAS

1:500

Appendix 13 SWOT analysis

<p>Strengths</p> <ul style="list-style-type: none"> • Diversity of habitat • Several species of local importance including water rail and kingfisher • Good number of sparrows although rapidly declining within the wider area • Site of watercress beds uncommon • Part of Ver valley as wetland corridor • Good community support and usage of site • Little significant vandalism or disturbance • Successful recent appeals not to feed ducks has reduced mallard numbers and increased other species • Appeal of water and other habitats within an urban area • Good communications with members and local residents 	<p>Weaknesses</p> <ul style="list-style-type: none"> • small size – not able to support many populations • not natural – some waste materials on-site • lack of regular monitoring/patchy species lists • grassland overgrown to scrub • few grass species • Limited historical and recording records of the site • Biodiversity of Mere may be limited – some problems associated with algal growth, problem in maintaining outflow • Limited volunteer time
<p>Threats</p> <ul style="list-style-type: none"> • Loss of volunteers to manage habitat • Water pollution event or excessive water abstraction upstream, major algal blooms • Mere outlet blocked • Community wishes to 'garden site' • Noisy and inappropriate visitor behaviour, litter and vandalism • Lease renewal (no immediate threat) 	<p>Opportunities</p> <ul style="list-style-type: none"> • attract wider range of wildfowl and passage waders • widen range of plants in and around Mere • attract more fish within Mere • develop history of watercress beds • widen opportunities for volunteers • use monitoring to improve management and increase information for visitors • Improve species richness of grassland • re-establish water vole • 20th anniversary

Appendix 14 Bibliography

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