St George Park (Southern Boundary)

Management Plan

2015 - 2020

Prepared by: Mary Wood
Checked by: Kelly MacGillivray

32 Jacobs Wells Road
Bristol
BS8 1DR

Tel 0117 917 7273
Fax 0117 929 7273
Email enquiries@AWTecologicalconsultancy.org.uk

AWT243
Revision: 0
July 2015

Contents

1 Introduction and Methodology

1.1 Introduction and Aim

Avon Wildlife Trust Ecological Consultancy was commissioned by the Friends of St George Park Group, Bristol (FOSGPG), to carry out an ecological survey of a strip of land at the southern boundary of the park.

1.2 Method

The land was subject to a botanical survey, with the individual species recorded and the DAFOR score (dominant, abundant, frequent, occasional, rare) applied. The surveys were completed by Mary Wood MCIEEM, an experienced ecologist, on 11th May 2015. The scope of the survey area is shown in Figure 1.

1.3 Review of Existing Information

Information supplied by the client, a former Park Keeper at St George Park (now a member of FOSGPG), was reviewed. This followed a site visit between the client and AWT Ecological Consultancy on 30th January 2015. These provided suggestions and a vision for the future ecological enhancement of the area. A data search was also carried out for protected and notable species associated with the site and within 1km of the site. This information was obtained from Bristol Regional Environmental Records Centre (BRERC).

1.4 Constraints

The survey was carried out at an appropriate time of year. Although some woodland plants were noted, the dense cover of tall herb species over much of the site may have led to some species being missed or those observed being underestimated in their distribution.

2 Site Information

2.1 Location

St George Park is located in east Bristol. The central grid reference for the southern section, which is the subject of this plan, is ST621736. This area covers approximately 0.67 hectares (ha), while the entire park is 14.2ha. The park is bounded by residential and commercial properties bordering the A420 Church Road to the south, Chalks Road to the south-west, Park Crescent to the north-west and north, and Clouds Hill Avenue to the east.

2.2 Land Tenure

The site is owned by Bristol City Council, who have the primary management role. The Friends Of St George Park Group also contribute to various elements of management work and are keen to assist with aspects of the current proposals.

2.3 Historical Perspective

The park was established by St George Urban District Council in 1894 on land previously occupied by Fire Engine Farm. Wain Brook, which used to cross the farm fields, was used to form the large lake in the east of the park.

2.4 Current Land Use

The Friends' Group have a section at www.stgeorgenp.org.uk/friends-of-st-george-park providing information about the park and events etc. It is a well-used site, the dominant activities being recreational walking, family picnicking, jogging and dog exercising. There is a large and popular games park in the south-west of the site. Guided walks are being provided to encourage people to learn more about the park's biodiversity interest. During the survey, it was evident that young children and their families walk home from school along the paths in the south of the site.

2.5 Environmental Information

2.5.1 Biological (please see Figure 1).

2.5.1.1 Grassland

This habitat is found alongside paths (as a one metre strip) and also forms a large expanse between paths and on a bank down to Church Road in the east of the area. Having been planted, it consists largely of grass species, dominated by perennial rye-grass *Lolium perenne.* Occasionally other grasses are present, such as cock's-foot *Dactylis glomerata,* false-oat grass *Arrhenatherum elatius* and annual meadow grass *Poa annua.* Due to the variety of common species occurring within the sward, the grassland, which is currently managed as amenity (i.e. frequently cut), would be described as semi-improved grassland, i.e. not diverse enough or supporting sufficient less common plants to be described as species-rich. Abundant daisy *Bellis perennis* and dandelion *Taraxacum* agg. occur particularly on the eastern grassland, with locally abundant common chickweed *Stellaria media.* Meadow buttercup *Ranunculus acris* is frequent, as are white clover *Trifolium repens,* yarrow *Achillea millefolium,* mouse-ear hawkweed *Cerastium fontanum* and common field speedwell *Veronica persica.* Found occasionally are ribwort plantain *Plantago lanceolata,* dove's-foot crane's-bill *Geranium molle,* spear thistle *Cirsium vulgare,* lesser trefoil *Trifolium dubium,* common ragwort *Senecio vulgaris,* wood dock *Rumex sylvatica,* white deadnettle *Lamium album,* smooth sow-thistle *Sonchus oleraceus* and hogweed *Heracleum sphondylium*. Common sorrel *Rumex acetosa* is rarely found. Lady's smock is found occasionally on the south-eastern slope, implying some impeded drainage in this area; thyme-leaved speedwell *Veronica serpyllifolia* ssp. *serpyllifolia* is also rarely found here. Planted daffodils *Narcissus* spp. also occur in this area. More shaded areas support wood avens *Geum urbanum.* All the above species are common and widespread, but of particular interest are several clumps (approximately 50 plants) of corky-fruited water-dropwort *Oenanthe pimpinelloides,* a nationally uncommon plant, which is found on the shorter grass adjacent to the footpath. Occasional lying dead wood is present in these areas, with consequent benefit to amphibians and invertebrates.

2.5.1.2 Tall herbs

The grassland areas between the trees in the south of the site consist of tall herbs, dominated by cow parsley *Anthriscus sylvestris* interspersed with abundant common nettle *Urtica dioica.* Present occasionally are broad-leaved dock *Rumex obtusifolius* and hogweed, the latter dominant in some areas. Bramble *Rubus fruticosus* agg. occurs rarely. Because of the presence of trees, this area also supports some species associated with woodland, even species considered by some to represent ancient woodland indicator species such as bluebell *Hyacinthoides non-scripta* and wild garlic *Allium ursinum,* which occur rarely, and also wood avens. Green alkanet *Anchusa officinalis,* an introduced species, was noted growing amongst ivy *Hedera helix* and common nettle in one area on the mid-western boundary. Fencing divides the site from the houses beyond, and ivy is often present here.

2.5.1.3 Scrub

There is an area of diverse scrub and tall herbs in an indented area in the west of the site adjacent to the community centre. A mature sycamore *Acer pseudoplatanoides* grows in the centre; hawthorn *Crataegus monogyna* is present, and there is an old hawthorn near the back, along with young ash *Fraxinus excelsius* and young dogwood *Cornus sanguineum*. There are three old field maples *Acer campestre* with one coppiced hazel *Corylus avellana* alongside. Shrub species

present are elder *Sambucus nigra,* wild privet *Ligustrum vulgare* and buckthorn *Rhamnus cathartica* (the latter species is not found very commonly in the Bristol area). The tall herbs include stands of hogweed, common nettle and cleavers. A stand of Japanese knotweed near the rear of the area is currently being treated. This area should not be allocated to any further use until the area has been declared free of Japanese knotweed.

2.5.1.4 Trees

There are a number of trees of varying ages along the southern border of the site. Some appear to have been planted while others are self-seeded.

South of the east-west path

The majority of the trees are native; of the non-native planted trees are two strawberry trees *Arbutus unedo* on the grassland at the eastern end, and a probable red oak *Quercus rubra* lying to the east of the north-south path onto Church Road. There is a single holm oak *Quercus ilex*, and a clump of three young sycamore *Acer pseudoplatanus.* Of the native trees, at least ten silver birch trees have been planted, as have frequent hybrid lime *Tilia* x *europaeus.* Ash *Fraxinus excelsior* is likely to be self-seeded and there are at least five trees as well as saplings, the latter occurring especially along the southern boundary adjacent to some flats on Church Road. Wild cherry *Prunus avium* saplings are also present. The boundary between the park and the domestic properties beyond is generally marked by railings, but garden privet *Ligustrum ovalifolium* occurs in some sections.

North of the east-west path

Other than a single hybrid lime, all the trees here are non-native plane and have been planted, most likely to be London plane *Platanus* x *acerifolia*.

2.5.1.5 Protected and Notable Species

The data search returned records for the park itself for bats - common pipistrelle *Pipistrellus pipistrellus* and noctule *Nyctalus* noctula, and birds - great spotted woodpecker *Dendrocopus major*, house sparrow *Passer domesticus*, starling *Sturnus vulgaris*, and an old (1979) record for spotted flycatcher *Muscicapa striata*. The latter three species are all red-listed on the Birds of Conservation Concern (RSPB *et al*) due to significant declines over the last 25 years. An unidentified newt species was also recorded from the park. Within a 1km radius of the park there are records for the following species for which the current park habitats could be suitable - the reptiles and amphibians slowworm *Anguis fragilis,* grass snake *Natrix natrix* (both these are protected under the Wildlife and Countryside Act 1981 (as amended), common toad *Bufo bufo,* common frog *Rana temporaria,* great crested newt *Triturus cristatus* (1988, on 1km boundary) - this species is fully protected under the Conservation Regulations 2012 (as amended), the birds song thrush *Turdus philomelos,* blackcap *Sylvia atricapilla,* bullfinch *Pyrrula pyrrula,* kestrel *Falco tinnunculus,* sparrowhawk *Accipiter nisus,* treecreeper *Certhia familiaris,* green woodpecker *Picus viridis,* tawny owl *Strix aluco,* willow warbler *Phylloscopus trochilus,* the bat Leisler's bat *Nyctalus leisleri* (all bats are fully protected under the Conservation Regulations 2012 (as amended), other

mammals badger *Meles meles* (badgers are protected under the Badger Act 1992) and European hedgehog *Erinaceus europaeus*; and the uncommon plants fern grass *Catapodium rigidum,* squirrel-tail fescue *Vulpia bromoides* and common cornsalad *Valerianella locusta.*

3 Management Rationale and Prescriptions

3.1 Objective

To improve the appearance and biodiversity of the southern boundary of the park, encouraging and creating species-diverse low and open woodland, and enabling creation of a wildflower meadow. An education area could be created in the most appropriate location within the woodland. Much of the current site is attractive, visually interesting, and of great benefit to wildlife, so the aim is to retain what is good and maximise the interest.

3.2 Rationale - Woodland

As many of the existing species would be found in a natural woodland habitat e.g. hawthorn, ash, bluebell and wild garlic, these species should be retained and encouraged to spread. Due to the popular public use of the park, and its currently open appearance, it will be important to ensure that the area remains visually open, so that passage through it affords a safe space. Hidden corners will be avoided to discourage anti-social behaviour.

3.2.1 Existing Species Removal

Due to their ability to self-seed quickly and efficiently, thus competing with newly planted bushes, the ash saplings and young sycamore trees will be removed, with the stumps treated to prevent re-generation. Bramble will be selectively cleared. Use any timber from this process to form log piles, which should be left in as long lengths as possible and stacked in shady areas.

3.2.2 Suggested species planting

Many of the existing trees should be retained. Scrub species to be planted to create the woodland understorey will include: hazel *Corylus avellana* (to be coppiced on rotation), holly *Ilex aquifolium*, spindle *Euonymus europaeus*, buckthorn, elder *Sambucus nigra,* dogwood *Cornus sanguineum*, wych elm *Ulmus glabra,* guelder rose *Viburnum opulus* and wayfaring tree *Viburnum tinus.* The shrubs should be planted in the winter at least 5m apart to ensure an open woodland. These species have berries as well as nectar and pollen to support other wildlife. The hazel will be coppiced on a rotation once it is established and tall enough, which is unlikely to occur within the life of this 5 year plan. Generally speaking hazel should be coppiced every 10-15 years.

Although a hedgerow could be planted along the southern boundary, with species as above, it may struggle to grow successfully given the shade of the existing trees and the buildings along Church Road. Should it be decided to go ahead and plant a hedgerow, it would be unnecessary to include hawthorn as this is already prevalent on site and is likely to occur naturally. Blackthorn *Prunus spinosa* could be included but this species suckers readily and would need control.

Bramble will re-grow in open areas. This species is important as a food source for many species of invertebrates, including butterflies, and for breeding birds, and should be encouraged in selected areas. Approximately one third will be cut each year, to ensure new and healthy re-growth.

3.2.3 Management

It is likely that the cow parsley/nettle community will persist for some time so this will be cut regularly within the new woodland area. However, these species are beneficial to invertebrates, and their presence along the woodland edges should be encouraged. Woodland ground floor species such as native bluebell, wild garlic, wood anemone *Anemone nemorosa* and yellow archangel *Lamium galeobdolon* will be encouraged where already in existence, with additional planting carried out if necessary should their spread not occur naturally.

3.3 Rationale - Grassland

3.3.1 The grassland at the eastern end of the site adjacent to the road could be allowed to grow long, with an annual cut in August and complete removal of arisings. The species diversity already evident in the grassland will provide a good visual appearance, and other species may appear once the current cutting regime is reduced. The grassland could be supplemented in time with plug planting of other locally appropriate species if necessary. Consideration could be given to allowing the grass to grow long and be managed as a wildflower meadow in the section just to the north of this area.

Tall herb species will form a natural edge to the grassland, and provide additional habitat for invertebrates, amphibians and reptiles. A two metre boundary should be left uncut around the grassland perimeters, with half being cut in alternate years so that there is always some habitat for overwintering invertebrates.

In order to maintain a managed appearance, cut regularly strips of ½-1m wide adjacent to paths. Where the corky-fruited water-dropwort occurs this area should be left to grow long and cut at the same time as the meadow area.

3.4 Pond

3.4.1 Consideration could be given to creating a wildlife pond (see drawing). If designed appropriately, ponds are extremely valuable for wildlife such as aquatic plants, amphibians, dragonflies and damselflies, and other aquatic invertebrates.

3.4.2 A wildlife pond should have earth perimeters where vegetation can grow, and should shelve down to a maximum depth of one metre. Ideally the shape should be 'scalloped' to increase the edge habitat. If the pond dries out occasionally this does not matter as it would kill any non-native fish present, and the presence of a 'drawdown zone' around the edges each summer allows certain plants to grow there which otherwise would not be present.

3.5 Monitoring

3.5.1 Monitoring and keeping careful records will enable the success of the habitat creation project to be assessed. The plants can be monitored by selecting certain 'indicator' species i.e. those that are desirable as indicative of woodland or meadow habitat, and those that are undesirable, such as cow parsley (because of its current dominance), nettles, hogweed and docks.

3.5.2 Butterflies are a useful indicator of a botanically diverse environment. These could be surveyed by carrying out a weekly or monthly transect during March to October in warm, sunny weather with little wind.

3.5.3 *Odonata* (dragonflies and damselflies) could be observed in similar conditions at the pond.

3.5.4 A bird survey could be carried out between March and June to check the types and numbers of breeding species.

3.5.5 Amphibians could be observed by torchlight at the pond in early spring.

3.5.6 The surveys could be carried out by experienced professional surveyors, but knowledgeable volunteers would be just as helpful in providing reliable data.

3.6 Legislation

3.6.1 Nature Conservation Legislation

- Bats are protected under the Conservation of Habitats and Species (Amendment) Regulations 2012 and the Wildlife and Countryside Act 1981 (as amended). It is an offence to disturb, injure or kill a bat, or to damage or destroy a roost. Any tree scheduled for removal may have the potential to support bats and therefore any such tree should be assessed. Should it be found to have potential to support a bat roost, it should be subject to a bat survey carried out by a qualified ecologist before works to trees with features which may support bat roosts commence. Should a bat roost be present, a licence will be required from Natural England.
- Nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended). Scrub and tree works should only be carried out between October and February inclusive to avoid harm to nesting birds.
- Reptiles are protected against killing and injury under the Wildlife and Countryside Act 1981 (as amended).

3.6.2 Health and Safety Legislation

- In accordance with Health and Safety Regulations, safety checks must be carried out across the site, recorded and recommendations acted upon where necessary.
- Risk assessments must be made and kept for each work or public event activity.

3.6.3 Health and Safety at Work Act 1974

- All operations carried out on the site must be undertaken by trained personnel, using methods and equipment approved by the Health and Safety Executive.

3.6.4 Occupier's Liability Act 1984

- This Act imposes an obligation on the landowner to ensure that every reasonable care is taken to remove any risks to all visitors to the site. In compliance it will be necessary to:
  a) Make sure that all footpaths and other constructions are safe;
  b) Remove any hazardous objects;
  c) Survey all trees on the site, both within and along the boundaries, on a regular basis to ensure the safety of visitors to the site and of those people who use the adjacent rights of way, such as the footpath at the eastern end of the site;
  c) Conduct a safety audit to identify further hazards.

4 Five Year Work Programme

4.1 Work Programme

Actions relating to the next five years of management are listed in tabular format below. Table 1 gives the capital works (i.e. one off works) schedule and Table 2 the annual works (i.e. ongoing works) schedule. It is suggested that an ongoing record is kept annually of work completed (including dates and operators) and work carried forward, with the Plan amended accordingly, so that it is a useful working document.

Table 2 Capital Works St George Park (Southern Section) 2015-2020

Year	2015/16	2016/17	2017/18	2018/19	2019/20
Work					
Remove and treat ash saplings and young sycamore	One third	One third	One third		
Use timber from such removal to form log piles.					
Remove bramble in tree planting area	Most				
Plant woodland shrubs	All				
Plant woodland ground flora in autumn if necessary				√	√
Create wildlife pond		√			

Table 3 Ongoing (Annual) Works St George Park (Southern Section) 2015-2020

Year	2015/16	2016/17	2017/18	2018/19	2019/20
Work					
Woodland					
Monitor progress of newly planted shrubs - e.g. check guards, weed around bases, water as necessary,	All	All	All	All	All

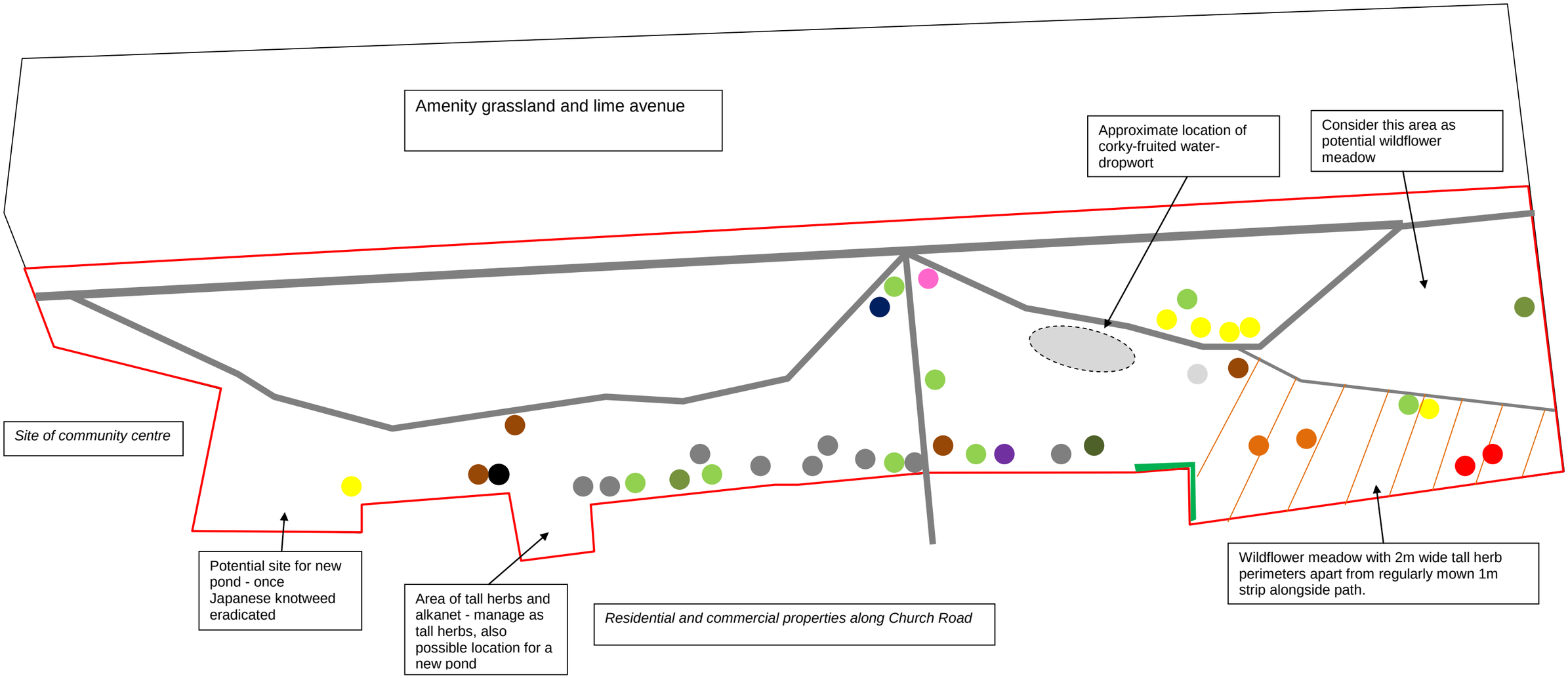
replace diseased/damaged stock. To be carried out by Tree Pips.					
Continue to remove saplings of ash and sycamore	√	√	√	√	√
Encourage bramble in selected areas, cutting one third every year.		Cut back one third	Cut back a different one third section	Cut back final one third section	Re-cut original one third
Monitor extent of woodland ground flora in May - e.g. bluebell and wild garlic to see if spreading.	√	√	√	√	√
Grassland					
Allow new meadow area grassland to grow long, cutting it and remove all arisings in August.		√	√	√	√
Allow a 2m wide strip of tall herbs to form a border around the new meadow area.	√	√	√	√	√
Cut 50% of tall herb border in alternate years in August, removing the arisings.		Cut 50%	Cut alternate 50%	Re-cut original 50%	Re-cut alternate 50%
Manage tall herb area where green alkanet grows, cutting half in	Cut 50%	Cut alternate 50%	Re-cut original 50%	Re-cut alternate 50%	Re-cut original 50%

alternate years.					
Maintain a cut border adjacent to the paths of ½ - 1m in width, BUT allow corky-fruited water-dropwort to grow and cut at same time as annual meadow cut.	√	√	√	√	√
Pond					
Manage wildlife pond			Check extent of aquatic vegetation and maintain below 60% coverage	Check extent of aquatic vegetation and maintain below 60% coverage	Check extent of aquatic vegetation and maintain below 60% coverage
Monitoring					
Monitor wildlife using created area - e.g. plants, butterflies, dragonflies, birds, amphibians. In particular monitor corky-fruited water dropwort.	√	√	√	√	√

References

Clive Stace 1991. New Flora of the British Isles, Clive Stace 1991.

Figure 1 Managment Area



KEY	
	Ash
	Cherry
	Hawthorn
	Holm oak
	Lime
	Plane
	Red Oak
	Scots Pine
	Silver Birch
	Silver birch x10
	Strawberry Tree
	Length of garden privet hedge
	Wildflower meadow
	Path
	Site boundary

AWT ecological consultancy

32 Jacob's Wells Road, Bristol, BS8 1DR
Tel: 0117 9177273 Fax: 0117 9297273 www.avonwildlifetrust.org.uk

Client: Friends of St George Park Group
Title: St George Park
Date: 7th July 2015
Drawn: MW
Job Ref: AWT243
Figure 1: Area of Survey and Management Proposals

Not to scale - trees schematic only