SLINC Management Plan:
Martineau Gardens, Edgbaston

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Morgan Hughes, AIEEM
Biodiversity Co-ordinator

Foreword:

As described in the Birmingham Biodiversity Action Plan (BAP), there are three distinct levels of biodiversity: • the variety of ecosystems and habitats • the diversity of species • the genetic variation within individual species. This SLINC management plan for Martineau Gardens, Edgbaston, will endeavour to consider each of these and provide recommendations for the implementation of good practice in order to enhance the biodiversity of the SLINC and surrounding land that is not as yet included in the SLINC area but is under the management of Martineau Gardens' staff and volunteer groups.

To date, the following species are mentioned / included in the listed documents / classification systems for species of concern or focus for conservation or protection.

Birmingham and Black Country BAP Species

Noctule
Pipistrelle
Bluebell
Song Thrush
Kestrel

UK BAP Species:

Bullfinch
Song Thrush
Lunar Yellow Underwing
Pipistrelle Bat

RSPB Red List:

Lesser Spotted Woodpecker
Song Thrush
Bullfinch
Skylark

RSPB Amber List

Kestrel
Stock Dove
Green Woodpecker
Swallow
Dunnock

Fieldfare
Redwing
Goldcrest

Species Of Conservation Concern

Sparrowhawk
Ramshorn Snail
Grey Heron
Common Toad
Goldfinch
Greenfinch
Noctule Bat
Pipistrelle Bat
Stock Dove
Wood Pigeon
Jackdaw
Greater Spotted Woodpecker
Lesser Spotted Woodpecker
Robin
Jay
Brimstone Butterfly
Swallow
Bluebell
Coal Tit
Blue Tit
Great Tit
Dunnock
Cowslip
Green Woodpecker
Purple Hairstreak
Common Frog
Goldcrest
Nuthatch
Tawny Owl
Starling
Goldcrest
Smooth Newt
Redwing
Blackbird
Song Thrush
Fieldfare

Species / Habitats in the Birmingham and Black Country Biodiversity Action Plan
(*selected as site-appropriate and paraphrased / summarised* **)**

Veteran Trees

Habitat: Broadly defined as trees that are of interest biologically, aesthetically, or culturally because of their age. May be protected by Tree Preservation Orders.

Threats: Lack of protection / knowledge of location / species / age and individual value; Inappropriate management; Lack of appreciation that traditional management is required; Removal of trees and deadwood due to safety perceptions; lack of "new" veteran trees for the future; Lack of knowledge of other associated species living on them; Vandalism; Tree surgeons; Adverse effects of natural regeneration e.g. sycamore overtopping trees

Deadwood Habitats

Habitat: There are a number of groups of species associated with the deadwood habitat, some are nationally and/or locally rare, including Fungi and Invertebrates. Invertebrates dependent on dead wood at some stage of their life cycle include species of worms, snails, copepods, millipedes, centipedes, pseudoscorpions, spiders, mites and numerous flying insects which spend their immature stages in deadwood. Some vertebrates are also largely dependent on the presence of dead wood. These include woodpeckers, willow tits, tawny owls, nuthatches and several species of bats. A total of over 1,100 species believed to be associated with dead wood have so far been recorded [in B & BC], but this is likely to be a significant underestimate.

Threats: Lack of appreciation of its importance by decision makers, woodland managers/workers and the general public. Mature and ageing trees are often felled and removed, and fallen/cut dead wood cleared away, without understanding of the magnitude of the impact that this has on the wildlife in the area. Disuse of traditional woodland management strategies such as pollarding; Obligations relating to ensuring public safety/security are often translated into radical destruction. (Potential fallen branches, arson targets,etc.); Fragmentation of habitat.

Bluebell

Species: Bluebell is a perennial herb belonging to the Lily family and is found in shaded or semi-shaded conditions frequently carpeting the woodland floor in the spring.
Widely distributed and common throughout the United Kingdom, bluebell is of international importance as 25-49% of the world population is found in the UK. It is intolerant of trampling, heavy grazing, water logging, deep shade and competing with vigorous grasses.

Threats: Habitat loss, Climate change; Bulb removal; Trampling; Competition and hybridisation with Spanish bluebell

Hedgerow

Habitat: A hedgerow is a row of shrubs or bushes, which form a boundary, with or without trees or pollards. It provides shelter for livestock, crops and wildlife. Hedgerows are rich wildlife-rich habitats and support a number of species of concern within the U.K. Some of these are globally threatened species. They also act as corridors for wildlife.

Threats: A reduction in traditional management practices, Inappropriate management practices ;A lack of general management, Desire lines; Uncertainty of ownership and management obligations, Removal.

Bats

Species: Bats are protected within the UK. Their population status is difficult to estimate.

Threats: Factors affecting roosts, Factors affecting foraging areas, Direct losses to population; These may include: Felling of trees, Fragmentation of Habitat, Deliberate destruction of roosts, Inadequate survey efforts before development work. Cat predation

Previous Surveys:

Land Care Associates Ecological Survey, September 1999

Primary Recommendations:

- Limiting access to defined areas
- Create Dead wood habitats
- Glade and ride management for scrub areas
- Maintain pond
- Lay / coppice hedge
- Cut meadow twice a year in June and September
- Protect mature Trees across the site

Land Care Associates Ecological Survey and Assessment, November 2004

General Recommendations:

- Specialist survey work on trees (ie bat surveys)
- Hedgerow / Tree work to take place outside of the bird breeding season (March – September)
- TPO investigations prior to any tree felling works.

Management Recommendations:

- Preserve and protect mature trees on site
- Management of trees carried out with consideration for presence of bats
- Dead wood should be retained to encourage invertebrate species
- Thinning of the canopy to reduce extent of ivy
- Ivy removal to reduce tree damage and clear ground areas for colonisation by other plants.
- Structural diversity maintained by thinning and coppicing.
- Reduce colonisation by ornamental species and garden escapes
- Grassland areas maintained and encroachment by tall herb and scrub minimized.
- Tall herb / ruderal species encouraged within scrub and woodland to enhance diversity and provide food for invertebrates such as butterflies and moths.
- Pond: Retain areas of open water; plant increased diversity of native wetland species.
- Pond: Removal of leaf fall during autumn to prevent water quality deterioration.
- Hedgerows cut yearly in January or February to enable fruiting as a food source for wildlife, and to minimize disturbance of nesting birds.

Invertebrate Surveys Summer 2006: Peter Boardman MSc; Field Studies Council

General Recommendations:

- Establish areas of late-flowering vegetation to lengthen foraging period for insects
- Continue recording of Moths with Skinner Trap
- Provide man-made habitat for insects such as solitary bees and ladybirds

Phase 1 Habitat Survey Report – July 2007 – Simon Atkinson, Wildlife Trust for Birmingham and the Black Country

General Recommendations:

- Continue clearance of Holly, Laurel and Ivy
- Continue thinning and coppicing
- Communicate with neighbouring site to work towards removal of Japanese knotweed from their site.
- Continue annual removal of emergent and woody vegetation from pond.
- Remove colonising trees from boggy / sedge area
- Expand meadow areas
- Remove hop from hedgerow
- Eradicate Australian Swamp Stonecrop.

* *Species lists from these and other surveys can be found as an appendix to this document.*

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Habitat	Recommendation, Target or Species	Action Completed to Date(October 2007)	Action for 2007/2008	Ongoing or Future Action
Woodland	Preserve and protect mature trees	Full Tree survey. Tree Surgery taken place where necessary and where not a disturbance to bats or other species. Standing dead wood left in place for invertebrates.	Continue observation of mature trees for health and safety.	Ongoing; Survey every 2 years
	Management of trees carried out with consideration for presence of bats	Sunrise survey - roost recorded on tree 75 Pipistrelle Bats and an additional roost on an unmarked mature oak in woodland.	Continued surveillance of bats on site. Monitor use of bat boxes.	Ongoing
	Limiting access to defined areas	Path closed between woodland glade and pond area in order to link smaller pockets of habitat and reduce disturbance by visitors. Small hawthorn coppice planted.	Establish rotational coppice of planted hawthorns for variable perching / nesting habitat for birds.	Continue management of coppice and clearance of ivy, bramble and nettles in glade area adjacent to coppice.
	Create / preserve dead wood habitats	Constructed and maintained dead wood / log piles. These were labelled to minimise public disturbance / climbing and to raise awareness of invertebrates.	Ensure any future tree surgery takes place with a view to leaving as much STANDING dead wood as possible without health and safety risk.	Ongoing. Potential exists for future Invertebrate surveys of dead wood.

	Glade and ride management for scrub areas	Clearance of ground ivy, assessment of tree condition. Coppicing and thinning of young woodland to provide best chance for healthiest trees. Clearance of ground ivy to improve ground flora.	Continue ground ivy clearance and maintain cleared / coppiced areas.	Ongoing
	Structural diversity maintained by thinning and coppicing	Coppicing of willow, hazel, hawthorn and several other species within the woodland, around the pond, and in the formal gardens has taken place.	Continue during winter months. Establish a rotational coppice / plan to be followed in future years.	Ongoing
	Reduce colonisation by ornamental species and garden escapes	Removal of laurel throughout the woodland.	Continue control of Laurel. Systematic programme of identification and removal of Spanish bluebell.	Replace Spanish bluebells with English each year until Spanish bluebells are no longer present
	Grassy areas maintained and encroachment by tall herb and scrub minimized	General weeding / perimeter clearance.	Ongoing	Ongoing
	Tall herb / ruderal species encouraged within scrub and woodland	Removal of ivy has taken place to encourage this.	Survey existing plants as they come up in the woodland. Prepare a planting regime in response to the survey.	Planting and monitoring.
	Thinning of the canopy to reduce extent of ivy	General thinning / lifting of canopy to allow more light to woodland floor.	Continue during winter months; Canopy thinning only to take place November to February.	Ongoing
	Ivy removal to reduce tree damage and clear ground areas for colonisation by	Ivy removed from many areas of woodland, particularly areas of newly	Ongoing. Particular attention to young trees / hedges / perimeter of	Monitor older trees in respect to ivy causing winter wind damage or health and

	other plants	planted / laid hedgerow or coppiced trees.	woodland meadow.	safety risk.
Pond	Retain areas of open water;	Cleared excess vegetation at the end of the summer to maintain open water, leaving vegetation on the side of the pond for invertebrates and amphibians to return to the water.	Repeat yearly.	Ongoing
	Plant increased diversity of native wetland species	None`	Spring 2008, establish additional native species	Monitor changes / success. Ongoing.
	Maintain pond vegetation	Thinning of emergent vegetation in pond.	Continue previous actions yearly; prepare a plan for introduction of native marginal aquatic species.	Monitor any changes in biodiversity.
	Eradicate Australian Swamp Stonecrop.	None`	Begin removal in 2008	Ongoing
	Removal of leaf fall during autumn	Netted pond in Autumn 2006. Thinned out overhanging branches from nearby trees.	Maintain coppice, clear leaf fall, some dredging. Survey aquatic wildlife.	Ongoing.
Hedgerows	Hedge: Woodland Border	Hedge on western edge of compost area / meadow laid. This was planted in barer areas with bare root stock hawthorn.	Monitor hedgerow, remove overgrowing vegetation (hops) and cut yearly.	Ongoing.
	Hedge: Meadow Border	Hedge planted along back border to wildflower	Cut back 50% of first year's growth to thicken hedge.	Cut yearly, with a view to laying hedge in 4-5 years

		rose, hazel, dog rose and blackthorn.	competition.	
	Hedge: Inner Woodland	Laid existing defunct hedgerow, established new growth, planted with supplementary hawthorn and blackthorn.	Cut back 50% of first year's growth to thicken hedge. Extend hedgerow to include the rest of the defunct hedge that still exists within woodland.	Cut yearly, with emphasis on thickening, and particular attention paid to newly-laid areas in year 2 and 3.
	Hedgerow management (General): Manage hedgerow cutting in accordance with needs of wildlife	Woodland hedge cut back and partially laid in January 07. Hedgerow work only to take place in winter months.	Ongoing:Following BTCV guidelines, maintain hedge with best practice.	Ongoing
Meadows	Spring Meadow	Summer meadow planted with wildflower mix. Turf-stripped and planted. Cut in late June.Established cutting regime appropriate to meadow according to guidelines.	Cut from Midsummer onwards each year until October.	Continue regime. Monitor species success, re-sew in future years if necessary. Harvest seeds if abundant.
	Summer Meadow	Summer meadow planted with wildflower mix with extra yellow rattle to compete with grasses. Sewing method: over-sewing, turf not stripped.Established cutting regime appropriate to meadow according to guidelines.	Cut twice yearly	Continue regime. Monitor species success, re-sew in future years if necessary. Harvest seeds if abundant.

	Woodland Meadow	Summer meadow planted with shady glade mix. Sewing method: over-sewing, turf not stripped. Ongoing weeding of bramble, ivy and nettles.Established cutting regime appropriate to meadow according to guidelines.	Continue weeding, and continue cutting regime.	Continue regime. Monitor species success, re-sew in future years if necessary. Harvest seeds if abundant.
Formal Gardens	Establish areas of late-flowering vegetation to lengthen foraging period for insects	Surveys of insects and existing plants conducted.Cut back half of buddleia in March to extend flowering time for butterflies.	Continue adding and managing species to extend flowering times.	Reassess success / future plans 2010.
	Provide man-made habitat for insects such as solitary bees and ladybirds	Bamboo habitats created and in place.	Solitary bee posts to be put in place in areas where the public are not at risk.	Monitoring, recording ongoing.
	Adapt practices and policies for maintenance of the formal gardens to enhance the area's benefits to wildlife.	Some fallen fruit left, organic practices maintained, all major work done under advisement of biodiversity coordinator.	Contintue best practice for wildlife in formal gardens.	Ongoing
Biological Recording	Continue recording of Moths with Skinner Trap	Trap and resources acquired from Field Studies Council. Moth recording undertaken late in the year.	Full scheme of moth recording from spring until autumn. Records to be sent to FSC and to EcoRecord.	Ongoing
	Biological Recording Software	Volunteers trained in use of Mapmate. All previous biological records digitised.	Continue record-keeping, maintain dialogue with ecorecord and send records on yearly basis.	Ongoing

Additional Notes for Martineau Gardens and Best Practice Guidelines for Wildlife

- Continue organic practice
- Employ companion planting when and where possible
- Create bird / bat / insect habitat where possible and monitor inhabitancy
- Leave dead heads on flora species when appropriate for insects
- Cut back when appropriate to extend flowering times for insects
- Maintain a diverse range of food plants for insects
- Select bright, wide flowers with “landing space” for bees and butterflies
- Provide open water (bird bath) in several places
- Provide winter food for birds
- Generally continue to survey, record and report wildlife sightings to EcoRecord.
- Establish good links with local natural history groups and wildlife experts for help with recording and identification.
- Leaving areas of fallen fruit (away from the public if necessary) on the ground for blackbirds and insects to feed on.
- Take up a regime of clearing out, cleaning and maintaining bird boxes every winter, and hedgehog boxes in summer.
- Leaving “wild edges” to formal gardens where insects can thrive and low-nesting birds can find cover.
- Minimise non-native species in areas close to the SLINC, to prevent encroachment.
- Continue to record wildlife, attempt to expand the SLINC area to include at least the meadow and hedgerow areas, and increase status to SINC.
- Minimise disturbance in wildlife area and bird hide / viewing area.
- Do not move dead wood / compost in winter months in areas where newts may be hibernating.

This management plan to be reviewed in 2010.