

Friends of Whirlow Brook Park Community Climate Action Plan

Whirlow Brook Park Action for Climate Change



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February 2023



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Introduction

This report outlines the work of the Climate Action Project undertaken by and on behalf of the Friends of Whirlow Brook Park (FoWP). It presents some recommendations for future management of the Park together with a Community Climate Action Plan to guide the Friends' Group's activities over the next few years.

The studies undertaken in 2022 have highlighted significant opportunities for habitat enhancement for climate adaptation, biodiversity, and for local people. Issues have also been noted such as the very poor showing of pollinating insects around the gardened areas – including both day-flying bees, hoverflies, and butterflies, for example, and night-flying moths. The results suggested that the lower zone of the Park by the private domestic gardens and the lower woodland, were considerably richer than the upper, gardened zone around the main house.

Other issues noted are the paucity of bird breeding habitats (for hole-nesting species) and the challenges of water management in terms of both quality and quantity.

Background

FoWP successfully applied for grant funding from the National Lottery Community Fund (NLCF) under the 'Together for our Planet' initiative which arose in response to the global climate crisis and the UK's hosting of the COP26 climate summit in 2021. The Group had its roots in a U3A gardening group which had looked after grounds in the Park over a number of years. In 2021, they became a formally constituted Friends of Group and the Climate Action project developed from a wish to understand and address climate change impacts in the Park. Professor Ian Rotherham spoke at their inaugural meeting and supported them in applying to the NLCF.

The Climate Action project was designed to enable group members and the wider local community to learn more about the present and future challenges resulting from climate change and to communicate this to others in the area. FoWP had identified that there was a need to start the process of adaption of the Park's greenspace to meet climate change issues and to make the Park more resilient. However, they were unclear as to how to achieve these aims and which areas needed to be prioritised for action.

In parallel, collaborative work between Sheffield Hallam University and the Sheffield & Rotherham Wildlife Trust was happening on a research and demonstration project to slow the flow of the Limb Brook (which runs along the eastern boundary of the Park) and the wider catchment by natural interventions. This present project was a direct response to the current climate challenges and to flooding occurrences further downstream. It was recognised that actions in the Park could also affect the catchment and downstream floodwater, and these issues needed to be addressed. In particular, the Park contains a series of ornamental ponds, small pools and water channels which eventually drain into a large former mill pond and then into the Limb Brook. These were already a cause for concern for FoWP due to leaks and other problems which needed to be addressed.

The Park is a formal greenspace created early in the twentieth century as a setting for the house named Whirlow Brook. Prior to that the land was farmed on the fringe of the moorland with nearby woodland and the Limb Brook on its eastern boundary. The original garden has undergone a series of modifications and extensions over the years. Whilst in private ownership, this included the construction of a new entrance and driveway from the main road to the house, and which cut through an old quarry site. Later, after the house and grounds were sold to Sheffield Corporation (now City Council) the area around the house down to the main road became a municipal park and the Rough Standhills plantation was managed as a separate

woodland. Due to a lack of resources over the last thirty years and changes to management practices, parts of the Park were becoming overgrown and neglected. One of the aims of FoWP has been to rescue these areas, rejuvenate them, and replant where appropriate. The house was leased to a private company and is now a weddings and conference venue, not open to the public. The company renamed Whirlow Brook as Whirlow Brook Hall and this is how it is now commonly known. Later in 2023, a new café will open lower down the Park near to the lower car park and this will provide some publicly-accessible facilities. The lawns and short grass areas in front of the house and through the Park are maintained by SCC, and are cut frequently as short-mown turf during the summer. Fringing the lawns are areas of shrubs and trees, and to the west a complex of ornamental ponds and channels. Lower down the Park towards the main road and at the back of the house are areas of trees, both evergreen and deciduous. Some of these trees date to the ornamental planting of the early twentieth century but there are also trees from the previous landscape which are considerably older. Rough Standhills includes both ‘ancient woodland’ and ‘ancient wood-pasture’.

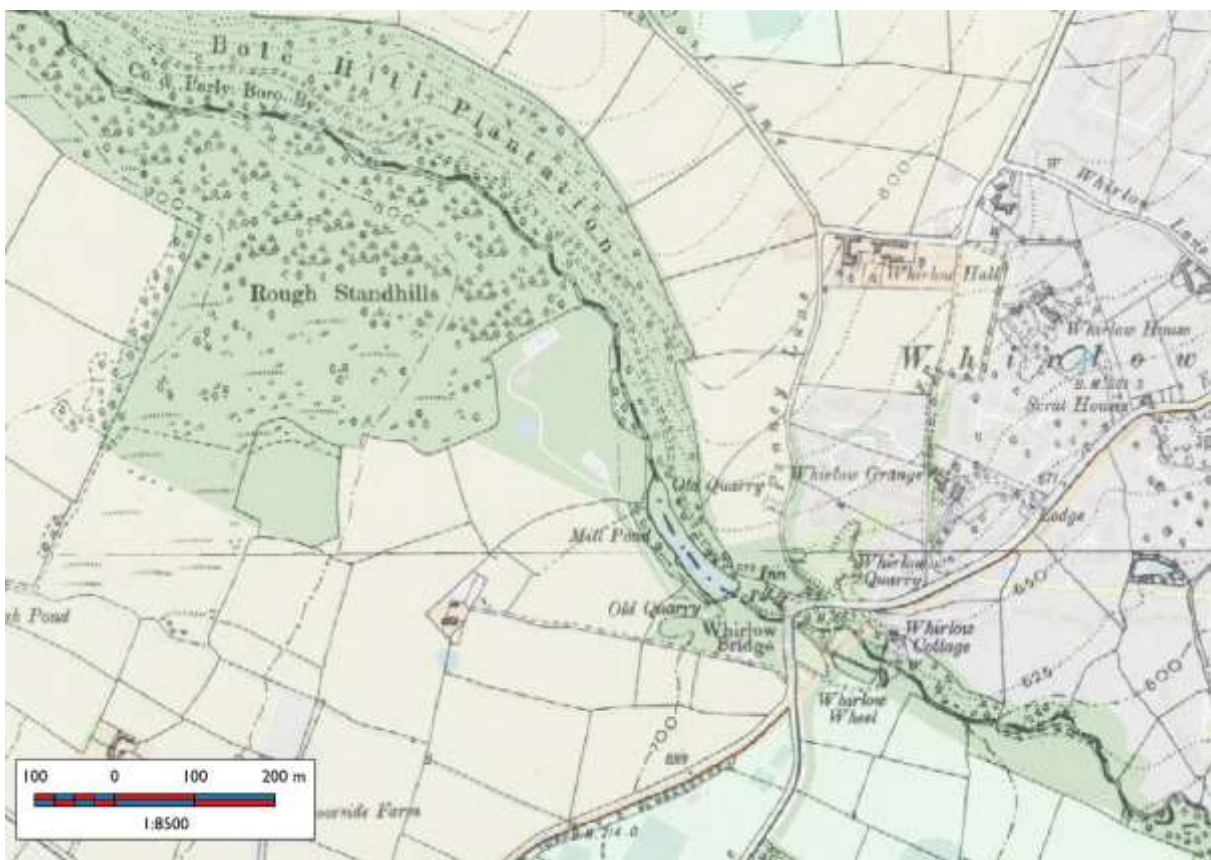


Figure 1. Composite map of the Whirlow Brook Park area with the 1905 map super-imposed onto the modern street view.

As Figure 1 shows, Whirlow Brook Park is closely connected spatially to the woodland and farmland to the north and west of the Park and to the Limb Brook, mill pond and woodland to the east. Changes in management and biodiversity in either area could affect the Park and *vice versa*. The Park is also connected more broadly to areas a little further away such as Lady Canning’s Plantation, Whirlow Playing Fields, and Ecclesall Woods. Changes in these areas may also influence the Park and its range of biodiversity. For example, the habitat creation of retention ponds, more deadwood, and wildflower areas to ‘slow the flow’ of water along the catchment will increase local biodiversity. This will in turn create opportunities within the Park to enhance its own biodiversity.

Aims & Objectives

The aims as set out in the NLCF *'Together for our Planet' Climate Action Project* were to:

- Understand the likely effects of climate change on Whirlow Brook Park & surrounding areas,
- Take action to protect the most important features - the trees and the ponds – 'climate proofing',
- Choose planting that will cope with extreme weather conditions – 'climate proofing',
- Take action to mitigate effects of climate and extreme weather – slowing the flow naturally – working in our catchment of the Limb Brook to hold water back and to reduce downwash soil erosion,
- Educate park users & other local people in how they might adapt their own gardening habits and how they use water, compost etc. and,
- Extend the 'environmental message' to a wider network of community greenspaces and people.

The objectives for the project were to gather more detailed information about the ecology of the Park, support FoWP and others to develop an understanding of the issues and challenges facing the Park, identify possible positive actions to overcome these, and to empower FoWP to take these actions forward.

Climate Context

It is now widely accepted that weather patterns under the influence of climate change are changing and will continue to do so over the coming years. This trend is already apparent, with last year 2022 being the warmest on record with prolonged periods of drought followed by persistent and heavy rainfall. The rate of change is less predictable but even with a relatively conservative 1.5°C temperature rise it is likely to be more rapid. It is predicted that by 2080 there will be a 21% decrease in summer rainfall and a 12% increase in winter rainfall.

The likely scenario for our region is that it will become hotter and drier but sometimes much wetter and very cold with more and more frequent storm events. This is already leading to dysfunctional seasons as demonstrated by earlier flowering of common plants and emerging insects; some of which have been recorded as an average of three weeks shift from for example, mid-April to late March. This has a knock-on effect within the wider ecosystem leading to loss of pollination and reduced success of fledgling birds. Some of these changes mean that there are opportunities for some wildlife to expand their range further north but conversely there are losers whose habitat requirements are no longer favourable, and they have no opportunity to move.

The Park was created as a landscape garden, planted with ornamental species but retaining some natural features. Some of these ornamental species may be resilient to climate change and the addition of others can increase the Park's overall resilience. The Park therefore provides some further opportunities for building climate resilience.

Project Work

The project was formally launched in March 2022 with a successful event at Whirlow Brook Hall, attended by around eighty people including the local MP and the Chairman of the NLCF. There was a linked media campaign promoting the event. This provided group members with an overview of the aims of the project, the need to take action to mitigate the effects of climate change and introduced them to the programme of activities which would be running through the year.

Over the Spring, Summer and Autumn of 2022, workshops and field study sessions were held on a variety of topics. The activities were designed to introduce group members and the wider community to the biodiversity in and around the Park and how changes in biodiversity can be used as indicators. These were organised and facilitated by South Yorkshire Biodiversity Group (SYBRG) and specialist tutors. Topics included: amphibians, aquatic and terrestrial invertebrates, bats, bees, birds, butterflies, digital mapping, dragonflies, fungi, moths, spring and summer flowers & grasses, survey techniques, water management and weather. The activities covered basic identification and recording skills and were supported by information/educational materials available to download on project webpages. Some of the activities were recorded and short videos made of the topics for future reference. Group members and community volunteers were introduced to digital mapping and, together with support from SYBRG, developed a basic wildlife recording system to encourage people to record what they observe on a casual basis. The woodland at Bolehill Plantation and the grassland at Whirlow Playing Fields were both visited and surveyed.

SYBRG and FoWP committee members gathered data from visits to the Park and at meetings with SCC staff and others through the year. This provided information and an eco-audit of the current resilience of the Park's resources against climate change issues. Records and observations from the public activities were also included.

Findings

The Park is on the fringe of the Whirlow suburb with good road, footpath, and transport links. Although not immediately visible from the road, the Park is a popular destination for walkers and dog walkers in particular. This is in part because it provides car parking and access to a round walk, through the Park and along the Limb Brook. It was observed that it has few facilities apart from seats along the main path (though a café is due to open in 2023). The Park does provide a setting for the house as an events and conference centre. The areas in front and to the side of the house are maintained as short-mown lawns; behind is a woodland fringe area which links to the plantation beyond. There are some notable landscape successes within the Park, for example the rhododendron and azalea beds, some of the feature planted trees, older trees from the pre-Park garden and pockets of ornamental planting. This has been supported by the enthusiastic gardening group and FoWP members with regular volunteer sessions and focused work on specific areas to maintain a tidy, neat garden and amenity for Park users. The location is adjacent to public open space at Limb Valley and Bolehill Plantation, and very close to the Ryecroft Glen and Whirlow playing fields open space.

It should be noted that the past year (2022) saw an exceptionally hot and prolonged dry period which was preceded by some wet and severe stormy weather; and then followed by prolonged wet weather. It also coincided with extensive tree work in the Rough Standhills plantation at the back of the house and the 'Slowing the Flow' project work through the Limb Valley. All these to a greater or lesser extent, influenced the wildlife and biodiversity recorded in and around the Park over recent months. Nevertheless, the records do provide a useful baseline for work in future years.

The eco-audit found that the better (richer and more diverse) areas for wildlife and biodiversity are:

- At the bottom of the park closer to the layby around the old quarry area.
- The woodland fringe above the millpond, on the eastern edge of the Park which contains oaks possibly ancient markers of the former landscape and bat roosts.
- The edge of Rough Standhills in the Park which includes mature oaks and other species associated with ancient woodland.
- The millpond and along the Limb Brook.

- The two main ponds which provide habitat for birds, amphibians, and odonata, plus feeding zones for bats, but which have serious problems [see later].
- The western side of the Park which links to the pasture and ancient hedgerow just outside the Park – an area which has commercial bee hives.
- Shrubberies around the ponds as winter roosts.
- The shrubberies (including exotic species) along the edge of Rough Standhills and fringing the Park above the hall. These are especially important for winter roosting birds.
- Shorter mown areas under trees and adjacent to shrubs on the eastern lawns of interest for fungi.
- The nearby Whirlow Playing Fields open space provides major opportunities to enhance the area and further support the Park’s biodiversity. However, there are serious problems with issues such as dog fouling which is both unpleasant and a potentially serious health hazard.

Less favourable or under-performing areas for wildlife and biodiversity included the ornamental planted areas such as flower borders, the garden stone-walls, the short-mown grass areas, and the ponds [noted above]. In its heyday as a municipal park of the 1960s and 1970s, Whirlow was notable for its stunning ‘gardenesque’ features and rich flower displays. Indeed, it was the high maintenance of these areas which became financially problematic by the 1980s and 1990s.

Some of the ornamental planted areas are presently designed and maintained for visual appearance which includes using bedding plants, whilst others are still bare or provide limited seasonal interest. The ponds and associated water channels had some specific merits, for example with areas of emerging sphagnum mosses and Polytrichum mosses, ferns, and damp/ dark areas for invertebrates. However, surveys found that although there were newts and frogs recorded, the overall food chain and range of aquatic invertebrates was very limited and almost non-existent. It was noted that water levels in and between the ponds fluctuated and with few oxygenating plants to balance the anaerobic conditions, both fine silt and fallen leaves are a continuing problem. The scrub areas to the east of the Park, the lawns, and some of the amenity tree planting around the car park were also found to be less favourable although they do provide shelter and feeding areas. Rough Standhills Plantation, an ancient woodland, has had significant recent tree felling which has severely impacted on the area with knock-on effects on wildlife and biodiversity in the surrounding habitats including the Park.

Specific training and survey events organised in the Park highlighted out some notable wildlife species which could be used as indicators of biodiversity status. Whilst it is important to record the species themselves and note their presence (or in some cases, an absence) it is also important to understand how the species may be using the area and the impact they may have. This can then inform the future management and activities of FoWP. Based on the community activities, the following species and habitats have been identified as priorities for monitoring and supporting / enhancing in the Park:

- Bats
- Moths
- Butterflies & bees
- Hoverflies
- Dragonflies & damselflies
- Fungi of grassland and dead wood
- Lichens as indicators of air quality pollution levels
- Botanical Indicators in grassland and woodland
- Breeding, wintering, and passage birds especially around the lake and to include winter roosts
- Amphibians such as palmate newt (in good numbers), common frog, and common toad
- Other mammals such as fox and badger. Roe deer have also been recorded nearby.

The workshops and community surveying activities were attended by variable numbers of people with some events such as amphibians, bats, and fungi much more popular than others. Some activities were also capped for numbers because of necessary health and safety considerations. The attendances may reflect people’s interests but also of the timings of the events and other time pressures. However, there was a core nucleus of people who attended most of the events and expressed interest in continuing their recording for the Group. A simplified recording map and target species list was produced with an online recording form linking to a spreadsheet to record some of the wildlife seen which now needs further promotion and support.

The project enabled FoWP to develop and strengthen links with other local community organisations such as the Friends of Ecclesall Woods (FEW) and because of the Bat field survey events, with South Yorkshire Bat Group. Visits were also made to other locations to help share good practice and learn from groups with more experience of ecological approaches, for example at Graves Park. Contact has been made with the residents and businesses on the west side of the Park with a view to linking up the work of FoWP in the Park with the wider area, to achieve wider positive results. The consultation event held last November (2022) brought together ideas to develop a community action plan and an eco-action plan, which would involve not only FoWP but also other organisations and the wider community raising the profile of the Park and the need to build climate resilience. The project also attracted new visitors to the Park and new members to the group.

Issues & Opportunities

The work undertaken through the project as indicated above has highlighted several issues that need to be addressed to build climate resilience and help climate-proof the Park. An over-riding issue is the need to develop a coherent and holistic vision for the Park and its setting, which will deliver the aspirations of FoWP, SCC and the commercial business venues (Whirlow Brook Hall and the new café). This holistic view could promote biodiversity networks and corridors whilst recognising that different areas of the Park can be zoned for specific interests of formal and informal settings and as a backdrop for the house without compromising the wildlife benefits. The Park is large enough and has distinct areas which can be zoned to deliver multiple benefits for each of the stakeholders as well as visitors. The presence of the café and toilet facilities will provide a significant boost to the amenity value and the potential for community involvement.

The key issues and opportunities identified around community involvement are outlined below:

- There is a current lack of child-friendly areas other than the lawns for informal play. FoWP are already beginning to address this through planning to design and install a new play area and developing a family-friendly trail. Other opportunities to make the Park more child-friendly include creating natural sculptures such as willow tunnels, ‘hide and seek’ trees, mown paths through wildflower areas, bird feeders, and bug boxes where wildlife can be observed. Age-appropriate opportunities need to be created so that children of different ages can engage with the Park and the Park’s value as an educational resource promoted to local schools and organisations. In the longer term, there could be opportunities to share digital information via trail cameras, the weather station, and water monitoring to provide an additional resource.

- There is little information about who visits the Park, how many people come, and why they visit. Anecdotally, other than for specific events organised by FoWP most people are ‘through visitors’ and dog walkers using the car parking facilities as a base for the start and end of a walk which takes them through and beyond the Park itself. The other main group of visitors are those who are there to attend an event at the Hall and may come onto the terrace or top lawn to admire the view. There could be opportunities to engage with both

groups to find out more about their views and to promote FoWP's work and plans as well as counting the 'footfall' at different times. The exercises may create further opportunities to target different groups of visitors in a more tailored way to promote the work in the Park towards climate-proofing.

- Other than the leaflets produced by FoWP, there is no interpretation for visitors or prospective visitors, about the different areas found in and around the Park and their management. A tree survey has been undertaken and a tree trail is being established. Development of interpretative material and simple signage would be a good opportunity to explain to visitors what work is happening and the reasons behind it. The materials and signage could be made from recycled and natural products to link to the eco-friendly climate-proofing theme. There are opportunities for some creative input by both FoWP members and young people (through local schools) which could engage a broader audience.
- There is a perception that there are other target audiences who know of the Park but do not currently visit, and then others still, who would visit if they knew it was there. The opening of the new café will create opportunities to promote the Park more widely. Then, as further work is carried out to enhance the biodiversity and create a more family friendly spaces, these opportunities will increase. Ideas here include a bird feeder station and a notice board with information on what to see and chance to submit your own wildlife records.

So far, the current project has not developed a sufficiently broad volunteer base to undertake the level of wildlife and weather recording and monitoring originally envisaged. There is enthusiasm for continuing with guided walks and supported recording sessions to allow volunteers to improve their skills, but the depth of volunteer support needs to be enhanced. This slow uptake of opportunities is not unusual with a short-term project such as this, but it does need to be addressed if the good work so far is to be continued. The current situation creates an opportunity to promote a selection of key headline indicator species and habitats to be monitored and used to promote the climate-proofing work. It also creates opportunities to have a programme of recording sessions focused on specific wildlife species that people can join to improve their skills and for mutual support. Further opportunities for developing the recording volunteer base could include setting up photographic monitoring and recording and promote this via an exhibition or competition. It is also suggested that the provision of a very simple blog and use of Facebook page group for submitting general 'what I saw' and 'what's around' reports would be very popular. Also, from the events organised over the year, the group now has a wide range of connections to specialist wildlife groups and expert individuals.

The Park has developed in several phases from its origins as a landscaped garden of a private residence and then expanded when a new access drive was built. It is possible to trace this older landscape which includes the garden terraces, ponds and feature trees and the winding driveway and car park areas that provide the Park with a structure. These phases of development together with inspiration from garden designers such as William Robinson and Gertrude Jekyll can provide a focus for developing areas which re-connect people and nature and provide both formal and informal settings to connect spaces across the Park. Whilst a major thrust of this project has been biodiversity, it is recognised that the Park is a designed landscape and has had varying influences over several centuries. These range from the industrial past and the nearby mills and former millponds, to the remnants of ancient woodland and the indicator plants associated with these, to the twentieth century garden landscape. This means that any approach to wildlife here has to mix acceptance of both native and non-native species. Indeed, we have suggested that the exotic plants such as skunk cabbage for instance, are not problematic in the Park or garden and that any conservation strategy should simply monitor status with a view to preventing spread downstream. Invasive plants such as Himalayan balsam should also be monitored within the Park and its immediate environs. Furthermore, the

survey and possible control of balsam can provide good opportunities for further community involvement in the Park's future.

The key issues and resulting opportunities to **enhance the biodiversity** of the Park and promote measures to mitigate climate change are listed below.

Issues

- Sources of pollen & nectar – localised & limited.
- Sources of berries, fruit, & nuts – again rather limited.
- Bird nesting sites limited.
- Bird winter roosting sites quite localised and easily compromised by clearance.
- Bat roosts - in main house - but limited in trees.
- Streams / channels and ponds prone to drying out.
- Lots of short-mown grass that is very species poor.
- Limited edge & 'ecotone' habitat.
- The state of the nearby woods.

Opportunities

- Enhancement to the herbaceous borders & stone walls.
- Resolving the waterflow to the ponds – flow & leakage.
- Introduction of suitable climbers especially honeysuckle & ivy in some difficult places.
- Zoning of grassland management - with extension of ecotone / edge areas.
- Planting of trees & shrubs for future climate - long-term.
- Practical work to control & gradually reduce invasive plants such as Himalayan balsam.
- Habitat supplements.
 - Bat boxes / bird boxes / bug boxes, etc.
 - Berry bushes, shrubs, & trees.
 - Composting.
 - Water & Slowing the Flow.

Target Outcomes

- Achieve measurable increases in local biodiversity.
- An improved & enhanced visual appearance of the park and garden with abundant year-round flowers and berries.
- A positive visitor experience for all Park users around the climate change actions has been created.
- 'Action for Climate Change' management of the Park is explained and interpreted to all users and the wider local communities to increase understanding of the issues.
- Achieve Green Flag status for the Park.

- Become the area's 'Action for Climate Change' showcase/ exemplar for local parks' management.



Figure 2: Mandarin Ducks seen on the Mill Pond. Ian Rotherham

The Plan

Community Climate Action Plan Summary

	Initial (Year 1)	Medium term (Year 2-5)	Longer term (Year 6+)	Comment
Plan: Develop and agree, a holistic vision for the Park and its surroundings	Use the climate action plan as a base for continuing discussions with stakeholders to develop the view	Produce draft statement of guiding principles agreed by key stakeholders; promote and adopt; use as guide to produce detailed plan. Work towards getting Green Flag status for the Park.	Review and monitor the vision to adapt and maintain relevance for key stakeholders. Achieve Green Flag status.	Essential to achieve and evidence progress.
Grassland mowing regimes:	Identify key areas for extending grassland / scrub edge (ecotone) habitat by zoning mowing regimes.	Continue the 'no-mow' practice, monitor what comes up and sow more wildflower seed.		These have been noted in the site visits and need to be negotiated with Park managers.
Tree planting & management:	Engage with neighbours and negotiate/ agree a tree planting plan along the western boundary. Clear scrub to provide access to trees on the tree trail; look for new planting opportunities. Begin to clear the belt between the back of the house and the new woodland and prepare for planting with berry bushes/ trees.	Apply for grant from the Tree Council. Raise funds and involve the community in planting sessions. Consider creating an orchard in the bramble patch uphill of the park entrance. Work with SCC to care for/ replace existing trees.		Need to liaise with SCC tree planting coordinator. Identify opportunities for new tree planting within the Park and also with owners or managers of neighbouring greenspaces. Target areas to include farmland west of the Park and the Whirlow Playing Fields site. Need to liaise with adjacent stakeholders.

<p>Where trees are dying or being felled, maintain deadwood habitat either standing or fallen.</p> <p>Maintain the dense ivy in the older trees below the lake area.</p>				<p>Maintain standing dead wood wherever possible – for birds, bats, fungi, and invertebrates.</p> <p>This provides excellent habitat for birds and bats and may render these trees ‘protected’ as bat roost sites. The ivy is also a good source of late nectar for insects like bees and wasps, and late berries for birds and mammals.</p>
<p>Water & wetlands: Water issues are key to much of the ecological enhancement of the Park.</p> <p>Seek to monitor ecological condition of the Limb Brook</p> <p>Lake / millpond: allow natural processes to continue and the waterbody to progress through ecological successions to mix willow carr, marsh, and open water. This is important for wintering and breeding birds, and as feeding habitat for bats. More detail survey and monitoring are required. Information is incomplete.</p>	<p>Upper pond: Continue the annual programme of clearing the pond margins (for health and safety reasons) but allow and encourage the sphagnum and polytrichum moss beds to grow as a natural sediment filter.</p> <p>Enhanced with ‘bog builder’ sphagnum from nearby Ringinglow Bog, this can become Sheffield’s very first parkland ‘bog garden’</p> <p>The upper zones of this pond can be improved by the addition of suitable marshland flowers.</p>	<p>Upper pond: Continue the annual programme of clearing the pond margins.</p> <p>Lower pond: Monitor the effects of work from Year 1. Consult with SCC re: a silt removal programme and seek funding.</p> <p>Streams etc: Carry out an annual clearance programme with the Su3a group and monitor the results. Clear the channel west of the ponds.</p>		<p>Upper pond: allow natural processes of ecological succession to marsh and bog habitat to continue. The water level and silting issues are considered intractable so best to take the opportunity to develop an uncommon habitat and at the same time hold back silt from the lower pond.</p> <p>Lower pond: establish reedmace and yellow flag iris in the channel between the two ponds, and a mix of appropriate marsh plants in the ‘neck’ end of the pond. This will further help to catch and remove silt and other</p>

<p>The catchment for the two main ponds in very limited and does not receive water off local farmland. This means that it is not water quality here that is causing issues.</p> <p>Silt accumulation in the top garden pond and in the millpond also amount to carbon-capture as organic sediment accumulates and does not breakdown. Undisturbed, within the proposed management regimes, this will not be a significant problem.</p>	<p>Lower pond: Clear the silt traps ready for planting. Clear debris from pond margins. Clear channel and margins to reveal original stone surrounds. Plant reedmace and iris in the channel. Monitor water quality.</p> <p>Streams etc: Agree an annual clearance programme with the Su3a group.</p>			<p>materials washing in. Once these actions are successfully established, then a programme of effective removal of silt will be worthwhile considering and if necessary, costing up.</p> <p>Streams & other channels: seek to ensure that water input from the Standhills catchment is effectively feeding into the ponds.</p> <p>Along the channel west of the ponds, establish attractive and ecologically beneficial marsh habitats.</p>
<p>Enhance habitats through:</p>	<p>Log piles: create log piles and brash piles as a by-product of clearing access to the tree trail.</p> <p>Bat boxes: install 15 bat boxes.</p>	<p>Bird boxes: raise funds for bird boxes including swift boxes.</p> <p>Preserve scrub edges, plant hedges, consider extending 'no-mow' areas.</p>		<p>Develop brash piles, log piles, and similar habitat supplements.</p>

	<p>Bird feeders: install bird feeding station near to the café.</p>			
<p>Enhance garden areas by:</p>	<p>Plant up the walls of the sunken garden.</p> <p>Add pollinator friendly planting around the new café.</p> <p>Replace old heather beds.</p> <p>Complete horseshoe bed with plants for pollinators.</p> <p>Take buddleia cuttings.</p>	<p>Redesign and replant the borders to the concert lawn.</p> <p>Incorporate alliums into grass borders at the front of the terrace.</p> <p>Replant borders between the north side of the house and the woodland with, to include berry bushes.</p> <p>Agree a landscape plan for the belt between the Park and the former plantation: seek funding for hazel, rowan, other berry and nut trees.</p>		<p>Seeding appropriate flowers such as foxglove, red valerian, marjoram, in the borders and especially on the stone walls.</p> <p>Add massed alliums to the borders and displays. Add massed ‘cottage garden’ flowers where possible.</p> <p>Develop buddleia beds as butterfly and bee areas in sheltered, sunny spots – simply planting cuttings will be fine.</p> <p>Add late-flowering butterfly plants such as ice plant.</p> <p>Establish further berry bushes such as cotoneaster and berberis for spring flowers for bees, and berries for birds and mammals.</p> <p>Plant crab apples in appropriate locations.</p>

<p>Promote 'Actions for Climate Change' to visitors & wider community</p>	<p>Put up noticeboards to explain to park users what we are doing and why.</p> <p>Hold craft events for children using natural materials.</p> <p>Include opportunities to learn about nature on the tree trail and the children's trail.</p> <p>Hold the first guided walk.</p>	<p>Plan and undertake park user/ visitor survey. Develop a plan for promoting the work of climate-proofing the Park. Install signage and look at further interpretation for different zones. Fundraise for and create child friendly areas and activities. Engage with schools/ youth organisations and work with them to produce relevant age-appropriate material and educational resources including use of digital technology. Develop a network with other local groups to share and exchange information about ways in which to take action.</p> <p>Produce promotional information to encourage visitors and local residents to develop similar schemes for their own gardens and other community greenspaces.</p>	<p>Work with the Hall and café to engage them with their own climate- proofing for a positive benefit of the Park.</p> <p>Review progress and update plans considering management initiatives and in response to continuing trends. Engage new audiences.</p>	<p>For members, users & visitors, including those who come to the Hall and new café, promote with messages about what is happening around the Park and why some areas are managed differently to others, what wildlife might be seen, and what the benefits will be in the long-term.</p>
<p>Promote & practice environmentally friendly gardening</p>	<p>Run 3x workshops (on soil erosion and water, on habitat creation, and composting and soil health).</p>	<p>Test soil health/ condition in different planting areas before planting up; monitor success.</p>	<p>Continue to develop the different ornamental areas of the Park along an</p>	<p>say no to Peat, no artificial (chemical) pest control or fertiliser, minimise single use plastic pots, use home-made</p>

	<p>Compile a list of 'do's' and 'don'ts' which FoWP and the gardening group can adopt and then promote this e.g. go peat free (including any pot-plants brought in), minimise use of single use plastic, no artificial fertilisers, natural pest control, use plants that are good nectar & pollen sources. This should include plants offered at plant sales.</p> <p>Begin development of areas for leaf mould and compost production.</p> <p>Review use of watering of plants and the use of annual bedding plants.</p>	<p>Develop planting regime with 'right plant in right place' for the conditions. Identify small areas to use as demonstration sites of environmentally friendly gardening with signage to explain what is happening and why.</p> <p>Phase out use of single-use plastic pots and recycle.</p> <p>Monitor usage/ need for compost etc and aim to become self-sufficient. Become a peat free garden zone.</p> <p>Install water management/ water butts.</p>	<p>environmentally friendly basis.</p> <p>Promote the demonstration areas and expand into the mainstream.</p> <p>Join with other groups</p>	<p>compost & leaf-mould; improve soil health / condition.</p> <p>Carry out audit of resources used by ornamental planting schemes.</p>
<p>Show the importance of recording, assessing, reviewing & adapting work in the Park</p>	<p>Organise wildlife recording sessions with experts and develop a core group of volunteers who will undertake recording.</p> <p>Organise and promote the 'recording' group to attract new members and resident experts.</p> <p>Perhaps with supportive local partners, set up the</p>	<p>Compile annual reports; publicise findings via noticeboards, café and website. Use data to inform events e.g., guided walks.</p>		<p>Show how well things are working and be part of the network monitoring climate change effects.</p> <p>Develop links to other groups and their surveys e.g., a bioblitz event. Continue to organise a programme of regular recording sessions.</p>

	<p>weather station and organise public sessions to show data and explain the use.</p> <p>Develop closer links to other groups such as Sorby Natural History Society to support the recording.</p>			<p>Set up photo-monitoring points across the Park to record changes.</p>
<p>Provide year-round biodiversity interest and enhance year-round visual amenity of the Park (see above)</p>				<p>To benefit visitors & habitat / food sources for wildlife – aim to provide plants & habitat to cover the seasons of the year; zoned areas (formal & informal); garden structure & design; planting for biodiversity – ‘bee/insect’ friendly; shelter and nest/roost sites.</p>
<p>Showcase habitat management & habitat creation (see examples above – wildlife prescriptions)</p>	<p>Run a workshop on habitat creation within the Park (see above).</p> <p>Work with S. Yorkshire Bat Group to install and monitor bat boxes.</p> <p>With SCC, plan and agree zones for habitat creation and discuss changes in management e.g., mowing regimes, widening margins at scrub edges, areas for beetle banks.</p>	<p>Develop annual programme of workshops in conjunction with the new café.</p>		<p>Nesting/roosting boxes, beetle banks & habitat piles, walls, and watercourses; larger-scale wildlife meadows, scrub/woodland edge, natural regeneration areas, selective clearance; ongoing maintenance and management – within Group’s capabilities or need for more technical help/professional input.</p>

	<p>Agree plan for ongoing pond maintenance and potential managing of the two larger ponds to succession of marsh and bog habitat.</p>			
<p>Annual Eco-audit reporting</p>	<p>Annually report on progress with status and monitoring of selected key species and habitats across the Park and where appropriate, with neighbouring greenspaces.</p> <p>Publish activities in newsletters, social media and on the website. Report progress at each annual general meeting of the Friends Group</p>	<p>Report progress at each annual general meeting of the Friends Group. Review and refine the plan as necessary.</p>		

Appendix: Species Records.

Species List for the Bird Walks in 2022

Recorders Dave Gash and Karon Mayor (14th May); Ian Rotherham, Jim Clarke and Karon Mayor (3rd November).

	Dawn Chorus 14th May		Autumn Roosts 3rd November
1	Blackbird	1	Black Headed Gull
2	Blackcap	2	Blackbird
3	Blue Tit	3	Bull Finch
4	Bullfinch	4	Buzzard
5	Chaffinch	5	Carrion Crow
6	Chiffchaff	6	Chaffinch
7	Coal Tit	7	Coal Tit
8	Coot	8	Dunnock
9	Crow	9	Goldcrest
10	Cuckoo	10	Goldfinch
11	Dunnock	11	Greater Spotted Woodpecker
12	Goldcrest	12	Grey Heron
13	Goldfinch	13	Jackdaw
14	Great Spotted Woodpecker	14	Jay
15	Jackdaw	15	Lesser Black Back Gull
16	Lesser Black Back Gull (flying over)	16	Long Tailed Tit
17	Long Tailed Tit	17	Magpie
18	Magpie	18	Mallard
19	Mallard	19	Mandarin Duck
20	Mandarin Duck	20	Moorhen
21	Moorhen	21	Red Poll
22	Pheasant	22	Redwing
23	Robin	23	Robin
24	Song Thrush	24	Siskin
25	Stock Dove	25	Sparrowhawk
26	Tawny Owl	26	Starling
27	Wood Pigeon	27	Tawny Owl
28	Wren	28	Tree Creeper
		29	Wood Pigeon
		33	Wren

Note: No House Sparrows on either walk and on the November walk bats were recorded at the end as dusk was falling.

Species List of Fungi Found on Walk at Whirlow Brook Park, 13th October 2022

Recorded by Chris Kelly and Michael Senkans

Blusher	<i>Amanita rubescens</i>	Park, area around the hall	SK307829
Bulbous honey fungus	<i>Armillaria gallica</i>	Park, old quarry area	SK309826
Honey fungus species	<i>Armillaria sp.</i>	Park, old quarry area	SK309826
Purple jellydisc	<i>Ascocoryne sarcoides</i>	Park, old quarry area	SK309826
Bay bolete	<i>Boletus badius</i>	Park, area around the lower car park	SK308828
Giant puffball	<i>Calvatia gigantea</i>	Park, old quarry area	SK309826
Aniseed funnel	<i>Clitocybe odora</i>	Park, old quarry area	SK309826
The miller	<i>Clitopilus prunulus</i>	Park, area around the lower car park	SK308828
Inkcap species	<i>Coprinellus sp.</i>	Park, area around the hall	SK307829
Sticky webcap	<i>Cortinarius mucifluoides</i>	Park, area around the hall	SK307829
Webcap species	<i>Cortinarius sp.</i>	Park, area around the lower car park	SK308828
Poisonpie species	<i>Hebeloma sp.</i>	Park, area around the hall	SK307829
White saddle	<i>Helvella crispa</i>	Park, drive, west of the lake	SK308827
False chanterelle	<i>Hygrophoropsis aurantiaca</i>	Park, drive, west of the lake	SK308827
Sulphur tuft	<i>Hypholoma fasciculare</i>	Park, area around the hall	SK307829
Bolete mould	<i>Hypomyces chrysospermus</i>	Park, old quarry area	SK309826
Fibre-cap species	<i>Inocybe sp.</i>	Park, drive, west of the lake	SK308827
Fibre-cap species	<i>Inocybe sp.</i>	Park, old quarry area	SK309826
Amethyst deceiver	<i>Laccaria amethystina</i>	Park, area around the hall	SK307829
Deceiver	<i>Laccaria laccata</i>	Park, area around the hall	SK307829
Beech milkcap	<i>Lactarius blennius</i>	Park, area around the lower car park	SK308828
Oakbug milkcap	<i>Lactarius quietus</i>	Park, area around the hall	SK307829
Milkcap species	<i>Lactarius sp.</i>	Park, area around the hall	SK307829
A milkcap	<i>Lactarius subumbonatus</i>	Park, area around the hall	SK307829
Dapperling species	<i>Lepiota sp.</i>	Park, old quarry area	SK309826
Common puffball	<i>Lycoperdon perlatum</i>	Park, area around the lower car park	SK308828
Cavalier species	<i>Melanoleuca sp.</i>	Park, area around the lower car park	SK308828
Angel's bonnet	<i>Mycena arcangeliana</i>	Park, old quarry area	SK309826
Bonnet species	<i>Mycena sp.</i>	Park, area around the hall	SK307829
Pleated inkcap	<i>Parasola plicatilis</i>	Park, drive, west of the lake	SK308827
Brittlestem species	<i>Psathyrella sp.</i>	Park, area around the lower car park	SK308828
Liberty cap	<i>Psilocybe semilanceata</i>	Park, area around the hall	SK307829
Humpback brittlegill	<i>Russula caerulea</i>	Park, area around the hall	SK307829
The sickener	<i>Russula emetica</i>	Park, area around the lower car park	SK308828
Blackening brittlegill	<i>Russula nigricans</i>	Park, old quarry area	SK309826
Bloody brittlegill	<i>Russula sanguinaria</i>	Park, area around the hall	SK307829
Splitgill	<i>Schizophyllum commune</i>	Park, old quarry area	SK309826
Redlead roundhead	<i>Stropharia aurantiaca</i>	Park, area around the lower car park	SK308828
Yellowing knight	<i>Tricholoma scalpturatum</i>	Park, drive, west of the lake	SK308827
Candlesnuff	<i>Xylaria hypoxylon</i>	Park, old quarry area	SK309826



Fungal Foray in the Park, October 2022. Photograph by Nell Dixon.