Staffordshire Wildlife Trust Reserve Management Plan 2015 to 2025



Hem Heath Woods

One of the largest areas of woodland in Stoke on Trent with a rich array of flora and fauna, on the edge of the Stoke & Urban Newcastle Living Landscape.



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Reserve description

Hem Heath Woods is now one of the largest areas of woodland in Stoke on Trent, with large chunks of the woodland having been planted in the mid-1800s and early 1900s. The reserve is located just a mile to the east of Trentham and the main A34 leading to the city. Originally, the reserve's sole entrance was via the A5035 Trentham Road, but thanks to a new partnership with the Wedgwood Estate, the main promoted entrance will allow access to the reserve via the Wedgwood Visitor Centre to the south.

The woodland holds a good mix of tree and shrub species dominated by oak, ash, sycamore, beech hawthorn, rowan and cherry. Although the ground flora is poor in many areas of the woodland, there is a patchy distribution with more diversity with species including bluebell, greater stitchwort, yellow pimpernel, wood sanicle, wood sorrel, broad-leaved helleborine and mostachel.



Breeding birds in the woodland include several specialist woodland indicator species such as blackcap, great spotted woodpecker, nuthatch and jay. The woodland occasionally holds other notable species including willow tit and spotted flycatcher. The reserve also holds a diverse range of fungi with over 150 species recorded.

Much of the reserve is broad-leaved plantation woodland, so habitat management work focusses around thinning blocks of similar aged trees to allow a more diverse woodland structure to develop. To complement the thinning, the network of rides and glades throughout the woodland are maintained and improved. Part of the reserve also holds an area of seminatural ancient woodland.



Being so close to a large urban population, visitor access has been a key part of the reserve. This is now reflected in the site being one of the Trust's most accessible reserves, with access including an all ability path looping through the northern part of the woodland.

Location and conservation status

Reserve information	
Reserve size	121 acres / 49 hectares
Entrance grid reference	SJ 885 399 (via Wedgwood Visitor Centre car park)
Nearest post code	ST12 9ER (Wedgwood Visitor Centre)
Local authority / Parish	Stoke on Trent City Council / City of Stoke on Trent

Local authority / Parish

Reserve location



Reserve status	Flagship (Tier 1) 🛆
Living Landscape	Stoke & Urban Newcastle $^{\bigtriangleup}$
National Character Area ${}^{\scriptscriptstyle riangle}$	Potteries and Churnet Valley

Statutory designations

The reserve has no statutory designations.

Non-statutory designations

Site name	Hem Heath Wood and Newstead Wood
Sile name	Site of Biological Importance (SBI) Local Wildlife Site

	Designated in 1986 Site ID: 84/80/64
Designation summary	The largest area of semi-natural and plantation woodland in the City of Stoke on Trent with well-established woodland flora and fauna, including a diverse array of fungi and invertebrates.

Reserve boundary and designated sites*



Reserve boundary Local Wildlife Site Aims of the management plan

This plan aims to set out our vision and priorities for the nature reserve over the next 10 years. Some of the planned works are essential for wildlife, people or statutory reasons, whilst other works may be aspirational and will be delivered as the Trust's priorities and resources allow.

The objectives outlined in each section of this management plan have been allocated a number between 1 and 3, based on the criteria outlined below:

- These objectives are key planned work the Trust undertakes for wildlife, people or statutory reasons. They are the Trust's main priorities for the reserve and, where ever possible, should be achieved.
- These objectives are a priority to be completed, but will require additional funding or consent from other organisations to undertake. If funding can't be sourced, some of these objectives may not be achieved.
- These objectives aren't essential to manage the reserve for wildlife, people or statutory reasons but would complement key planned work. They will be completed as resources allow

A place for wildlife: key species and habitats

The Trust's reserves should act as a first class example of their habitat(s) and be places where wildlife can flourish. Each reserve has its own range of key species and habitats which are the main features of the reserve as a place for wildlife. The habitats and species listed below are not exhaustive, but should be the priority for resources and management.



Broadleaf woodland

Primary interest

Most of the reserve's woodland was originally planted in the late 1800s, with subsequent harvesting and management for timber production. As a result, much of the woodland is of a similar age and structure.

The Trust's habitat management is aimed at improving the woodland structure, benefiting birds and woodland flora.

A place for wildlife: objectives

As the largest area of woodland in Stoke on Trent, Hem Heath Woods acts as an important site for woodland birds and woodland flora. The aim is to maintain and improve the woodland to benefit the reserve's bird life and promote a sustainable woodland structure.

Objective 1 Improve woodland structure in targeted areas

- Coppice woodland edge bordering railway line to provide mixed structure for woodland birds and address potential tree safety problems
- Maintain coppice area near eastern boundary to provide mixed structure for woodland birds and improve woodland flora
- Thin selected areas of the canopy by 30-40%, targeting sycamore where possible
- Widen main rides to allow scrubby grass margins to paths
- Coppice scrubby ride edges on rotation to maintain suitable nesting habitat for breeding birds

Objective 2 Maintain the network of rides and glades throughout the woodland

- Annually mow main glade to control encroaching scrub on to paths whilst maintain scrubby edges to rides coppiced as part of objective 1
- Mow rides on bi-annual rotation, alternating to leave some uncut each year

Objective 3 Remove or control invasive species

- Remove rhododendron from reserve
- Target sycamore for planned canopy thinning work

Objective 4 Create two new glades, one at each end of the woodland

- Fell area of trees in target areas to create two new small glades
- Annually mow glades to control encroaching scrub and promote species-rich composition

Objective 5 Improve pond and surrounding woodland edge

- Selectively coppice around perimeter of pond to let in more light and encourage marginal vegetation growth
- Investigate water quality of pond and methods to improve if found to be poor

A place for wildlife: objectives

Area objectives



A place for wildlife: objectives

Targeted objectives



A place for people: key messages

Every Trust reserve has the potential to inspire people to value wildlife and habitats, and support the work of the Trust. In order to achieve this, each reserve has key messages that should form the focus of all of our work with people at the reserve.



Woodlands need to be managed to maintain a healthy and sustainable structure that benefits wildlife

Woodlands which were planted, like Hem Heath Woods, need managing to maximize their value for wildlife. Sometimes, this involves felling trees to create rides and glades, or to thin the canopy and allow more light to reach the woodland floor. More light allows a richer ground flora and understory to develop.



The reserve is one of the largest areas of woodland in the city and an important part of the Stoke & Urban Newcastle Living Landscape

Access to local green spaces has been shown to improve peoples' health and mental well-being, with well managed spaces also providing a place for wildlife. As one of the largest woodlands in the city, the reserve is an important local site for woodland wildlife and offers the local community a place to escape urban life without travelling a great distance.

Target audiences

The Trust aims to promote responsible and appropriate levels of access to all its reserves, which can include either creating new access routes or restricting access completely. The following target audiences are those which the Trust would actively promote the reserve to, or make improvements for (ie. bird hides for birdwatchers, all-ability paths for wheelchair users etc.)

The Trust acknowledges that many other users groups use the reserve.

Primary	• Families, interested in wildlife, with children aged 4+
Secondary	Adults who enjoy nature
Other users	 Dog walkers Visitors with limited mobility

A place for people to discover: objectives

This section covers objectives aimed at improving the quality of self-led, everyday visits.

Hem Heath Woods is an unexpected urban oasis on the edge of Stoke on Trent. The reserve allows visitors to escape into natural surroundings on their doorstep. The aim is to increase the Trust's engagement with the target audiences and extend the appeal of the reserve to family visitors.

Objective 1 Improve visibility of reserve to encourage target audiences to visit

- Install clear signposting from Wedgwood visitor centre and car park to the reserve
- Install new entrance feature or sculpture at Wedgwood entrance
- Install new welcome interpretation boards at both entrances
- Install additional reserve roadside sign at northern car park to advertise entrance from opposite angle to existing sign
- Replace perimeter barriers around northern car park
- Open up view through trees along start of path from Wedgwood entrance
- Replace or refresh height barrier to northern car park to create more visually appealing structure using Trust branding
- Ensure reserve leaflet is stocked at local information points, including the Wedgwood visitor centre and Trentham Estate

Objective 2 Increase the quality of the visit for target audiences

- Annually cut back and clear vegetation overgrowing main paths and rides to allow visitor access around the woodland away from promoted paths
- Improve surface of promoted paths, targeting muddy areas and uneven sections
- Install two new wildlife sculptures along entrance path from Wedgwood and two sculptures in key glades
- Install new wildlife sculpture at path junction acting as a way marker
- Reroute and refresh existing promoted trail from northern car park
- Install new seating areas in the two newly created glades
- Replace bridge on promoted path with larger structure
- Replace the vehicle gate from the northern car park with wooden alternatives
- Ensure visitors with mobility scooters are able to access the reserve from either entrance
- Install new natural picnic tables with wildlife carvings in main glade to create destination for visitors

Objective 3 Increase visitor engagement with wildlife, particularly for families

• Install two self-guided family wildlife discovery trails, one from each entrance

Objective 4 Raise awareness, appreciation and support for the Trust and its work

- Ensure new welcome interpretation boards include information about the reserve's wildlife and management
- Include a membership request on the new welcome interpretation boards

A place for people to learn: objectives

This section covers objectives aimed at improving the experience offered through events and activities led by Trust staff and volunteers.

Hem Heath Woods is one of several locations used by the Trust to deliver its informal education work in Stoke on Trent. Given the reserve's location, the aim is to continue utilising the reserve for informal education and increase the reserve's use for formal education visits, possibly linking with Wedgwood Estate to deliver a successful programme.

Objective 5 Use reserve as a key location for the delivery of the Trust's informal education work

- Hold at least four family focused events or activities annually
- Install new pond dipping platform at pond for use in informal and formal education work
- Include reserve as a location for delivery of informal education events and activities in future funding bids

Objective 6 Establish feasibility of working with Wedgwood to deliver formal education visits

● Investigate opportunities for delivering formal education visits[△] with Wedgwood

A place for people: objectives

Targeted objectives



Reserve boundary

🗍 Sculpture

O Welcome signage

Main paths

The Trust acknowledges that climate change could impact our reserves in many ways, potentially affecting the species using them and the level of management required to maintain the habitats.

Natural England has produced a Climate Change Adaptation Manual for guidance on mitigating impacts of climate change on specific habitats. The habitats and potential impacts for this reserve are outlined below. The full document can be viewed as document number NE546 at http://publications.naturalengland.org.uk/

Lowland mixed deciduous woodlands (climate change sensitivity: low)

- Warmer winters may encourage an earlier bud burst of trees, leaving them susceptible to frost damage. The abundance of invertebrates feeding on the new growth is likely to be at its peak earlier, impacting on the breeding success of woodland birds, and particularly hampering migratory species
- Drier summers may cause a shift in the species composition of the woodland with more invasive species becoming dominant. The ground flora in the woodland may also change, with a loss of species requiring wetter conditions
- Increasingly frequent storms may lead to the loss of mature and veteran trees, potentially leading to a loss of the associated specialist species, primarily lichens, fungi and invertebrates

The Trust's habitat management of the reserve will lead to an improved woodland structure, one of the key adaptation options for helping to limit the impacts of climate change on the habitat.

Thinning of the woodland will promote the natural regeneration of tree and shrubs species, providing more nesting and feeding opportunities for woodland birds and having trees ready to take advantage of gaps in the canopy created through the loss of mature trees. The improved woodland structure will also aid the growth of the ground flora species, allowing more flowering and seed setting, thus increasing the potential for species to survive drought years.

Demonstrating success

The objectives and resulting work detailed in this management plan are intended to make a positive impact on the reserve, whether they act as a place for wildlife, a place for people or both.

In order to evidence the impact of the management and ensure that the impact is positive, the Trust aims to undertake structured monitoring looking at the attributes for the objectives. The monitoring results will also help to review, and where necessary amend the current management plan period and provide evidence to inform future management of the reserve.

The main attributes and objectives are listed on the accompanying tables. From time to time, the Trust may occasionally undertake additional surveys and monitoring to help inform management.

A place for wildlife

The targets listed are intended to provide a realistic and achievable measure of the impact of the reserve's management. Figures, timescales and methods are taken from the existing requirements, such as the Trust's environmental stewardship agreements or best practice guidelines such as JNCC's Common Standards of Monitoring Guidance documents. Where no such reference exists, the Trust consults with experts and partner organisations.

A place for people

The targets listed are intended to provide a realistic and achievable measure of the impact of the Trust's work with people. As little guidance exists for the best practice of monitoring work with people, the Trust's aims to focus monitoring on collecting quantifiable data that can demonstrate an impact, such as number of visits, proportion of people visiting for specific reasons or whether they would recommend a visit to the reserve to others.

The Trust will continually review and update all aspects of its monitoring work to ensure that the data obtained is able to provide an evidence base.

A place for wildlife

Attributes	Targets	Monitoring frequency	Priority	
Objective 1: Impro	ve woodland structure in targeted areas			
Extent of woodland	No loss of woodland cover, except for planned creation of rides and glades	Visual assessment as part of woodland structure surveys	Every 10 years	Low
Presence of sycamore	Reduction in frequency of sycamore at each subsequent survey until species occurs in less than 20% of samples	Method W1 – woodland structure Survey method to be confirmed	Every 5 years	High
Woodland structure	 Average of all samples shows that: 1. Understorey covers (2-5m) at least 20% 2. Canopy covers (5m+) between 70-90% 3. One or more fallen dead wood tree (>20cm diameter) present per sample 4. One or more standing dead wood tree (>20cm diameter) present per sample (excluding those impacted by tree safety policy and associated works) 	Method W1 – woodland structure Survey method to be confirmed	Every 5 years	High
Breeding woodland birds	 Establish baseline using CSM* Each reporting cycle shows a stable or recovering population (breeding territories) of woodland specialist species 	Method B2 – woodland birds Three visits between late March and end May to sample territorial birds at fixed points of selected species	Annually	High
Coppice extent and structure	 Extent of coppice area (excluding railway margin) remains with 80-100% of area present in 2015 Coppice contains varied structure of at least 3 ages 	Visual assessment as part of woodland structure surveys	Every 5 years	Medium
Objective 2: Maint	ain network of rides and glades throughout the woodland			
Breeding woodland birds	 Establish baseline using CSM* Each reporting cycle shows a stable or recovering population (breeding territories) of woodland specialist species 	Method B2 – woodland birds Three visits between late March and end May to sample territorial birds at fixed points of selected species	Annually	High
Ride management	Half of all rides show no evidence of management in any one year	Visual assessment as part of breeding woodland bird surveys	Annually	Medium
Project complete	Project complete by end of management plan period	Task competition logged	Bi-annually	High
Objective 3: Remov	ve or control invasive species			
Presence of rhododendron	Rhododendron recorded in less than 1% of samples	Method W1 – woodland structure Survey method to be confirmed	Every 5 years	High

Presence of sycamore	Reduction in frequency of sycamore at each subsequent survey until species occurs in less than 20% of samples	Method W1 – woodland structure Survey method to be confirmed	Every 5 years	High
Objective 4: Create	two new glades, one at each end of the woodland			
Project complete	ct complete Project complete by end of management plan period Task competition logged Bi-annuall			High
Objective 5: Impro	ve pond and surrounding woodland edge			
Biological quality	 Establish baseline of current water quality and marginal vegetation composition and extent Marginal vegetation extent increases from baseline PSYM score increases from baseline 	PSYM method	Every 5 years	Medium

A place for people

Attributes	Targets	Monitoring methods Consult highlighted methodologies for more details	Monitoring frequency	Priority
Objective 1: Impro	ve visibility of reserve to encourage target audiences to visit		- <u>-</u>	
Project complete	Project complete by end of management plan period	Task competition logged	Bi-annually	High
Reason for visiting	Presence of new signage and entrance features represents 10% of answers	Visitor survey with specific questions to gather data against monitored attributes	Every 3 years from 2016	High
Objective 2: Increa	se the quality of the visit for target audiences			1
Frequency of visits made per person	Average number of visits per person increases over period of the management plan			
Favourite feature(s) and reason for visiting	New wildlife sculptures, self-guided trails and overall wildlife experience become favourite features of visitors and reason for visiting.			
Proportion of visitors with children	Proportion of visits made with children increases over period of the management plan	Visitor survey with specific questions to gather data against monitored attributes	Every 3 years from 2016	High
Likelihood of visitors recommending the reserve to others	Likelihood of visitors recommending the reserve to others increases over period of the management plan			
Quality of visit	Quality of visit increases over period of the management plan			
Project complete	Project complete by end of management plan period	Task competition logged	Bi-annually	High
Objective 3: Increa	ise visitor engagement with wildlife, particularly families			
Project complete	Project complete by end of management plan period	Task competition logged	Bi-annually	High
Favourite feature(s) and reason for visiting	New wildlife sculptures, self-guided trails and overall wildlife experience become favourite features of visitors and reason for visiting.	Visitor survey with specific questions to gather data against monitored attributes	Every 3 years from 2016	High
Objective 4: Raise	awareness, appreciation and support for the Trust and its wor	k		
Project complete	Project complete by end of management plan period	Task competition logged	Bi-annually	High
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Members recruited	Members recruited from reserve leaflet or during events	Review data from Membership Officer for the join source and reason for joining	Annually	High	
Objective 5: Use re	serve as a key location for the delivery of the Trust's informal o	education work			
Number of events run at reserve	At least four family focused events or activities delivered annually	End of year review of data on database	Annually	High	
Project complete	Project complete by end of management plan period	Task competition logged	Bi-annually	Medium	
Objective 6: Establish feasibility of working with Wedgwood to deliver formal education visits to the reserve					
Project complete	Feasibility study complete by end of management plan period	Task competition logged	Bi-annually	High	

A place for wildlife: work plan

[©] Lead staff member may undertake task directly or delegate to other staff or volunteers: Land Management Team (LMT), Monitoring Officer (MO), Visitor Experience Team (VET), Fundraising Manager (FM) ^{*} For this plan, year one is taken as 2015 [©] Code refers to project entry on CMSi to allow work recording [®] Task not timetabled as work only required once funding secured

Objective 1 Improve woodland structure in targeted areas						
Management / Task	Projects	Priority	Timing	Lead \diamond	Years 🌣	CMSi [⊙]
	Complete coppicing of woodland bordering railway line	High	Oct to Feb	LMT	1-2	
	Coppice 1/3 of main coppice area every 2 years so that all areas are coppiced every 6 years	High	Oct to Feb	LMT	All	
Maintain coppice woodland areas	Complete Woodland Grant Scheme works	High	Oct to Feb	LMT	1-2	
	Widen main rides to create scrubby edges to develop	High	Oct to Feb	LMT	1-2	
	Coppice the scrubby edge of one main ride every year so that every ride is coppiced on a 6 year rotation	High	Oct to Feb	LMT	All	

Objective 2 Maintain network of rides and glades throughout the woodland								
Management / Task	Projects	Priority	Timing	Lead \diamond	Years $\stackrel{ riangle}{}$	CMSi [⊙]		
Glade and ride mowing	Annual mow main glade to control encroaching scrub	High	Aug to Oct	LMT	All			
	Mow main rides on bi-annual rotation	High	Aug to Oct	LMT	All			

Objective 3 Remove or control invasive species								
Management / Task	Projects	Priority	Timing	Lead \diamond	Years ☆	CMSi [⊙]		
Rhododendron control	Clear and treat stumps of rhododendron on reserve	High	Aug to Feb	LMT	All			

Objective 4 Create two new glades, one at each end of the woodland								
Management / Task	Projects	Priority	Timing	Lead \diamond	Years 🌣	CMSi [☉]		
Create two new glades in woodland	Decide best locations and size for glades based on existing habitat management and visitor access	High	Any	LMT	2			
	Create glades over staggered period	High	Oct to Feb	LMT	2-10			

Objective 5 Improve pond and surrounding woodland edge

Management / Task	Projects	Priority	Timing	Lead \diamond	Years $\stackrel{ riangle}{}$	CMSi [⊙]
Assess water quality and marginal vegetation of pond	Carryout marginal vegetation survey to assess extent and species composition	Medium	Jun to Aug	МО	2	
	Carry out water quality testing using agreed methodology	Medium	Jun to Aug	МО	2	
Coppice surrounding trees	Coppice selected trees around perimeter of pond to allow in more light	Medium	Oct to Feb	LMT	3	

A place for people: work plan

Lead staff member may undertake task directly or delegate to other staff or volunteers: Land Management Team (LMT), Monitoring Officer (MO), Fundraising Manager (FM), Education Team (ED)
 For this plan, year one is taken as 2015
 Code refers to project entry on CMSi to allow work recording
 Task not timetabled as work only required once funding secured

Management / Task	Projects	Priority	Timing	Lead $^{\diamond}$	Years $\stackrel{ riangle}{}$	CMSi
Deliver improvements to access and facilities on the reserve for visitors through external funding	Plan and cost funded projects, including design of new entrance signage and features and additional tasks from all other objectives	High	Any	TBC	2-3	
	Secure funding to deliver projects	High	Any	FM	3-5	
	Install features and facilities as and when funding is found	High	Any	LMT	\otimes	
	Install gates accessible for motorized buggies, wheelchairs and pushchairs	High	Any	LMT	\otimes	
	Install new directional signage	Medium	Any	LMT	\otimes	
	Install self-guided family wildlife discovery trail	High	Any	VET	\otimes	
Create open view from Wedgwood entrance along first section of path to junction	Coppice selected trees to provide open view along path at Wedgwood entrance	Low	Oct to Feb	LMT	Any	

Objective 2 Increase the quality of the visit for target audiences									
Management / Task	Projects	Priority	Timing	Lead \diamond	Years 🌣	CMSi ⁰			
Improve and maintain access for visitors	Annually cut back vegetation overgrowing main paths and rides	Medium	Oct to Feb	LMT	All				
	Upgrade path surfaces along both promoted trails, particularly muddy and uneven sections	High	Any	LMT	All				
	Reroute existing north promoted trail	High	Any	LMT	2-3				
Deliver improvements to access and facilities on the reserve for visitors through external funding	Include wildlife sculptures, picnic tables and seating in funded project plan as detailed in objective 1	High	Any	TBC	2-3				

Objective 3 Increase visitor engagement with wildlife, particularly families								
Management / Task	Projects	Priority	Timing	Lead \diamond	Years 🌣	CMSi ⁰		
Deliver improvements to access and facilities on the reserve for visitors through external funding	Include self-guided trails in funded project plan as detailed in objective 1	High	Any	ТВС	2-3			

Objective 4 Raise awareness,	appreciation and support for the Trust and its work					
Management / Task	Projects	Priority	Timing	Lead \diamond	Years $\stackrel{ riangle}{}$	CMSi [⊙]
Work linked to tasks in other objec	tives		·			

Objective 5 Use reserve as a key location for the delivery of the Trust's informal education work							
Management / Task	Projects	Priority	Timing	Lead \diamond	Years $\stackrel{ riangle}{}$	CMSi [⊙]	
<i>Provide opportunities for visitors to explore the reserve</i>	Plan and deliver events or activities	Medium	Any	TBC	All		
Install pond dipping platform	Secure funding for pond dipping platform	Medium	Any	TBC	\otimes		
	Install pond dipping platform	Medium	Any	LMT	\otimes		

Objective 6 Establish feasibility of working with Wedgwood to deliver formal education visits to the reserve							
Management / Task	Projects	Priority	Timing	Lead \diamond	Years 🌣	CMSi ⁰	
Complete feasibility study for delivering formal education visits	Work with Wedgwood to investigate feasibility of delivering formal education visits with Wedgwood	Medium	Any	ED	Any		