

KINGSTON POOL COVERT (SOUTH) HABITAT MANAGEMENT PLAN 2005-2009

Section 1: Site details

Name: Kingston Pool Covert (South)

Total area: approx. 4.5 hectares

Grid reference: SJ 944 235

OS Map: Explorer 244 (6) 1:25,000

Ownership: Stafford Borough Council

Local Planning Authority: Stafford Borough Council

District: Stafford Borough

Conservation Status: Grade 1 Staffordshire Site of Biological Importance, Proposed Local Nature Reserve (LNR).

Access: The site has free and open access. There are three main access points which are linked by two sections of surfaced footpath. The first of these footpaths runs north-south through the woodland on the western side of the Kingston Brook leading from the Weston Road to Birkdale Drive. The second footpath, which goes from the Birkdale Drive entrance to another access point adjacent to the Sewage Pumping Station on the Tixall Road, marks the southern boundary of the site. In addition to these surfaced footpaths and main access points there are numerous other informal access points and desire lines on both sides of the woodland.



Section 2: Site description

Kingston Pool Covert (South) is an area of relatively undisturbed damp woodland on the eastern fringe of Stafford. When heading out of Stafford on the A518 Weston Road the woodland can be found on the right hand side of the road just before you reach the roundabout at the university. There is another area of woodland- Kingston Pool Covert (North)- on the left hand side of the road, which is owned and managed by a local residents' group.

The woodland of Kingston Pool Covert (South) has a fairly open canopy and is dominated by mature crack willow and alder, with scattered mature sycamore. The understorey contains a large number of young "leggy" sycamore and ash trees together with smaller numbers of other woody species including hawthorn, holly, wych elm, hazel and elder. Due to the age of the mature trees and the growth habit of crack willow there is a great deal of standing and fallen deadwood within the woodland which adds to the site's biodiversity.

The woodland ground flora is dominated by vigorously growing species such as common nettle, cleavers, cow parsley and ground elder. Even so, a variety of ferns and fungi can be identified throughout the site and there are also pockets of notable species such as lords-and-ladies, three cornered garlic, lesser celandine and marsh marigold. Garden escapes such as bluebells and daffodils can also be found within the woodland, although they are mainly confined to the edges of the site and along the main footpaths. A variety of birds, amphibians and insects have been identified in the woodland. There is evidence of historic water vole burrows in the banks of the Kingston Brook, which runs through the centre of the woodland.

In addition to the brook running through the centre of the site there are several particularly wet areas within the woodland, which generally coincide with old drainage ditches. Wetland species such as yellow flag iris, common water starwort and soft rush are present in these areas.

Section 3: Site objectives

- To maintain and enhance the woodland and ensure the successful natural regeneration of appropriate tree species within the woodland.
- To maintain and enhance the ground flora of the woodland. In particular, to ensure that notable species such as lords-and-ladies and marsh marigold are not detrimentally affected by vigorously growing species such as nettles and cleavers.
- To maintain and enhance, and where possible create or restore, wetland features within the woodland.
- To manage the site appropriately for Biodiversity Action Plan species. In particular to encourage natural re-colonisation of the site by water voles.
- To protect the site from the adverse affects of surrounding developments.
- To enhance the educational value of the site and increase the number of educational visitors.
- To contribute towards achieving the aims, objectives and targets that are identified in the UK Biodiversity Action Plan, the Staffordshire Biodiversity Action Plan, the Stafford Borough Biodiversity Strategy, the Stafford Borough Local Agenda 21 Strategy and the Stafford Borough Community Plan.

Section 4: Community Involvement

4.1 Proposed and existing links with voluntary nature conservation groups, local residents and other site users

The Community Biodiversity Officer is working with the local community to keep them informed about, and involved with, the management of Kingston Pool Covert (South). Members of the community with a particular interest in the site have also been involved with the development of this habitat management plan. During the coming year a programme of practical conservation activities will be developed for the site, which will be open to any members of the local community. In addition the Community Biodiversity Officer will liaise with local specialist groups, such as the Staffordshire Mammal Group and the Staffordshire Amphibian and Reptile Group, with a view to running targeted educational/training events on this site.

4.2 Proposed links with local schools

Within Stafford there are a number of schools that will utilise Kingston Pool Covert (South) as an educational resource, including a primary school and a secondary school that are in the very near vicinity. If used in a sensitive manner this woodland will act as an excellent 'outdoor classroom' where children could learn about the important local wildlife value of the woodland habitats as well as broader environmental issues, such as the harm caused by dropping litter. Similar educational field visits are already taking place on other Local Nature Reserves within Stafford Borough.

4.3 Purpose of seeking formal Local Nature Reserve declaration

By declaring Kingston Pool Covert (South) as a Local Nature Reserve, Stafford Borough Council is making a public statement recognising the woodland as a valuable resource for both local wildlife and local people. The declaration will contribute towards the main aim of the Stafford Borough Biodiversity Strategy, namely "to conserve and enhance the characteristic biodiversity of Stafford Borough for present and future generations" and the Stafford Borough Local Agenda 21 Strategy, which aims "to help achieve a better quality of life for all, both today and in the future". The declaration will also be in line with targets, aims and policies identified in Stafford Borough's Community Strategy and Stafford Borough Council's draft Development Plan Document for the Natural Environment (part of the new Local Development Framework for the Borough).

Section 5: Main management operations

This section details the main management operations that are required to protect and enhance the biodiversity of the woodland and also maintain and increase its community amenity value. A new management plan should be produced during 2009 to succeed this document. This current plan should be monitored throughout its 5-year lifetime and should be revised at any time during that period, if necessary, to provide greater protection to the important habitats and species that are found on this site.

5.1 Woodland Management

Kingston Pool Covert (South) is primarily an area of broadleaved semi-natural wet woodland. Many of the trees within the woodland are now very mature and the crack willows (*Salix fragilis*) in particular are now beginning to fall at an increased rate. In addition there are signs that the woodland is progressively drying out. A number of the older trees have partially exposed root systems which indicates that the ground level within the wood has dropped, probably as a result of reduced soil moisture. However, despite these obvious management issues there is very good natural regeneration of saplings, which will ensure the long-term viability of the woodland.

5.1.1 General principles

- Many of the mature trees within the woodland are of a similar age and the crack willows in particular are now overly mature. In the last two years several large willows have fallen within the woodland and whenever there are strong winds there is the possibility that another one will come down. As a result significant open areas are now developing within the woodland. To ensure the long term survival of the wet woodland habitat it is important to ensure that regeneration of native wet woodland tree species occurs within these areas. Although large scale tree management works within this semi-natural habitat would not be desirable some active tree management will be required to maintain a healthy structural diversity within the woodland.
- As such the woodland will be divided into a series of management compartment. Specified tree management works, including selective felling, thinning, planting and coppicing, will be carried out within each of the compartments on a rotational basis. These works will be identified in greater detail in a separate Woodland Management Programme which will be produced once the site has been declared as a Local Nature Reserve. The Woodland Management Programme will compliment this management plan and will be drawn up by the Stafford Borough Biodiversity Steering Group and Stafford Borough Council's Tree Officer and Community Biodiversity Officer. Additional funding will be required to implement the works identified within the Woodland Management Programme.
- Natural regeneration of native wet woodland trees species will be encouraged as much as possible to maintain the local provenance of the tree stock in Kingston Pool Covert (South). In parts of the woodland where natural regeneration is successfully occurring it may be necessary to carry out some tree thinning to ensure that in the long term healthy mature trees continue to develop within the woodland. At the moment there are sections of the wood where young saplings are growing in such close proximity that they are developing into very tall, but very weak, trees as they race each other upwards towards the canopy. Dense natural regeneration should be identified at an early stage so that there is the possibility to transplant selective saplings to parts of the wood where natural regeneration is less successful. Where trees are too mature to

transplant then selective coppicing will be required. If small amounts of coppicing are carefully carried out each year then a good structural diversity will be maintained within the woodland. Planting cuttings taken from the existing willow trees within the woodland is a technique that could be used to assist the regeneration of willow trees. Purchased trees should only be planted as a last resort.

- There is a high level of young natural regeneration of sycamore (*Acer pseudoplatanus*) trees within Kingston Pool Covert (South). There are a number of large sycamore trees within the woodland so this species has clearly been present at this location for a significant period of time. However, it is important to ensure that the sycamore trees do not suppress the growth of other less vigorous species. This invasive, non-native, tree species has the potential to significantly affect the composition of woodlands if left unchecked. Consequently, when coppicing/thinning of natural regeneration is required sycamore trees should, in general, be selectively removed. Sycamore trees should not be transplanted to other parts of the woodland.
- Part of the root system of several mature trees have been exposed as a result of the ground surface settling. The most likely cause of this falling ground level is that the woodland is gradually drying out. There are many potential causes of a reduction in the soil moisture including increased drainage or extraction, or reduced precipitation and climate change. However, in this location the most likely cause is a reduction in surface or sub-surface run-off into the woodland as a result of housing developments around the woodland during the last 30 years. Surface drainage from housing developments on both the western and south-eastern side of the woodland are piped or drained straight into the Kingston Brook. Previously most of this water would have flowed into the woodland via natural run-off or contorted man-engineered field drainage systems. The only natural drainage into the woodland can now come from a field adjoining the north-east section of the woodland. Interestingly this area currently has the most diverse ground flora in the entire woodland, including a significant amount of lords and ladies (*Arum maculatum*). If this field is ever developed for housing or other purposes it is essential that some form of sustainable urban drainage is incorporated to maintain water flow through the woodland. Drainage must not be directly into the Kingston Brook.
- Wherever possible lying deadwood will be retained within the woodland and allowed to decompose naturally. Deadwood such as this makes an important contribution to the local biodiversity by providing a habitat and food source for a variety of species including numerous insects and fungi. In general lying deadwood should only be removed or chipped if it blocks a footpath or could potentially suppress notable species of ground flora.
- Standing deadwood should also be retained if possible. Woodpeckers are often seen in the woodland and there is a lot of evidence of these birds using the existing standing deadwood on the site. However, there are obviously potential health and safety risks in relation to standing deadwood, particularly if it is located near to surfaced footpaths or the perimeter of the site. In addition, “hung up” trees (i.e. trees that have fallen but which have not reached the ground as they have been caught by the branches of surrounding trees) pose an equally significant risk. Stafford Borough Council’s Tree Officer will be asked to assess all standing deadwood and “hung up” trees in the woodland. Any dangerous trees that are considered to pose a Health and Safety risk to site users or neighbouring residences will be felled. If felling is deemed to be necessary then the cut deadwood should be left on the ground within the woodland to provide habitat diversity.

5.1.2 Trees alongside footpaths and roads and overhanging the perimeter

- All trees that are located alongside either of the surfaced footpaths or on the perimeter of the site (i.e. overhanging residences or roads) should be assessed by Stafford Borough Council's Tree Officer. Any necessary works should be carried out to ensure the health and safety of the general public.
- As previously stated natural regeneration of native woodland tree species will generally be encouraged throughout the woodland. However, alongside the two surfaced footpaths any such regeneration may need to be controlled. It is important to maintain satisfactory lines of sight along these footpaths and to ensure that overgrowing branches do not obstruct them. Selective annual coppicing of scrub/trees alongside the footpaths should be undertaken as required.
- In places along the main north-south footpath there are currently some large sections of timber which are the remnants of fallen trees. Although laying deadwood will generally be left to naturally decompose in the woodland it may be necessary to carry out some work in these specific cases to ensure that the footpath wide is satisfactory and that lines of sight are acceptable.

5.1.3 Native Black Poplars

- The Black Poplar (*Populus nigra ssp. betulifolia*) is a rare native British tree, which is naturally found on lowland river floodplains and is therefore suited to the conditions in Kingston Pool Covert. Black poplars are currently present within Kingston Pool Covert (North). Native Black Poplars are now very rare because the remaining mature trees are not producing saplings. This is because their seeds need very specific wet, muddy ground conditions to successfully grow. However, in the last 300 years suitable conditions for the establishment of these majestic trees have virtually disappeared because of changing farming practices and land drainage. Some black poplars still survive locally and to promote the survival of this species Staffordshire County Council are growing new trees by taking cuttings from the remaining mature trees. The native black poplar is a Staffordshire Biodiversity Action Plan species.
- Suitable planting locations for at least three native black poplar saplings should be identified within Kingston Pool Covert (South). Native black poplar saplings should then be obtained, planted and monitored to ensure that they establish successfully. Removal of competing vegetation should be carried out regularly for at least the first two years after planting. The use of tree shelters may attract vandalism on this site so should be avoided unless deemed essential. Further native black poplar planting could be carried out in additional suitable locations if further saplings could be obtained.

5.1.4 Other tree management tasks

- Beneath the main tree canopy there is an understorey which contains a variety of young trees and scrub, including hawthorn (*Crataegus monogyna*), holly (*Ilex aquifolium*), wych elm (*Ulmus glabra*), wild rose (*Rosa sp.*), hazel (*Corylus avellana*) and elder (*Sambucus nigra*). This mixed species vegetation provides a valuable diversity of habitat within the woodland. The trees/scrub provide a winter food source of berries (rose hips, haws, etc.), as well as potential spring cover for nesting birds. This habitat should be maintained.
- Whenever possible ropes, etc. should be removed from the branches of trees, although only if it is safe to do so.

- Bird boxes and bat boxes could be installed in appropriate locations on some of the sturdy mature trees in the woodland. Suitable locations should be assessed with help from local specialist groups, including the Staffordshire Bat Group. This work could also provide an opportunity for community involvement and school educational work (e.g. bird surveys, bat walks, construction of bird/bat boxes, etc.).

5.2 Wetland Management

Kingston Pool Covert (South) contains several wetland features, including the relatively fast flowing Kingston Brook, various drainage ditches (including one that is stone lined) and a number of silted up water bodies.

5.2.1 The Kingston Brook

- The Kingston Brook is a watercourse that appears to have been quite heavily canalised (i.e. it is much straighter and has much steeper banks than would be naturally expected). The brook is currently managed by the Environment Agency.
- The brook does not contain a great diversity of aquatic vegetation. This is probably because of the regular dredging and the quantity and speed of water that rushes through the brook from the neighbouring housing estates after period of rainfall.
- By altering current maintenance regimes the diversity of habitats in and around the brook could be enhanced. Ideally some re-meandering of the brook would be considered, but this is likely to be a long-term objective. In the short term measures such as reducing the extent of dredging and leaving woody debris in or near to the brook would enhance the biodiversity of the water course.
- There is evidence of water vole (*Arvicola terrestris*) burrows within the banks of the brook, but there are no signs of a current water vole population in the immediate area. The bank profile is suitable for water voles and there is clear evidence of a historic colony so efforts should be made to manage the brook and its banks in a way that would provide maximum habitat potential for these locally rare mammals. Ideal water vole habitat is open, grassy riverbanks with plenty of water plants and not too much shade or woody vegetation. Obviously it is highly unlikely that completely ideal conditions could be created within an area of woodland, but maintaining 'buffer strips' of appropriate native vegetation on either side of the watercourse would be beneficial.
- Existing open areas near to the banks of the brook should be retained and maintained in an appropriate manner. Ideally bankside vegetation that grows very vigorously, such as the common nettle (*Urtica dioica*), should be manually controlled (see 5.3.2) to ensure that it does not completely dominate these areas. Management of the 'buffer strips' should aim to achieve a diversity of lush bankside vegetation including grass, rush and sedge species.
- Efforts to minimise fluctuating water levels in the Kingston Brook (by encouraging more natural, gradual surface run-off—see 5.1.1, bullet point no.5) would also benefit water voles by reducing the likelihood of burrows being frequently flooded.
- Water vole colonies do not generally travel large distances so it would be sensible to survey connected water courses within 2 miles of Kingston Pool Covert (South) to identify populations that could naturally re-colonise the woodland. Once any such populations are identified it would then be important to ensure that water courses leading from the existing colony to Kingston Pool Covert (South) are managed in a water vole-friendly way. Obviously this is likely to involve working with private landowners to encourage appropriate management practices.

- At the far northern end of the woodland, just as the brook emerges from a culvert beneath the Weston Road, the banks of the brook are very steep and re-inforced with blocks of stone. These stone walls have been colonised by heart's tongue fern (*Phyllitis scolopendrium*), which seems to be thriving in this damp, shady habitat. Any management work in this area should avoid disturbing the stone wall and repairs should be carried out as necessary to maintain this interesting feature.

5.2.2 Management of drainage ditches and wetland restoration

- There are now only two active open drainage ditches within Kingston Pool Covert (South)- one on either side of the woodland. The one towards the north of the western part of the woodland has been heavily engineered and is concrete lined. Serious consideration should be given to how these two ditches can be managed to maximise their wildlife value whilst still retaining their purpose as a drainage system from nearby housing developments.
- In addition a number of old drainage ditches and low-lying depression features can be identified within the woodland. These often retain water during winter months and periods of prolonged rainfall, but do not retain this for long enough to provide a breeding habitat for wetland fauna such as amphibians or dragonflies. In particular it has become apparent that frogs use some of these features for spawning, but that water is present in them for an insufficient length of time to allow tadpoles to develop into frogs. In early 2005 a small section (approximately 3 feet) of the drainage ditch which runs alongside the north-south surfaced footpath was dug-out to a depth of 6 inches. This trial was a moderate success as frogs used it for spawning and the open water persisted much later into the year than at other such features within the woodland. However, this trial was too small to have any significant lasting benefit.
- Consequently a number of other suitable locations for the re-creation of open water features will be identified. A programme of wetland restoration works can then be organised. This would involve deepening the existing features by removing the accumulated soil, leaf mulch and other organic matter that has been responsible for their gradual silting up. In drainage ditches the whole length should not be cleared as this would simply speed up water flow into the Kingston Brook. Instead selected sections should be left un-excavated at regular intervals to act as natural dams whilst the remainder of the ditches are restored. This would produce an network of small wetland features throughout the woodland. Any larger natural depressions within the woodland could be deepened to produce saucer-shaped "scrapes" with a maximum depth in the centre that is approximately 0.5m below the current ground level. The overall aim of these proposed works will be to provide open water features that will remain into the summer months and may allow amphibians and dragonflies to successfully breed. It will also provide valuable habitat diversity that will encourage a variety of other flora and fauna.
- These wetland restoration works will require additional funding and will therefore only be carried out once the necessary resources have been allocated. The works would need to be carried out during the late summer months to avoid disturbance to the local wildlife during the spring breeding season or the hibernation period in late autumn and winter. The surplus soil and silt that would be produced could be landscaped into the banks that are present on the western and eastern sides of the woodland. The eastern slope has been greatly diminished by an adjacent housing development so this soil/silt deposition would also help to re-create this historical feature of the landscape. The bare soil/silt will be allowed to naturally regenerate with local native wildflowers.

- Once constructed any restored wetland features should be regularly monitored. Data should be collected on species using the features, and the condition of the features should also be inspected so that maintenance can be organised as necessary. The amount of open water should be monitored regularly and clearance work should be carried out, if necessary, during September or October, to maintain viable areas of open water.

5.2.3 Pollution Control

- Adjacent to the south-eastern corner of the woodland is a Severn Trent Water sewage pumping station. On a number of occasions in recent years sewage from this site has overflowed into the woodland. In addition to the obvious public health issues that this raises there are also serious ecological affects. Any input of such nutrient-rich material would cause an imbalance to the chemistry and ecology of the area. It is particularly noticeable that nutrient-loving plant species such as common nettles and cleavers are growing particularly vigorously in the affected area. It is therefore essential that in future great care is taken to avoid any pollution incidents from this pumping station. Stafford Borough Council should work closely with Severn Trent Water to ensure that the ecological value of the woodland is recognised, protected and enhanced.
- The concrete lined drainage ditch in the north-western part of the woodland seems to be intermittently affected by pollution incidents. As this ditch drains water from the adjacent housing estate it is very likely that these incidents have a domestic origin. The ditch should be regularly monitored and any pollution should be reported to Severn Trent Water. In addition the problem could be tackled at source by ensuring that local publicity regarding the Local Nature Reserve designation for the woodland highlights the problem of water-borne pollution.
- Any pollution incidents of an unknown origin should be reported to the Environment Agency on their emergency pollution hotline (0800 80 70 60).

5.3 Management of Ground Flora

Kingston Pool South (South) contains some important species of native ground flora, including lords-and-ladies. It is important that the populations of these species are protected and enhanced whilst invasive non-native species or dominant vigorously growing species are controlled where necessary.

5.3.1 Protecting and enhancing native woodland species

- The populations of native woodland species, particularly those with localised populations within Kingston Pool Covert (South) such as three-cornered garlic (*Allium triquetrum*), hart's-tongue fern (*Phyllitis scolopendrium*) and to a lesser extent lords-and-ladies (*Arum maculatum*) and foxglove (*Digitalis purpurea*), should be monitored annually. Any immediate dangers to the populations or more gradual declines should be identified and measures should be put in place to counteract them. The ground flora off the south running pathway has been dominated by Enchanter's Nightshade. *Circaea lutetiana*.
- There are a number of non-native strains of plant species within the woodland, including hybrid daffodils (*Narcissus sp.*) and yellow archangel (*Lamiastrum galeobdolon ssp. argentatum*) which have either been deliberately planted or have naturally "escaped" from neighbouring residential gardens. In most cases, although they are not native to the woodland, they will not cause any specific problems for the

local environment. However, there are also some areas of planted Spanish bluebells (*Hyacinthoides hispanica*). This species readily hybridises with the native British bluebell (*Hyacinthoides non-scriptus*). As a result of the possible effects that this could have on the gene pool of any remaining native bluebells in the area the removal of all Spanish bluebells from the woodland should be strongly considered.

- Certain native woodland plant species, in particular wood anemone (*Anemone nemorosa*), have historically been recorded within the woodland but can no longer be found on this site. In these circumstances the re-planting of native species from local provenance stocks should be considered. In carefully controlled conditions, with all necessary authorisations, appropriate seeds or bulbs could be harvested from nearby sites. Such work would only be carried out to re-populate Kingston Pool Covert (South). This possibility should be discussed with the owners of Kingston Pool Covert (North) and other nearby landowners. The Staffordshire Ecological Record (SER) could be used to find local populations of suitable species, such as native bluebells (*Hyacinthoides non-scriptus*).

5.3.2 Control of invasive, vigorous or introduced species

- The woodland should be monitored for the presence of invasive non-native plant species such as Japanese Knotweed (*Fallopia japonica*), Giant Hogweed (*Heracleum mantegazzianum*) or Himalyan Balsam (*Impatiens glandulifera*). Any observations should be reported to the Community Biodiversity Officer at Stafford Borough Council (01785 619387) immediately. These species are currently not present in the woodland, so they should be controlled immediately if they invade the site. In such a situation the most current Environment Agency recommendations for the control of these species should be followed.
- The common nettle (*Urtica dioica*) dominates the ground flora throughout most of the woodland. This species, together with other highly competitive species such as cleavers (*Galium aparine*) and ground elder (*Aegopodium podagraria*), could potentially out-compete and smother the natural regeneration of saplings and prevent the spread of less vigorous species of woodland flora. Consequently, manual control of nettles, cleavers and ground elder should be considered in selected locations within the woodland. This control would simply involve regular cutting of the vegetation using a slasher or grass hook during the peak months of growth (i.e. May-September). If such cutting regimes were trailed in small set locations throughout the lifetime of this management plan then an assessment could be made of the benefits it would provide (i.e. increased/reduced diversity of ground flora).
A cutting regime on a small scale commenced on the 31st October 2006. Success shall be measured using indicator species that show a marked improvement in their ground flora dominance; species include Enchanter's Nightshade. *Circaea lutetiana*.

5.4 Other Site Management Tasks

There are numerous general site management tasks that need to be undertaken. Some of these are suitable to be undertaken by volunteer work-parties, whilst others will require the use of specialist contractors. In addition, members of the Council's staff or approved Voluntary Wardens should carry out regular site patrols to monitor the following:

5.4.1 Access

- Improvements will be made to the two main footpaths which run through the woodland. The footpaths were constructed from compacted stone and generally provide a good solid walking surface. However, over the years a great deal of organic matter has accumulated on sections of both paths and soil has been washed onto the north-south footpath from the steep bank which is located very close to the path in places. Small scale clearance of accumulated debris from the footpaths has already commenced near to the Birkdale Drive entrance. As a result of 'Wildspace!' funding this work can be continued along the entire length of both surfaced footpaths. Where necessary additional stone will be imported for this work, but it is envisaged that very little will be needed as the footpaths seem to remain in good condition beneath the soil and organic matter.
- To ensure the health and safety of site users who walk along the two surfaced footpaths some management operations may need to be carried out on the trees/scrub that are situated immediately alongside the footpaths. These are stated in more detail in section 5.1.2 of this management plan.
- Monitoring of the condition of all access points, fencing, etc. should be undertaken regularly. Any defects should be reported to the Community Biodiversity Officer at Stafford Borough Council (01785 619387). Any repairs should be arranged as necessary.
- It is essential that un-authorized vehicular access be prevented. Any site security defects should be reported to the Community Biodiversity Officer at Stafford Borough Council (01785 619387) and any necessary repairs should be arranged as soon as possible.
- In the long term it has been suggested that an additional surfaced footpath could be constructed through the eastern part of the woodland to create a circular woodland walk (the Weston Road footpath would form the northern part of the walk). This idea should be assessed during the lifetime of this management plan. Primarily the ecological affects of constructing a surfaced footpath through the eastern section of woodland should be assessed. In addition, the level of public support or opposition should be gauged. Any such footpath should NOT be constructed if it is decided that it would have a negative effect on the biodiversity of the site.
The Eastern footpath does exist but has many obstacles to scramble over i.e. fallen trees, wet flushes, drainage ditches and many piles of branches.

5.4.2 Litter

- An annual community litter-pick of the whole woodland should be arranged during the spring. Stafford Borough Council will provide necessary equipment and remove the litter that is collected.
- As with other LNRs any volunteers who litter-pick around the site regularly can make arrangements with Stafford Borough Council to be provided with blue bags and litter-pickers. Any bagged litter will be collected by arrangement (call the StreetScene hotline on 01785 619401). Any incidents of fly-tipping should be reported promptly to the same hotline.
- Dog fouling problems should be monitored closely. All site users should be asked to clean up after their pets.

5.4.3 Signage

- Three ladder signs has been installed, 2 on the Weston Road side of the woodland and one on the Birkdale Drive side.

5.4.4 Wildlife Surveys

- To get a better overall understanding of the wildlife that uses this site a number of detailed ecological surveys should be undertaken. There is already some basic data relating to the flora of the site which has been accumulated over the years as a result of a series of surveys and reports from local residents. It would however be beneficial to have comprehensive up-to-date survey data relating to the ground flora of the site (including ferns and fungi) so such a survey should be commissioned. In addition, specific surveys for mammals (including the presence or absence of bats), amphibians, reptiles, butterflies and moths that use the woodland should be undertaken. These surveys would provide an important guide for future management operations.
- Wherever possible it is important that local residents and site users are involved in the recording and reporting of information about wildlife on the site. Current reporting from local residents should be encouraged and a simple system for recording and compiling sightings made by members of the public should be developed. Appropriate training events should be organised for volunteers who would like to get involved in carrying out surveys on the site.
- All wildlife records that are collected, whether historical or current, should be reported to the Staffordshire Ecological Record (SER).

Plant Species list for Kingston Pool Covert (South)

1. ASPLENIACEAE <i>Phyllitis scolopendrium</i>	Spleenwort f. Hart's tongue
2. DRYOPTERIDACEAE <i>Dryopteris filix-mas</i> <i>Dryopteris dilatata</i>	Buckler-fern f. Male fern Broad Buckler-fern
3. PINACEAE Larix sp	Pine f. Larch sp.
4. RANUNCULACEAE <i>Caltha palustris</i> <i>Ranunculus repens</i> <i>Ranunculus ficaria</i>	Buttercup f. Marsh-marigold Creeping Buttercup Lesser Celandine
5. ULMACEAE <i>Ulmus glabra</i>	Elm f. Wych Elm
6. URTICACEAE <i>Urtica dioica</i>	Nettle f. Common Nettle
7. FAGACEAE <i>Quercus robor</i>	Beech f. Pedunculate oak
8. BETULACEAE <i>Betula pubescens</i> <i>Alnus glutinosa</i> <i>Carpinus betulus</i> <i>Corylus avellana</i>	Birch f. Downy Birch Alder Hornbeam Hazel
9. CARYOPHYLLACEAE <i>Stellaria media</i> <i>Silene latifolia</i> <i>Silene dioica</i>	Pink f. Common Chickweed White Campion Red Campion
10. POLYGONACEAE <i>Rumex sanguineus</i> <i>Rumex obtusifolius</i>	Knotweed f. Wood Dock Broad-leaved Dock
11. VIOLACEAE <i>Viola odorata</i>	Violet f. Sweet Violet
12. SALICACEAE <i>Salix fragillis</i> <i>Salix cinerea</i> ssp <i>oleifolia</i>	Willow f. Crack-willow Grey willow
13. BRASSICACEAE <i>Alliaria petiolata</i> <i>Cardamine flexuosa</i>	Cabbage f. Garlic Mustard Wavy Bitter-cress
14. GROSSULARIACEAE <i>Ribes rubrum</i> <i>Ribes sanguineum</i> <i>Ribes uva-crispa</i>	Gooseberry f. Red currant Flowering currant Gooseberry
15. ROSACEAE <i>Filipendula ulmaria</i> Robus fruticosus agg. <i>Geum urbanum</i> <i>Rosa canina</i>	Rose f. Meadowsweet Brambles Wood Avens Dog-rose

<i>Crataegus monogyma</i>	Hawthorn
<i>Potentilla reptans</i>	Creeping Cinquefoil
16. ONAGRACEAE	Willowherb f.
<i>Epilobium hirsutum</i>	Great Willowherb
<i>Epilobium</i> spp.	Willowherb spp.
17. AQUIFOLIACEAE	Holly f.
<i>Ilex aquifolium</i>	Holly
18. ACERACEAE	Maple f.
<i>Acer pseudoplatanus</i>	Sycamore
19. GERANIACEAE	Crane's-bill f.
<i>Geranium robertianum</i>	Herb-Robert
20. ARALIACEAE	Ivy f.
<i>Hedera helix</i> subsp/helix	Common Ivy
21. APIACEAE	Carrot f.
<i>Anthriscus sylvestris</i>	Cow Parsley
<i>Aegopodium podagraria</i>	Ground-elder
<i>Apium nodiflorum</i>	Fool's water-cress
<i>Angelica sylvestris</i>	Wild Angelica
<i>Heracleum sphondylium</i>	Hogweed
22. APOCYNACEAE	Periwinkle f.
<i>Vinca</i> sp.	Periwinkle sp
23. BORAGINACEAE	Borage f.
<i>Myosotis</i> sp.	Forget-me-not sp
24. LAMIACEAE	Dead-nettle f.
<i>Lamium galeobdolon</i>	Yellow Archangel
<i>Lamium album</i>	White Dead-nettle
<i>Lamium maculatum</i>	Spotted Dead-nettle
25. CALLITRICHACEAE	Water-starwort f.
<i>Callitriche stagnalis</i>	Common Water-starwort
26. PLANTAGINACEAE	Plantain f.
<i>Plantago major</i>	Greater Plantain
27. OLEACEAE	Ash f.
<i>Fraxinus excelsior</i>	Ash
28. SCROPHULARIACEAE	Figwort f.
<i>Scrophularia auriculata</i>	Water Figwort
<i>Digitalis purpurea</i>	Foxglove
<i>Veronica hederifolia</i>	Ivy-leaved Speedwell
29. RUBIACEAE	Bedstraw f.
<i>Galium aparine</i>	Cleavers
30. CAPRIFOLIACEAE	Honeysuckle f.
<i>Sambucus nigra</i>	Elder
<i>Lonicera periclymenum</i>	Honeysuckle
31. ASTERACEAE	Daisy f.
<i>Arctium minus</i>	Lesser Burdock
<i>Cirsium vulgare</i>	Spear thistle
<i>Taraxacum</i> agg.	Dandelion
<i>Bellis perennis</i>	Daisy

<i>Senecio jacobaea</i>	Common Ragwort
<i>Senecio aquaticus</i>	Marsh Ragwort
32. HYDROCHARITACEAE	Frogbit f.
<i>Elodea Canadensis</i>	Canadian Waterweed
33. ARACEAE	Lords-and-ladies f.
<i>Arum maculatum</i>	Lords-and-Ladies
34. JUNCACEAE	Rush f.
<i>Juncus effuses</i>	Soft-rush
35. CYPERACEAE	Sedge f.
<i>Carex acutiformis</i>	Lesser Pond-sedge
<i>Carex pendula</i>	Pendulous Sedge
36. POACEAE	Grass f.
<i>Dactylis glomerata</i>	Cock's-foot
<i>Glyceria maxima</i>	Reed Sweet-grass
<i>Phalaris arundinaceae</i>	Reed Canary-grass
37. LILIACEAE	Lily f.
Narcissus sp	Daffodil sp
<i>Hyacinthoides hispanica</i>	Spanish Bluebell
38. IRIDACEAE	Iris f.
<i>Iris pseudacorus</i>	Yellow Iris
39. CIRCAEA	Nightshade f.
<i>Circaea lutetiana</i>	Enchanters Nightshade