Scottish Natural Heritage

FIDDLER GILL
SITE OF SPECIAL SCIENTIFIC INTEREST

SITE MANAGEMENT STATEMENT

Site code: 632

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Purpose

This is a public statement prepared by SNH for owners and occupiers of the SSSI. It outlines the reasons it is designated as an SSSI and provides guidance on how its special natural features should be conserved or enhanced. This Statement does not affect or form part of the statutory notification and does not remove the need to apply for consent for operations requiring consent.

We welcome your views on this statement.

Description of the site

Fiddler Gill Site of Special Scientific Interest (SSSI), lying approximately 2.5 km south of Carluke comprises one of the best examples of ancient, semi-natural deciduous woodland in Lanarkshire and supports a rich assemblage of beetles.

The site encompasses a steeply sloped gorge on the Fiddler Burn which is joined from the south by the Auchenglen Burn towards the west of the site – both of which are tributaries to the River Clyde. As a consequence of the underlying geology, composed of calciferous sandstone in conjunction with limestone, overlain with boulder clay, the site plays host to both base-rich and acid plant communities. The regular occurrence of the moss *Cratoneuron* indicates areas that are underlain with carboniferous rock (calciferous sandstone) as this moss coats the rock surface in flush areas where calcium is present in significant amounts.

The woodland is dominated by ash and elm with a range of tree age classes along the Fiddler Burn with areas of the eastern banks dominated by mature oak. Where the soils become more acidic birch is present and where the ground is wetter alder is supported, close by St Oswald's Villa. Drier areas in the west and north east of the site support Scots pine. Hazel is a common feature of the woodland understorey.

The occurrence of Dutch elm disease in this locality has left extensive areas of dead elm below Hamperhill Farm to the south west of the site and on the banks opposite Auchenglen. Sycamore has established itself as the natural successor of elm in these areas alongside regenerating elm, ash and beech. Avenues of non-native beech have been planted on the margins of the SSSI, seedlings of which are regenerating into the woodland throughout, particularly in the Derwent Wood area and the north eastern section of the site, towards Fiddler Bridge. Other non-native tree species include the Norway maple, larch, and spruce. Pockets of invasive rhododendron have encroached on the central section of the wood towards St Oswald's Villa although efforts to control its spread have been made.

In areas not dominated by beech (which by virtue of its broad foliage and dense leaf litter casts heavy shade) the ground flora is rich and diverse. The varied ground flora includes herb Paris, broad-leaved helleborine, mountain melick and pendulous sedge. More common species include honeysuckle, great wood-rush and opposite-leaved golden-saxifrage. Further botanical interest includes a moss that thrives under wet 'Atlantic' conditions - *Hookeria lucens.*

The woodland is considered to be in an unfavourable condition mainly due to the high percentage of non-native trees species present within the site - especially beech and sycamore. However it should be noted that the woodland structure is good and there is management in place to thin the non-native species. Sycamore has been generally accepted at increased levels as it has naturally succeeded elm in the aftermath of Dutch elm disease.

The site also supports a diverse assemblage of woodland beetles (Coleoptera) and is especially important for saproxylic (dead wood) species, associated with old or dead wood and fungi growing on dead wood. The occurrence of Dutch elm disease within the woodland gorge and the nature of the gorge's unstable, steep-sided slopes means there is a plentiful supply of dead wood at this site. Felled non-native beech and sycamore on the southern banks of the burn which was requested to be left on-site further enhances the supply of fallen timber. Standing dead wood is less abundant; however, if introduced, the ring-barking of non-native trees would be beneficial to ensure an ongoing supply of standing deadwood.

Beetle species found at the site include the Nationally Rare minute fungus beetle *Orthoperus brunnipes*, which is associated with marshy areas, and a number of Nationally Scare beetles including *Tetratoma ancora, Cerylon fagi* and *Orchesia minor*. Other Nationally Scarce invertebrates include the hoverfly *Brachyopa insensilis* and fly *Aulacigaster leucopeza*.

The beetle assemblage is considered to be in a favourable condition because, despite only three of the 14 target beetle species being found, there was a good diversity of available habitats suitable for beetles present within the site. Fallen sapwood, in varying states of decomposition, in a variety of conditions of exposure and moisture content was plentiful. Decaying heartwood (produced via fungal attack), active sap runs and decaying sap under bark were also present at adequate frequencies to be useful to invertebrates.

Although not part of the notified feature the open glades of unimproved herb-rich grasslands add to the diversity of the site on flatter ground at Auchenglen Bridge and Hamperhill to the west of the site. Found at the woodland margins and within areas of open woodland, these grasslands are of interest both in their own right and for their role in the lifecycle of certain invertebrate species. Species typical of these areas include creeping thistle, hedge woundwort, hogweed, black knapweed, tufted vetch, lesser stitchwort, and germander speedwell. These grassland areas in the past were used as apple orchards, which are now in a state of decay but are providing further dead wood habitat for invertebrate assemblages. Bracken is now encroaching into these areas.

The diverse age structure of the woodland also supports a rich breeding bird community including willow tit and green woodpecker. Both species are restricted in their distribution in west-central Scotland with the willow tit at the most northerly extent of its breeding range in the UK.

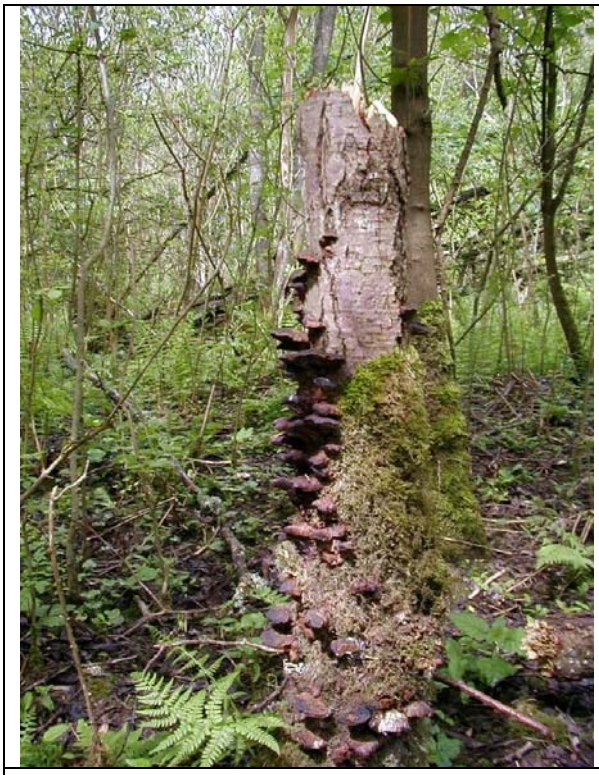
Natural features of Fiddler Gill SSSI	**Condition of feature** (date monitored)	**Other relevant designations**
Upland mixed ash woodland	Unfavourable, no change (April, 2009)	Special Area of Conservation (SAC)
Beetle assemblage	Favourable, maintained (September, 2003)	

The site is also an important component of the Clyde Valley Woods Special Area of Conservation (SAC), which has the following qualifying feature:

- Mixed Woodland on Base-rich Soils Associated with Rocky Slopes

The Clyde Valley Woods SAC is comprised of eleven individual woodland Sites of Special Scientific Interest, lying in the often steep sided gorges containing several tributary rivers to the River Clyde in Lanarkshire. This SAC contains the most extensive areas of ash-elm woodland in Scotland.

The condition of this qualifying feature, considered across the whole SAC, has been assessed as favourable, despite the high number of non-native trees present. The favourable condition of this site is likely a result of non-intervention. Though some of the flatter areas of the SAC have historically been felled, coppiced or otherwise managed, the steep-sided nature of the gorges in which these woodlands are situated has made it difficult for much interference to have taken place since their original development following the last ice-age.

	
Fungoid dead wood that is ideal for saproxylic (dead wood) invertebrates.	Bird's-nest orchid, a non-photosynthetic plant species found at this site (Photo: BerndH).

Past and present management

Woodhall Coal Mine was still active, as late as 1961, within the central section of the site, on the northern bank of the Gill. A large spoil heap still remains within the site, stretching from the waters edge up the northern gorge to the cliff top, and it is slowly revegetating.

Old apples trees, within an old apple orchard near the Auchenglen footbridge and below Hamper Hill, are in a state of decay. There is evidence of coppicing of hazel, birch and sycamore within Derwent Wood and the apple orchard areas. The predominance of young trees in Derwent Wood suggests that timber has been extracted in the past.

Currently the site forms part of the Clyde Valley Woods Special Area of Conservation (SAC) and is either managed for conservation, under six different management agreements with SNH covering 64% of the site, or is under no active management. Five management agreements are due to expire in 2014 and were initiated under the Clyde Valley Woodlands LIFE project. LIFE funding is available to support positive management. Management policy under these agreements includes the removal of non-native tree species, removal of invasive rhododendron, removal of rubbish from the woodland area and the erection of stock-proof fencing around the woodland.

The remaining agreement covers a section of land on the northern banks of the burn and is due to expire in 2012. Management policy is to maintain and enhance the natural species composition of the woodland by encouraging native species

regeneration and further development of the ground flora together with providing conditions for the dead wood fauna.

The management agreements have enabled continuous stock-proof fencing to be erected around the entire site and as a result grazing pressure is no longer a problem. There is now only very light browsing by roe deer.

Presently a foot bridge crosses the Fiddler Burn east of Auchenglen, constituting a public right of way which continues along the northern perimeter of the woodland (Woodheads Road Path). This route is frequented by horse riders.

Scottish Power maintains a wayleave across the site.

Objectives for Management (and key factors influencing the condition of natural features)

We wish to work with the owners and occupiers to protect the site and to maintain and where necessary enhance its features of special interest. SNH aims to carry out site survey, monitoring and research as appropriate to increase our knowledge and understanding of the site and its natural features and monitor the effectiveness of the management agreements.

The EU Habitats and Birds Directives oblige Government to avoid, in SACs and SPAs, the deterioration of natural habitats and the habitats of species, as well as disturbance of the species for which the areas have been designated, in so far as such disturbance could be significant in relation to the objectives of these Directives. The objectives below have been assessed against these requirements. All authorities proposing to carry out or permit to be carried out operations likely to have a significant effect on the European interests of this SSSI must assess those operations against the relevant Natura conservation objectives (which are listed on our website through the SNHi - SiteLink facility).

1. **To maintain and enhance, where possible, the natural species composition and structure of the mixed ash woodland** by ring-barking non-native trees, removing non-native regeneration, controlling invasive species and by ensuring stock-proof fencing is maintained.

   Non-native tree species such as beech and sycamore are present throughout the site, especially towards the woodland margins, and they tend to out-compete native species. Beech litter will also smother native ground flora. However the removal of mature non-native trees is not possible throughout most of the site as felling within such a steep sided gorge is dangerous, potentially damaging to ground flora and may give rise to unstable slopes. It is therefore recommended that, where possible, non-native trees are ring-barked – this will also help provide standing deadwood habitat for invertebrate fauna.

   All felled tree materials and other dead wood should remain on site wherever possible to maintain microhabitats for dead wood fauna. Any regeneration, both seedlings and saplings, of non-native tree species should be removed. It must be noted that in areas where beech has been cut there is evidence of regrowth from

the stumps emphasising the need to grub up seedlings or kill the cut stumps. Therefore hand-pulling or grubbing up beech saplings and seedlings is recommended in preference to cutting. Comprehensive removal of seedlings, established saplings and pole stage non-native trees will entail ongoing commitment and effort. The development and expansion of native tree species should also be encouraged throughout the site.

Removing non-native shrub species is also important as they can shade out the native ground flora species associated with mixed ash woodland. Rhododendron in particular will out-compete native tree species and suppress native wildflowers through acidification of the soil. It may also be necessary to remove bracken from open glade habitats where it is encroaching – if left to spread unchecked it will result in a reduction in floristic diversity and a loss of vital invertebrate habitat. Future monitoring will assess the need for appropriate action.

During monitoring visits severe erosion in the vicinity of the confluence of the Auchenglen Burn and Fiddler Burn was noted. The state of this area will be assessed in the future to inform any management requirements.

The woodland should be safeguarded from tipping of materials such as garden rubbish. Such rubbish is unsightly and may also be a potential source of invasive non-native plant species.

2. **To maintain and conserve the rich beetle assemblage** by ensuring protection from damaging impacts and ensuring dead and decaying wood remains within the site to benefit invertebrates. Ring-barking of non-native trees, where possible, will provide a substantial source of standing deadwood for saproxylic (dead wood) beetles and a variety of other invertebrates.

Dead or decaying wood, either fallen or standing, should be left to decay naturally (except with regard to public health), thereby maintaining microhabitats. Where fallen timber must be moved from footpaths for safety and access reasons, the wood should not be moved far from its original position, where it should be placed in the shade to keep moist.

Much of the invertebrate interest within the woodland may be associated with the understorey shrubs, the ground flora and litter layer, so it is essential that a complex tree age structure is present, including areas where light can penetrate to the herb layer within open glades.

Maintenance of pioneer plant communities and wet areas within the site are vitally important for invertebrates, especially wetlands and areas of springs and seepages together with their associated natural erosion. Insensitive alteration of natural drainage patterns will interrupt the passage of freshwater seepages and small streams and therefore any footpath repairs or upgrades should ensure that ecologically friendly options are employed rather than trying to create a dry path. It may be preferable to bridge the springs or seepages rather than channel them into pipes or drains, but it may be that the provision of stepping-stones will help avoid any disruption of the hydrology.

A conflict of interest arises where certain invertebrate species are known to use living non-native trees such as beech and sycamore during their lifecycle. At present it is unknown whether the development of primarily native woodland will be detrimental to invertebrate diversity. Therefore the removal of non-native trees from the woodland is tempered by the value of mature trees for deadwood invertebrates. By concentrating management efforts on removing mature non-native trees from within the body of the woodland, those that remain living around the woodland boundary can provide invertebrate habitat.

Front page photograph: View of Fiddler Gill woodland, the woodland clearing habitat is represented here in early summer with a carpet of bluebells. Bracken is encroaching on these areas however raising the need for management.

Date last reviewed: 18 March 2010