

Site Improvement Plan

Avon Gorge Woodlands

Site Improvement Plans (SIPs) have been developed for each Natura 2000 site in England as part of the Improvement Programme for England's Natura 2000 sites (IPENS). Natura 2000 sites is the combined term for sites designated as Special Areas of Conservation (SAC) and Special Protected Areas (SPA). This work has been financially supported by LIFE, a financial instrument of the European Community.

The plan provides a high level overview of the issues (both current and predicted) affecting the condition of the Natura 2000 features on the site(s) and outlines the priority measures required to improve the condition of the features. It does not cover issues where remedial actions are already in place or ongoing management activities which are required for maintenance.

The SIP consists of three parts: a Summary table, which sets out the priority Issues and Measures; a detailed Actions table, which sets out who needs to do what, when and how much it is estimated to cost; and a set of tables containing contextual information and links.

Once this current programme ends, it is anticipated that Natural England and others, working with landowners and managers, will all play a role in delivering the priority measures to improve the condition of the features on these sites.

The SIPs are based on Natural England's current evidence and knowledge. The SIPs are not legal documents, they are live documents that will be updated to reflect changes in our evidence/knowledge and as actions get underway. The information in the SIPs will be used to update England's contribution to the UK's Prioritised Action Framework (PAF).

The SIPs are not formal consultation documents, but if you have any comments about the SIP or would like more information please email us at IPENSLIFEProject@naturalengland.org.uk, or contact Natural England's Responsible Officer for the site via our enquiry service 0300 060 3900, or enquiries@naturalengland.org.uk

This Site Improvement Plan covers the following Natura 2000 site(s)

UK0012734 Avon Gorge Woodlands SAC

Site description

The Avon Gorge Woodlands SAC is good example of *Tilio-Acerion* forests in south-west England. It is important because of the high concentration of Small-leaved lime *Tilia cordata* and the presence of rare whitebeams *Sorbus spp.*, including at least two which are unique to the Avon Gorge (*S. bristoliensis* and *S. wilmottiana*), and other Nationally Scarce plants, such as Angular Solomon's-seal *Polygonatum odoratum*.

The associated species-rich transitions to scrub and herb-rich calcareous open limestone grassland often found on cliff ledges support a high number of Nationally Rare and Scarce species, such as Bristol rock-cress *Arabis scabra*, round-headed leek ('Bristol onion') *Allium sphaerocephalon* and honewort *Trinia glauca*. Part of the Leigh Woods side of the SAC is considered to be important remnant wood pasture habitat which was managed as a wood pasture for many hundreds of years. This is shown by the presence of large numbers of veteran pollards, which are also highly likely to be important for saproxylic invertebrates.

Plan Summary

This table shows the prioritised issues for the site(s), the features they affect, the proposed measures to address the issues and the delivery bodies whose involvement is required to deliver the measures. The list of delivery bodies will include those who have agreed to the actions as well as those where discussions over their role in delivering the actions is on-going.

Priority & Issue	Pressure or Threat	Feature(s) affected	Measure	Delivery Bodies
1 Invasive species	Threat	H6210 Dry grasslands and scrublands on chalk or limestone (important orchid sites), H9180 Mixed woodland on base-rich soils associated with rocky slopes	Effectively control invasive species across the site to reduce impact. Key to ensuring its effectiveness will be a coordinated approach across the whole site	Bristol City Council, Forestry Commission, National Trust, Natural England, Network Rail, Downs Committee, Merchant Ventures, Clifton Suspension Bridge Trust, Trustees of the Wills Estate, Bristol Zoo
2 Undergrazing	Pressure/Threat	H6210 Dry grasslands and scrublands on chalk or limestone (important orchid sites)	Explore and implement further grazing reintroduction projects where appropriate	Bristol City Council, Forestry Commission, National Trust, Natural England, Network Rail, Downs Committee, Merchant Ventures, Clifton Suspension Bridge Trust, Trustees of the Wills Estate, Bristol Zoo

3 Public Access/Disturbance	Pressure/ Threat	H6210 Dry grasslands and scrublands on chalk or limestone (important orchid sites), H9180 Mixed woodland on base-rich soils associated with rocky slopes	Deal with public access through engagement, management and interpretation	Bristol City Council, Forestry Commission, National Trust, Natural England, Network Rail, National specialist, Downs Committee, Merchant Ventures, Clifton Suspension Bridge Trust, Trustees of the Wills Estate, Bristol Zoo
4 Disease	Threat	H9180 Mixed woodland on base-rich soils associated with rocky slopes	Regularly monitor diseases that affect trees, and take action as necessary	Bristol City Council, Forestry Commission, National Trust, Natural England, Network Rail, National specialist, Downs Committee, Merchant Ventures, Clifton Suspension Bridge Trust, Trustees of the Wills Estate, Bristol Zoo, University of Bristol
5 Changes in species distributions	Threat	H6210 Dry grasslands and scrublands on chalk or limestone (important orchid sites), H9180 Mixed woodland on base-rich soils associated with rocky slopes	Regularly monitor species distributions and take action as necessary	Bristol City Council, Forestry Commission, National Trust, Local partnership, University of Bristol, National specialists
6 Air Pollution: impact of atmospheric nitrogen deposition	Pressure	H6210 Dry grasslands and scrublands on chalk or limestone (important orchid sites), H9180 Mixed woodland on base-rich soils associated with rocky slopes	Control, reduce and ameliorate atmospheric nitrogen impacts	Not yet determined

Issues and Actions

This table outlines the prioritised issues that are currently impacting or threatening the condition of the features, and the outstanding actions required to address them. It also shows, where possible, the estimated cost of the action and the delivery bodies whose involvement will be required to implement the action. Lead delivery bodies will be responsible for coordinating the implementation of the action, but not necessarily funding it. Delivery partners will need to support the lead delivery body in implementing the action. In the process of developing the SIPs Natural England has approached the delivery bodies to seek agreement on the actions and their roles in delivering them, although in some cases these discussions have not yet been concluded. Other interested parties, including landowners and managers, will be involved as the detailed actions are agreed and delivered. Funding options are indicated as potential (but not necessarily agreed or secured) sources to fund the actions.

1 Invasive species

Non native species (including: certain *Cotoneaster spp.*; Holm Oak *Quercus ilex*; Viburnum tinus *Viburnum Laurustinus*; Buddleia; Everlasting Pea *Lathyrus latifolius*; Alexanders *Smyrniololus atrum*; Japanese knotweed *Fallopia japonica*; Himalayan balsam *Impatiens glandulifera*; Onion sp. *Alliums spp.*; Turkey oak *Quercus cerris*) and other species are present across the site. The Cotoneasters and other invasive species have a tendency to spread quickly and form dense mats which smother out areas of the SAC grassland and smaller rare species. Holm oak is evergreen, casting heavy shade and is growing more quickly than many native trees - it has the potential to affect plant species associated with *Tilio-Acerion* woodland habitats as well as shading out grassland. Effective methods of elimination and control are currently being undertaken in certain parts of the site but a coordinated approach is needed across the whole site (particularly on the North Somerset side within land owned by Networkrail, the Trustees of the Wills Estate and Suspension Bridge Trusts). On the Leigh Woods side of the Gorge (mainly in the Forestry Commission managed area) there are other problems with Rhododendron, Cherry laurel *Prunus laurocerasus* and various planted stands of Conifer Spp. And these will need to be considered as part of an invasive species plan. Native species of shrub and tree are also considered a major threat to the open limestone grassland habitats and there is a constant need for control across the site. Additional consideration needs to be given to the issue of deer and grey squirrel damage which is a potential issue affecting regeneration of the Leigh Woods side of the Gorge.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
1A	Development of an Avon Gorge-wide 'Invasive species and priority habitats management plan'. Development of this plan could be coordinated by a new Project Officer role who could potentially become part of an expanded Avon Gorge and Downs Wildlife Project looking at the management of issues affecting the whole Gorge.	£10,000- £30,000	2015-17	Invasive Control Plan: Invasive Species Control Programme	Heritage Lottery Fund (HLF), HLS/NELMS, Non-native species project, Other stakeholder(s) contributions, Other large scale funding bid	Local partnership	Bristol City Council, Forestry Commission, National Trust, Natural England, Network Rail, Downs Committee, Merchant Ventures, Clifton Suspension Bridge Trust, Trustees of the Wills Estate, Bristol Zoo

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
1B	Delivery of the Avon Gorge-wide 'Invasive species and priority habitats management plan'. Designed, funded and delivered by all key landowners and stakeholders. With increased and additional organisational funding and with external 'other' funding to ensure the delivery can be achieved and sustained long term.	£100,000-£500,000 over 10 years	2017 onwards	Invasive Control Plan: Invasive Species Control Programme	HLS/NELMS, Non-native species project, Other stakeholder(s) contributions, Other large scale funding bid	Local partnership	Bristol City Council, Forestry Commission, National Trust, Natural England, Network Rail, Downs Committee, Merchant Ventures, Clifton Suspension Bridge Trust, Trustees of the Wills Estate, Bristol Zoo

2 Undergrazing

Grazing has been introduced into two parts of the site but the vast majority of it is ungrazed at present. The majority of the North Somerset side is ancient woodland and not in need of grazing. But the open quarries on the North Somerset side and further areas of the grassland on the Bristol side need to be looked at in terms of sustainable management options - grazing animals being one of them (although this will need very careful planning, consideration, funding and ongoing management). The lack of grazing on these open areas is resulting in loss of habitat, pressure from scrub / invasive species and the need for expensive mechanical management.

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
2A	Development of an Avon Gorge-wide 'Grazing management plan'. Development of this plan could be coordinated by a new Project Officer role who could potentially become part of an expanded Avon Gorge and Downs Wildlife Project looking at the management of issues affecting the whole Gorge.	£10,000-£30,000	2015-17	Habitat creation / restoration strategy: Habitat restoration	HLS/NELMS, Other stakeholder(s) contributions, Other large scale funding bid	Local partnership	Bristol City Council, Forestry Commission, National Trust, Natural England, Network Rail, Downs Committee, Merchant Ventures, Clifton Suspension Bridge Trust, Trustees of the Wills Estate, Bristol Zoo

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
2B	Delivery of the Avon Gorge-wide 'Grazing management plan'. Designed, funded and delivered by all key landowners and stakeholders. With increased and additional organisational funding and external 'other' funding to ensure the delivery can be achieved and sustained long term.	£200,000- £600,000	2017 onwards	Habitat creation / restoration strategy: Habitat restoration	HLS/NELMS, Other stakeholder(s) contributions, Other large scale funding bid	Local partnership	Bristol City Council, Forestry Commission, National Trust, Natural England, Network Rail, Downs Committee, Merchant Ventures, Clifton Suspension Bridge Trust, Trustees of the Wills Estate, Bristol Zoo

3 Public Access/Disturbance

The site suffers major pressures from public access. Most legal access isn't a problem and the main issues result from inappropriate and often illegal access, an example of which is the use of the steep side of the Gorge on the North Somerset side for downhill mountain biking. Other negative aspects of access ranges from overall visitor pressure to vandalism. Future close monitoring and security work is needed involving various parties, to ensure the site remains protected. 'Legal' or permitted access still needs close monitoring and engagement to ensure that no damage to sensitive SAC habitats occurs. There is increasing pressure to encourage more people onto the site to appreciate it. This could quite conceivably increase over the coming years due to increased interest and a desire to engage further. There are many opportunities to improve safe multi-user access to certain areas of both sides of the Gorge, and also further possibilities to link both sides together by promoted routes. The understanding of the National and European significance of the site through engagement, promotion and interpretation is key to its sustainable use. Clearly the SAC features should be at the forefront of all future public engagement and access decisions. Nitrogen deposition from dog fouling could lead to further specific local impacts.

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
3A	Development of an Avon Gorge wide 'Public access engagement, interpretation, improvement and management plan'. Development of this plan could be coordinated by a new Project Officer role who could potentially become part of an expanded Avon Gorge and Downs Wildlife Project looking at the management of issues affecting the whole Gorge.	£10,000- £30,000	2017	Advice: Access Strategy	Other stakeholder(s) contributions, Other large scale funding bid	Local partnership	Bristol City Council, Forestry Commission, National Trust, Natural England, Network Rail, National specialist, Downs Committee, Merchant Ventures, Clifton Suspension Bridge Trust, Trustees of the Wills Estate, Bristol Zoo

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
3B	Implementation of the Avon Gorge-wide 'Public access engagement, interpretation, improvement and management plan' is key to ensuring protection of SAC features on the North Somerset side and Bristol side of the Avon Gorge. Funded and delivered by all key landowners and stakeholders with 'other' external funding being an essential part of ensuring the delivery can be achieved and sustained long term.	£100,000- £500,000	2017 onwards	Partnership agreement	Other stakeholder(s) contributions, Other large scale funding bid	Local partnership	Bristol City Council, Forestry Commission, National Trust, Natural England, Network Rail, Downs Committee, Merchant Ventures, Clifton Suspension Bridge Trust, Trustees of the Wills Estate, Bristol Zoo, National specialists

4 Disease

Ash Dieback *Chalara fraxinea* has the potential to dramatically affect the overall structure of the Avon Gorge woodland. Ash is not a feature of the SAC woodland but a major component of the high forest structure. The relatively recent death of several of the mature (and young) rare whitebeam trees on both the North Somerset and Bristol side of the Gorge is of significant concern and needs further investigation.

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
4A	Development of an Avon Gorge-wide 'Plant disease identification and management plan'. Development of this plan could be coordinated by a new Project Officer role who could potentially become part of an expanded Avon Gorge and Downs Wildlife Project looking at the management of issues affecting the whole Gorge.	£5,000- £10,000	2014-16	Investigation / Research / Monitoring	Staff time, Other stakeholder(s) contributions	Natural England/ Forestry Commission	Bristol City Council, Forestry Commission, National Trust, Natural England, Network Rail, National specialist, Downs Committee, Merchant Ventures, Clifton Suspension Bridge Trust, Trustees of the Wills Estate, Bristol Zoo, University of Bristol

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
4B	Implementation of the Avon Gorge-wide 'Plant disease identification and management plan'.	£5,000- £25,000	2016 onwards	Investigation / Research / Monitoring	Staff time, Other stakeholder(s) contributions	Natural England/ Forestry Commission	Bristol City Council, Forestry Commission, National Trust, Natural England, Network Rail, National specialist, Downs Committee, Merchant Ventures, Clifton Suspension Bridge Trust, Trustees of the Wills Estate, Bristol Zoo, University of Bristol

5 Changes in species distributions

Over the years there have been local changes in species populations and distributions (including some significant fluctuations in population sizes). The 2010 Condition Assessment identified several specific plant species where populations had reduced to worrying levels. Although this is likely to be caused mainly by scrub and invasive species and the other issues highlighted in this document (disturbance from public access, development, disease & pollution), the changes could also be attributed to climate change. It is not clear whether national changes in species distribution driven by climate change will affect Avon Gorge but the assumption is that this could be highly likely. Some work has been initiated with the Bristol Botanical garden to look into a species recovery programme for some of the plants affected and this needs further investigation. A programme of whitebeam spp. monitoring and future management should be developed in partnership with Bristol University and national experts.

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
5A	Development of an Avon Gorge-wide 'Species distribution and monitoring management plan / strategy'. Development of this plan could be coordinated by a new Project Officer role who could potentially become part of an expanded Avon Gorge and Downs Wildlife Project looking at the management of issues affecting the whole Gorge.	£3,000- £10,000	2014-16	Investigation / Research / Monitoring	Staff time, Other stakeholder(s) contributions	Natural England/ Forestry Commission	Bristol City Council, Forestry Commission, National Trust, Natural England, Network Rail, Downs Committee, Merchant Ventures, Clifton Suspension Bridge Trust, Trustees of the Wills Estate, Bristol Zoo, University of Bristol, National specialists

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
5B	Implementation of an Avon Gorge-wide 'Species distribution and monitoring management plan / strategy'.	£10,000- £30,000	2016 onwards	Investigation / Research / Monitoring	Other stakeholder(s) contributions, Other large scale funding bid	Natural England/ Forestry Commission	Bristol City Council, Forestry Commission, National Trust, Natural England, Network Rail, Downs Committee, Merchant Ventures, Clifton Suspension Bridge Trust, Trustees of the Wills Estate, Bristol Zoo, University of Bristol, National specialists

6 Air Pollution: impact of atmospheric nitrogen deposition

Nitrogen deposition exceeds site-relevant critical loads. The site is situated on the edge of a city and there are major roads and other transport routes currently running directly through and adjacent to it. The effect of these, general urban pollution and the amount of atmospheric nitrogen deposition has not been fully studied but it is likely to be a potential issue for the SAC features currently and in the long term. Pollution influences from Avonmouth and Severnside should also be considered due to the relatively close proximity to the site.

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
6A	Control, reduce and ameliorate atmospheric nitrogen impacts. Develop a long term monitoring strategy for the effects of nitrogen deposition on rare plants and SAC habitats directly linking to changes in species distribution.	Not yet determined	2014-20	Site Nitrogen Action Plan	Not yet determined	Not yet determined	Not yet determined

Site details

The tables in this section contain site-relevant contextual information and links

Qualifying features

#UK Special responsibility

Avon Gorge Woodlands SAC	H6210# Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>)
	H9180# <i>Tilio-Acerion</i> forests of slopes, screes and ravines

Site location and links

Avon Gorge Woodlands SAC

Area (ha) **152.35** Grid reference **ST560741** [Map link](#)

Local Authorities City of Bristol; North Somerset

Site Conservation Objectives [European Site Conservation Objectives for Avon Gorge Woodlands SAC](#)

European Marine Site conservation advice [n/a](#)

Regulation 33/35 Package [n/a](#)

Marine Management Organisation site plan [n/a](#)

Water Framework Directive (WFD)

The Water Framework Directive (WFD) provides the main framework for managing the water environment throughout Europe. Under the WFD a management plan must be developed for each river basin district. The River Basin Management Plans (RBMP) include a summary of the measures needed for water dependent Natura 2000 sites to meet their conservation objectives. For the second round of RBMPs, SIPs are being used to capture the priorities and new measures required for water dependent habitats on Natura 2000 sites. SIP actions for non-water dependent sites/habitats do not form part of the RBMPs and associated consultation.

Avon Gorge Woodlands SAC

River basin

[Severn RBMP](#)

WFD Management catchment

Bristol Avon & North Somerset Streams

WFD Waterbody ID (Cycle 2 draft)

n/a

Overlapping or adjacent protected sites

Site(s) of Special Scientific Interest (SSSI)	
Avon Gorge Woodlands SAC	Avon Gorge SSSI

National Nature Reserve (NNR)	
Avon Gorge Woodlands SAC	Leigh Woods NNR

Ramsar	
Avon Gorge Woodlands SAC	n/a

Special Areas of Conservation (SAC) and Special Protection Areas (SPA)	
Avon Gorge Woodlands SAC	n/a

<i>Version</i>	<i>Date</i>	<i>Comment</i>
1.0	06/01/2015	

www.naturalengland.org.uk/ipens2000

