



User Guide to the Woodland Benefits Tool

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Introduction

Woodland provides a wide array of benefits for the environment and for communities. Our woodlands provide an important home for Britain’s valuable wildlife, improve the quality of our water, slow the rainfall that might otherwise cause flooding, generate raw materials, provide jobs and opportunities for skills development, and are important community assets – places to exercise, learn, and simply enjoy the natural environment.

The Woodland Benefits Tool has been designed to support investors in new woodland with reporting the many social, environmental, and economic benefits that their investment has helped to secure. Through the use of the tool and its reporting output, investors in woodland creation will be able to better understand and communicate the value of their investments to both internal and external stakeholders.

It is anticipated that the key user groups for the tool will include the businesses, site developers, brokers and other stakeholders engaged in the Forestry Commission’s **Woodland Carbon Code**, although it is likely to prove a useful resource for any party with an interest in reporting the benefits of woodland creation.

The Woodland Carbon Code is the voluntary standard for UK woodland creation projects where claims are made about the carbon dioxide they sequester.

The Woodland Benefits Tool is intended for use during the first months of a woodland creation project and can be completed at any point from initial project conception – during which it might support thinking¹ on how a new woodland could be situated and designed to deliver particular social, environmental, and economic benefits – through to final planting and establishment of the new woodland.

This guidance document has been put together to support users of the Woodland Benefits Tool and includes the following sections:

Using the tool	A guide to navigating through the Woodland Benefits Tool
Woodland and biodiversity Woodland and water Woodland and community Woodland and economy	Detailed information on the questions included in the Woodland Benefits Tool
Reporting of results	A guide to the Woodland Benefits Assessment produced by the Tool

¹ It is important to note that this document does not feature official Government guidance. The UK Forestry Standard (UKFS) is the reference standard for sustainable forest management in

the UK. The UKFS has been endorsed by the UK and country governments and applies to all UK forests and woodlands.

Using the tool

The Woodland Benefits Tool ('the Tool') is an easy-to-use Excel-based framework that provides the user with the opportunity to answer a series of questions focused on the potential social, environmental, and economic benefits associated with a woodland creation project. This section provides a guide to navigating the Tool and is followed in subsequent chapters by more detailed guidance on how to answer the questions set out in the Tool and to report the final results of the assessment.

Opening the tool

1. Download and save the Excel file to an appropriate location.
2. Double click to open the file. The user will then be prompted to enable content by a warning towards the top of the screen.
3. Click the [Enable content] button. This will activate the hidden functions that underpin the Tool. The Tool is now ready to use.

Worksheet One: Woodland Benefits Tool

The Tool will open in the first Excel worksheet, which is titled 'Woodland Benefits Tool'. This worksheet sets out all of the questions included in the Tool. These questions are broken down into four separate categories:

Woodland and biodiversity

Woodland and water

Woodland and community

Woodland and economy

The questions associated with each category can be revealed or hidden using the [+/-] buttons at the top of the spreadsheet, so allowing easy navigation between questions.

Each of the four categories is broken down into four goals – for example the goal '*Create a native woodland with the aim of delivering benefits for biodiversity*' can be found in the 'Biodiversity' category. Each goal has two related questions. In the case of the above goal focused on the creation of native woodland, the two related questions are:

- I. Has the woodland area been planted mainly with native species or allowed to regenerate naturally?
- II. Has the new woodland been designed with the aim of creating or improving priority habitat?

In total there are twenty-four questions that can be answered using the drop down menus. These menus give the user the option of selecting either [Yes] or [No or N/a] as a response to each question. This simple set of responses has been chosen with the aim of making the Woodland Benefits Tool easily useable. The Tool's reporting tab allows users to expand on these responses.

It should be noted that many of the questions in the guide are process focused – i.e. focused on the steps that have been taken to try and deliver woodland that delivers social, environmental and economic benefits, rather than direct evidence of the delivery of these benefits. This is because many woodland benefits are difficult to capture during the establishment stage of woodland creation.

This guide provides suggestions on how to respond to the questions set out in the Tool in three separate sections which are focused on: [Biodiversity](#), [Water](#), [Community](#), and [Economy](#). The guidance also provides some potential actions that could be undertaken by a woodland owner.

Potential actions are listed for each of the questions included in the Tool in order to provide an indication of the types of action that could result in a question being answered positively. However, it is important to note that these suggestions will not be applicable to all woodland contexts and other actions can support positive answers.

There is no expectation that the user will be able to answer [Yes] to all of the questions included in the Tool given the **trade-offs** associated with woodland creation. The Tool is best viewed as a means to highlight the benefits from new woodland planting and achieving ‘top marks’ is not the aim.

Once all questions have been answered the user should scroll to the top of the spreadsheet and then click on the [Go] button in the [Calculate scores] cell.

Trade-offs are inherent in woodland creation. This reflects the fact that woodlands vary in their ability to provide certain benefits, either as a result of the woodland’s location, its physical characteristics (e.g. the underlying soil type), or the design of the woodland. For example, a woodland focused on delivering community activities may provide fewer benefits for wildlife compared with a more tranquil, less disturbed site.

Category	Badge	Woodland Type
Woodland and biodiversity		Four or five badges: Biodiversity haven
Woodland and water		Four or five badges: Freshwater friendly
Woodland and community		Four or five badges: Community asset
Woodland and economy		Four or five badges: Economic driver
Scoring system		
Over 10%		
Over 20%		
Over 40%		
Over 60%		
Over 80%		

Worksheet Two: Reporting

This worksheet automatically displays the scores generated by the Tool in a reporting output. It displays these scores in the form of a series of symbols, or 'badges'. The badges corresponding to each category are shown in the adjacent table.

Badges are allocated based on the number of questions answered [Yes]. A maximum of five badges can be obtained under each category. If a woodland is awarded four or five badges in a particular category, it is considered to be a particular 'type' of woodland. The names for these woodland types are shown in the table above. Woodlands that achieve three badges in all four categories are given the title **Multi-purpose**.

In addition to the woodland's score, this worksheet includes several text boxes for the user to input details about their woodland creation project. These boxes are:

- Name of project
- Description of project
- Supporting commentary (four boxes)
- Unique woodland features

These text boxes have a character limit which is indicated at the base of each box. These limits ensure that the Woodland Benefits Assessment can be exported as a PDF correctly.

To export the Woodland Benefits Assessment as a PDF click the [Go] button in the box titled [Export PDF]. This will generate a PDF version of the assessment which will automatically be saved in the same location as the Tool.

The file generated will be saved as 'Reporting.pdf' and will automatically open. To prevent an assessment being overwritten by the Tool in future, it is recommended that each PDF generated is given a unique name by the user – e.g. WoodlandReport1.pdf.

Further details on how to complete and use the Woodland Benefits Assessment are set out in the [final section](#) of this guide.

Limitations

Whilst the Woodland Benefits Tool and its accompanying guidance provides a means to assess the wider social, environmental, and economic benefits of woodland creation, it should be considered an initial step into exploring the types of benefit that can be generated and the means by which they can be measured.

There is a wealth of material online and a wide array of expert groups who can assist in getting the most from a new woodland project. Such resources should be consulted from the outset of woodland creation project and can also provide helpful information when using the Woodland Benefits Tool to evaluate and communicate the benefits of a new woodland.

It is important to note that this document does not feature official Government guidance. The UK Forestry Standard (UKFS) is the reference standard for sustainable forest management in the UK.

UKFS Guidelines are available for the following subject areas:

- Biodiversity
- Soil
- Water
- Landscape
- Historic environment
- Climate change
- People

Woodland and biodiversity

Britain's woodlands support a disproportionately high proportion of the country's **biodiversity**. Woodland planting creates habitats for a variety of plants and animals, including insects such as beetles and spiders that live on the forest floor, the birds and mammals that feed on these insects and plants, and the mosses, flowering plants, and lichens that will eventually come to inhabit woodland as it moves towards maturity.

During the planning of new woodland there is an opportunity to consider how it might be designed to provide an important home for wildlife. By planting suitable species, planning for diverse woodland features, and considering the role of the new woodland in the wider landscape, new woodlands can provide significant support to many kinds of British wildlife.

The questions included in this section of the Woodland Benefits Tool focus on the creation of wildlife friendly woodlands.

Biodiversity is the term given to the total diversity and variability of life on Earth and of the natural systems that we are all part of.

Goal #1: Create a native woodland with the aim of delivering benefits for biodiversity

Native woodlands are some of Britain's richest habitats for biodiversity, and support many of our most important species. The species of trees that make up native woodland have inhabited Britain since the last Ice Age. As a result of their presence over such long

timescales, other species of plants, animal, and fungi have evolved to depend upon these tree species.

Given the reliance of so many species on native woodland, newly planted woods that contain a large proportion of native tree species have the high potential to become havens for wildlife in the future. Generally speaking, broadleaved native woodland has a greater potential to support wildlife than coniferous woodland, although a compromise can be found through the creation of mixed woodland.

It should be noted, however, that coniferous woodlands can provide an important home to some species. An example of this is the threatened Red Squirrel, which thrives in large blocks of conifer woodland that feature a mixture of tree species.

The planting of native species found local to a woodland creation site is generally encouraged as these species are likely to be best adapted to the local climate and other conditions. When considering the suitability of species it is important to also take account likely changes in the climate – guidance on this is available in the UKFS.

Native woodland is composed of species native to Britain. Such woodlands can have a very high biodiversity value and support important species.

Woodlands can also be created through **natural regeneration**. This involves the repopulation of open ground by trees and other plants as a result of the spread of seeds from nearby areas of woodland. Ideal sites include field corners and field edges adjacent to old woods where there is heavy seed fall. Species which colonise a site will come to reflect those present in nearby woodland over time.

A naturally regenerated site will still require close management however, including site preparation, weed control, protection from herbivores such as deer, and the removal of invasive species.

Natural regeneration is the process by which woodlands are restocked by trees that develop from seeds that fall from nearby woodland and germinate naturally.

Question 1.1: Has the woodland area been planted mainly with native species or allowed to regenerate naturally?

Suggested actions

- Choose mix of native species of local and UK origin in the planting scheme or where appropriate use natural regeneration
- Engage with organisations that provide advice on appropriate mixes of native species
- Consider local strategies and priorities for biodiversity conservation when making design decisions

The creation of new native woodland also presents an opportunity to develop and support **priority habitats** that are of particular importance for UK biodiversity conservation, including the following woodland habitats:

- Lowland mixed deciduous
- Upland mixed ashwoods
- Native pine woodlands
- Upland oakwood

- Upland birchwoods
- Wet woodland

Priority habitats are threatened and declining habitats for which urgent conservation action is necessary.

There are also opportunities to create priority habitat within the open spaces found within woodland – for instance, through the inclusion of features such as ponds or meadows. It is also important to ensure that the creation of new woodland does not lead to the damage of wider priority habitats, either through direct loss of this habitat to woodland, or the spread of seed from the newly created woodland.

When considering opportunities to develop, link with, or protect priority habitats, useful sources of information include the biodiversity strategies of local authorities and engagement with third sector organisations, such as the Woodland and Wildlife Trusts.

Question 1.2: Has the new woodland been designed with the aim creating or improving priority habitat?

Suggested actions

- Seek advice on whether the woodland site would be suitable for the creation of one or more UK priority habitats
- Where appropriate, design a woodland that supports the creation and enhancement of priority habitats
- Ensure that exiting priority habitats on or near to the woodland site are identified and taken into account during design

Goal #2: Create a woodland with a structure that will deliver benefits for biodiversity

Woodland structure is an important influence on the suitability of habitat for different wildlife communities. The majority of species have very particular requirements in terms of woodland structure as this determines supplies of suitable food, level of protection from predators, the availability of nesting sites, and factors such as light levels, temperature, and humidity.

Generally speaking, the higher the level of diversity in a woodland's structure, the greater the level of biodiversity, as a larger variety of suitable areas – or niches – are available to species. For instance, the most important factor governing whether a woodland is a good habitat for butterflies is the presence of a diverse, uneven structure. This creates a variety of habitats necessary for their multiple life stages, including the food plants they rely on as larvae.

There is, however, no single answer to the question of what the ideal structure is for a particular woodland. Whilst a woodland that is diverse in structure can support a wide range of biodiversity, a woodland can also be structured to favour fewer targeted species – for instance, those that are threatened, such as the Red Squirrel.

Woodland structure is the term for three closely related woodland characteristics:

- Woodland mosaic – the variety of different habitats and stages of growth within the woodland
- Vertical structure – the different layers that make up the woodland canopy

- Age structure – the approximate age of the woodlands trees and the number of different age groups

The structure of a woodland can be influenced in a number of ways during the design and planting stage of woodland creation. In particular, woodland can be designed so as to include internal rides, glades and other **open spaces**. Such areas provide a valuable habitat for a wide range of wildlife, much of which differs from that found in denser woodland, such as sun-loving plants and insects.

The creation of open spaces can also increase the length of woodland edges, which have their own specialist plants, insects, birds and mammals. Much of the flora and fauna in a wood lives in the first ten metres from the woodland edge. Additional features that can be provided within woodlands include open water, wetlands, reed beds, hedgerows, areas of wildflower planting, and the creation of traditional hay meadows.

The ongoing management of a maturing woodland can also have a strong influence on its structure and so its suitability for wildlife. Activities that replicate the natural processes that would otherwise bring about diversity in a woodlands structure, such as canopy thinning, can also be included in woodland management plans.

Open spaces within a woodland can include:

- Glades – openings within woodland that can either be coppiced or left as grassland and scrub.
- Rides – trackways designed for access that can include a central track or pathway, grading into taller grassland, shrub, bramble and woodland edge.

Question 2.1: Has the woodland been designed to deliver a suitably diverse and wildlife-friendly structure?

Suggested actions

- Create a diverse woodland structure that will contribute to greater species richness
- Ensure that plans for future woodland management give consideration to the ongoing maintenance and development of a diverse woodland structure

Another way in which woodland structure can be influenced is the designation of certain parts of a woodland as areas of **minimum intervention**. Minimum intervention can, over time, generate a varied woodland structure through the actions of natural processes such as vegetation succession (i.e. changes in the make-up of plant communities over time), the effect of wind, pests, and disease, and the activities of herbivores such as hares.

By allowing natural processes to work in a mostly free and unpredictable manner, increases in biodiversity can be realised – particularly over the longer term. Areas suitable for minimum intervention can be immediately apparent, such as particularly hard to reach parts of a site where management would otherwise be difficult. In other cases, suitable areas may become more obvious as the woodland begins to mature.

Some management may still be necessary in areas of minimum intervention, such as for deer control, the removal of invasive species

and the management of risks associated with public access. Monitoring areas subject to minimum intervention can help to determine when such management will be required.

Minimum intervention areas are set aside as places where little to no active woodland management takes place and natural processes are allowed to determine woodland characteristics.

It should be noted that plans for the introduction of minimum intervention areas and other activities to deliver diverse woodland features should be tailored to the site in question. For instance, opportunities for diversifying a woodland’s structure may be more limited in the case of smaller woodlands.

In addition, minimum intervention may not always be suitable during the establishment stage. Action can be required to ensure the successful establishment of the woodland – such as pest control – whilst areas most suitable for minimum intervention may become clearer as the woodland develops over time.

Where opportunities for woodland diversity are limited within a site, the way in which it complements other woodlands in the wider landscape will often be more important.

Question 2.2: Has the potential for an area of minimum intervention been assessed?

Suggested actions

- Assess, and if possible, identify areas where there is the potential for minimum intervention

- If an area cannot be identified, plan for a future assessment to identify opportunities for minimum intervention, and consider how the woodland can contribute at the landscape scale
- Develop a monitoring schedule to assess the condition of any designated minimum intervention areas over time

Goal #3: Create a woodland that provides new ecological connections across the landscape

Woodland once covered most of the UK, but only a small fraction of those that previously existed remain today. Presently, many woodlands are small and isolated from one another within the landscape. Wildlife relies heavily on the **ecological connections** between woodlands as these allow species corridors through which to move. Free movement reduces the likelihood of local extinction and provides woodland species with greater scope for adapting to future change, including those brought about by a changing climate.

To help address the effects of habitat fragmentation, the location and design of new woodland should take into consideration the context of the wider landscape. The proximity of other areas of woodland is important, with woodlands that are close to each other or connected providing a higher degree of benefit for wildlife. Woodland type is a further consideration, with linkages between habitats of a similar kind being of greater value (e.g. broadleaved to broadleaved). Other forms of habitat, such as hedges, can also provide an important link between woodlands.

Consideration should also be given to the connectivity of open, non-wooded habitats that are to be created or maintained on the new woodland site (e.g. grassland or scrub). Care should also be taken to avoid fragmenting existing areas of important, non-woodland habitat through the creation of new woodland.

Ecological connections support the movement of species by providing linkages between habitats. Ecological connections can be improved through the:

- Expansion of existing areas of habitat
- Creation of corridors of habitat between areas
- Development of 'stepping stones' of smaller habitat parcels that are separate from, but close to, larger areas of habitat

Question 3.1: Will the new woodland link to an existing woodland, or otherwise connect valuable habitats?

Potential actions

- Map the location and characteristics of wooded and non-wooded habitats in the local area
- Explore existing local strategies and national strategies that set out preferred areas for woodland expansion
- Seek expert advice on how your woodland can be located and designed to deliver improved ecological connections
- Locate and design woodland in a manner that will deliver new or improved ecological connections

Providing or improving connections to particularly valuable areas of habitat can deliver important benefits for biodiversity. For example, creating woodland near or adjacent to certain forms of **priority habitat** can provide the species that live in them with more habitat and space to move across the landscape – although it is important to also recognise that woodland can be damaging to some forms of important habitat and to seek advice where required.

Ancient woodland is a good example of where improved ecological connections can support a very important habitat for wildlife, with many of the species that inhabit them only ever found in ancient woodland. The ancient woods that remain in Britain are often very small and exist as islands within a wider landscape of development or farmland. By expanding and connecting these woodlands through the creation of well-placed new woods, the future of these ancient woodland species is likely to be more secure.

Ancient woodland is a woodland that has existed continuously since 1600 or before in England, Wales and Northern Ireland, or since 1750 in Scotland.

Question 3.2: Is the new woodland in an area of particular significance for biodiversity conservation?

Suggested actions

- Map the location and characteristics of valuable wooded and non-wooded habitats in the local area
- Explore existing local strategies and national strategies that set out preferred areas for woodland expansion

- Seek expert advice on how your woodland can be located and designed to support existing valuable habitat

Woodland and water

Woodlands can have a great influence on freshwater resources that provide vital habitat for wildlife, supplies of clean freshwater for drinking, and places of aesthetic beauty that can also be used for recreation. The presence of wooded areas can also provide protection from natural hazards such as flooding or soil erosion – functions that are increasingly recognised as being vital as our climate changes and extreme weather events increase.

The location, design and management of a new woodland can all affect the extent to which it is able to deliver water-related benefits. The identification of aquatic and wetland habitats, the creation of new habitats, and their appropriate management can all lead to gains for freshwater biodiversity. The capacity of woodlands to deliver water quality and flood regulation benefits can be enhanced when decisions on woodland design and location are made in the context of a **catchment based approach**.

The questions included in this section the Woodland Benefits Tool look at opportunities to create a woodland that can deliver freshwater-related benefits.

A catchment based approach involves working collaboratively with stakeholders across a water catchment to ensure that water management initiatives are joined up and effective.

Goal #1: Create a woodland that protects and improves the site's aquatic or wetland habitats

Aquatic and wetland habitats can add greatly to the overall biodiversity of a woodland site. In some cases, the site proposed for a new woodland may already be home to aquatic and wetland habitats, which include:

- Ponds – standing water bodies less than 1ha in size that can support high value species, such as the Great Crested Newt
- Lakes – standing water bodies over 1ha in size that can provide varied habitats for fish populations, water birds, and a range of water plants
- Reed beds – wetlands dominated by stands of common reed, reed beds are amongst the most important habitats for breeding birds in the UK
- Ditches – artificial networks of channels that may be of particular environmental value if they regularly contain free flowing or standing water that support aquatic plants
- Fens – peatland found on flood plains or on the fringes of open water, they can provide a home to a wide range of wetland plant species and globally rare species

It is important that such habitats are identified at the outset of a woodland creation project and their quality assessed. Such information can then feed into the design of the woodland and its long term management plan. Actions may be required to directly improve onsite freshwater habitats, such as the removal of silt from a ditch to allow space for wildlife to thrive.

It is also important to ensure that habitats adjacent to freshwater bodies, such as those found in the **riparian zone**, are supportive of healthy aquatic and wetland environments. The levels of shading provided by vegetation can, for example, have a strong influence on the wellbeing of species found in freshwater habitats. Such shading is likely to become increasingly important for fish survival as climate change progresses, since some species are very sensitive to water temperature with respect to spawning and growth.

The riparian zone is the area of land that adjoins the channel of a river or stream, including the bank but not the wider floodplain.

Woodland canopies also provide a fall of twigs, leaves and insects that provide an important food source for aquatic species, whilst tree roots and underwater stumps can be refuges for fish and holts for otters. Natural accumulations of **large woody debris** in rivers and streams can also help to increase habitat diversity. Woodland management that takes into account all of these influences on the freshwater environment is likely to deliver gains for wildlife.

Large woody debris consists of the logs, sticks, branches, and other wood that fall into streams and rivers.

Question 1.1: Have existing aquatic or wetland habitats been identified and their management appropriately planned for?

Suggested actions

- Conduct a survey to ensure that any existing aquatic or wetland habitats have been identified on the new woodland site
- Seek expert advice on the quality of any identified aquatic or wetland habitats and how these might be improved
- Ensure that identified habitats are included in management plans and take action where biodiversity gains can be delivered

The establishment of a new woodland also presents opportunities to deliver new aquatic and wetland habitats capable of supporting a rich array of freshwater dependent wildlife. For instance, woodlands can often be a good place to create new ponds because of woodlands ability to absorb pollutants before they reach sensitive aquatic habitats. This function allows ponds to fill with clean water that provides a very high quality habitat for wildlife.

In some locations there also may be opportunities to create areas of **wet woodland**, one of the rarest woodland habitats in Britain. These wooded areas tend to have between 30-70% tree cover and include open floodplain areas and other dry and wet habitats such as scrub, reed beds and ponds. Wet woodland can be planted or allowed to regenerate, and should ideally be managed through **minimum intervention** in order to encourage natural processes.

Wet woodlands are frequently or seasonally wet either through the action of flooding (floodplain woodlands), or from springs and geological features which ‘hold’ water (e.g. clay soils).

Decisions on whether to create new aquatic and wetland habitats will be best supported by an ecological survey and engagement with expert groups, such as NGOs, as well as regulatory bodies, such as the Forestry Commission and the Environment Agency. It will be also important to think outside of the boundaries of the woodland when determining which habitats to create, in order to strengthen **ecological connections** across the landscape.

Question 1.2: Does the woodland design include new areas of aquatic or wetland habitat?

Suggested actions

- Explore how the woodland environment could be enhanced through the creation of new aquatic or wetland habitat
- Gather advice on how new aquatic or wetland habitats could be delivered as part of the new woodland
- Create new aquatic or wetland habitats within the woodland

Goal #2: Create a woodland that contributes towards improvements in water quality

Pollution reduces the quality of water and so leads to a variety of impacts, including additional treatment costs to render it fit for human consumption, damage to fisheries and wildlife, and negative effects on the value of waterways for recreational use, such as bathing. There are two types of pollution: point source and diffuse. Sources of **diffuse pollution** include agricultural pollutants transported in water runoff from farmed land, and run-off from roads, houses and commercial areas.

Diffuse pollution is the release of pollutants from a range of activities that individually may have no effect on water quality, but at the scale of a catchment can have a significant effect. Point source pollution in contrast originates from a single, discrete place – for example a pipe that drains into a watercourse.

As a result of their ability to intercept and break down pollutants, the targeted planting of woodland within **riparian buffer zones** can play an important role in delivering water quality improvements. The presence of natural systems such as woodlands provide complex networks of plant roots and soil bacteria that act as a water filter, actively absorbing nutrients, whilst also slowing the flow of water through the soil. This slowing action allows time for pollutants such as pesticides to biodegrade and become less harmful.

Riparian buffer zones are areas of land that provide a physical barrier capable of preventing the flow of pollutants into watercourses and which can absorb and break down pollutants.

The location of new woodland is an important consideration when seeking to deliver water quality improvements. This will require a **catchment based approach** that considers the specific vulnerabilities of watercourses and how they might be addressed. Specific parties that might be engaged with include:

- Water authorities – for details of the current quality of watercourses, objectives for water quality in the catchment, and specific areas where pollution reductions are being sought

- Local fishery bodies – for assistance in identifying key spawning places, spawning times, and areas where recreational angling is suffering as a result of pollution inputs
- Water companies – for details of areas used for public water supply and areas where water quality improvements are needed to protect supplies and reduce treatment costs
- Conservation agencies – for help identifying the location of designated sites and presence of priority species and habitats that are affected by water pollution
- Regulatory authorities – such as the Forestry Commission, who have identified opportunity areas for woodland creation that targets improvements in water quality
- Local landowners – who may be a source of diffuse pollution and have an understanding of the paths that pollutants take to reach into waterways and how these might be intercepted

By engaging with these stakeholders, woodlands can be positioned so as to protect areas of greatest risk from pollution, so delivering significant improvements in water quality.

Question 2.1: Is the new woodland located where it will help to deliver improvements in water quality?

Suggested actions

- Take a catchment based approach to identify areas where woodland creation is likely to lead to gains water quality
- Engage with regulatory authorities and other expert groups in order to establish the best location for a new woodland

- Deliver new woodland in an area that will lead to particular benefits in terms of water quality

In addition to careful location of new woodland, water quality can also be enhanced through good woodland design. One important consideration in this respect is the width of the wooded **riparian buffer zone**. These areas can help to buffer the potentially adverse effects of adjacent land management, such as sources of pesticide and nutrient pollutants. The UKFS sets out the minimum buffer widths that apply in different woodland contexts, along with further guidance on how to develop such buffer zones.

The species present in a buffer zone can also influence pollution absorption. For instance, buffer zones targeted at alleviating nutrient pollution might be best planted with fast growing species such as willow or poplar that stabilise soil and provide a filtering effect. Meanwhile, species that increase nitrogen in the soil, such as Alder, would be best avoided.

Overall, it is important to select a variety of species in a buffer zone, so as to provide resilience to pests and diseases. If there is existing riparian woodland nearby, this might provide an indication of the species that are appropriate. Advice on species selection should also be sought from the Forestry Commission or other parties, such as NGOs, if there is doubt about which species should be planted within the riparian buffer zone.

Question 2.2: Has the woodland been designed with a focus on delivering improvements in water quality?

Suggested actions

- Consider the water quality issues that the woodland is seeking to address and how woodland design will influence these
- Gather advice on how species selection and woodland size can affect water quality in order to inform the woodland's design
- Create a woodland that has been designed with a view to addressing water quality issues

Goal #3: Create a woodland that contributes to flood risk objectives

The **flood plains** of Britain's rivers are now often devoid of woodland as a result of past river engineering and the reclamation of land for urban and agricultural uses. However, the presence of standing trees, fallen logs, branches and leaf litter within a woodland can create a very dynamic and complex network of channels and dams, which help to slow down flood flows. Woodlands can also help to reduce flood levels through their water uptake and the absorption of water by woodland soils.

Given these effects, the restoration of floodplain woodlands can play an important role in reducing flood peaks, so decreasing the risks posed to individuals, homes, and businesses located downstream. Such benefits are likely to be greatest where woodlands are strategically planted on the basis of information on local flood risk issues, as well as existing opportunity maps that show where woodland creation could yield benefits.

Flood plains are areas of low-lying ground adjacent to a river, formed mainly of river sediments and subject to flooding.

When planting woodland in the floodplain, the gathering of such information is crucial due to the potentially negative effects that woodlands can have on flood defence. These include increased upstream flooding due to the backing-up of floodwaters and increased downstream flooding as a result of large woody debris blocking bridges and other structures.

It is important to take a **catchment based approach** when creating woodland with the goal of alleviating flood risk. This should include engagement with regulatory bodies such as local authorities, the Environment Agency, and the Forestry Commission in order to establish the relative risks and benefits associated with woodland creation in particular areas of a catchment. These organisations may have GIS maps available that show those areas of a catchment that would particularly benefit from woodland creation to reduce levels of flood risk.

Question 3.1: Is the new woodland located where it will contribute to reductions in flood risk?

Suggested actions

- Gain a detailed understanding of local flood risk issues by gathering evidence through a catchment based approach
- Engage with regulatory authorities and other expert groups in order to establish the best location for a new woodland
- Establish the new woodland in an area that has the potential to lead to reductions in flood risk

Forest design is a key factor in determining the ability of floodplain woodland to slow down flood flows. To form an effective barrier to flood waters and thereby reduce flood risk it is important that woodlands straddle most of the width of the floodplain. Relatively narrow strips of linear woodland can be bypassed by flood waters, so having a minimal effect on flood water management.

Other factors to consider include the shape, area, pattern and spacing of tree planting, the species chosen for planting, **woodland structure**, and methods of woodland establishment. Opportunities also exist for the restoration of wetlands and ponds to increase flood storage, and the construction of dams made up of **large woody debris** in order to slow flood flows.

Given the complexities associated with flood risk reduction, these design choices are likely to be best made in consultation with regulatory bodies such as the Forestry Commission and Environment Agency, as well as other expert groups, in order to ensure that the best possible design is chosen.

Question 3.2: Has the woodland been designed with a focus on delivering reductions in flood risk?

Suggested actions

- Gain a detailed understanding of local flood risk issues through a catchment based approach
- Engage with regulatory bodies and other expert groups to ensure the woodland's design will lead to reduced flood risk
- Create a woodland that has been designed with a view to addressing flood risk issues

Woodland and community

Woodlands provide a diverse range of benefits for people. These include opportunities for access to the natural environment and for recreation, places to volunteer and gain skills, improvements in health through active living and improved air quality, and enhancements to the character and aesthetic appeal of local landscapes and townscapes. These social benefits of woodlands are particularly valuable in the UK as a result of its high population density and growing demand for outdoor recreation.

In order to create a woodland that improves livelihoods it is important that its future function as a community asset is considered right from the outset. This can include identifying deficits in particular forms of outdoor space, developing new community facilities, promoting access to the new woodland, and exploring opportunities for collaborating with others in the local community.

The questions included in this section of the Woodland Benefits Tool focus on the creation of woodlands capable of delivering community benefits such as these.

Goal #1: Create a woodland that is accessible to the community and actively used

Access to woodland allows communities to enjoy the host of recreational, aesthetic, and health benefits that woodlands can provide. Such access can be particularly beneficial where **accessible natural green space** is in limited supply, such as in urban areas. It has been suggested that there is sufficient access to woodland when a person can find:

- One area of accessible woodland of no less than 2ha in size within 500m
- One area of accessible woodland of no less than 20ha in size within 4km

It should be noted that it may not be possible to meet such levels of access to woodland in urban areas, where land supply is limited. In such cases the creation of several smaller areas of woodland can deliver gains in woodland accessibility.

Accessible natural green spaces are natural areas that are of sufficient size and proximity to meet the needs of communities.

When choosing a location for new woodland it is also useful to consider how it might complement the trees, parks, green spaces, canals and rivers that make up an area's existing **green infrastructure** network, including links with the existing footpath network that provides people with access to these spaces.

By connecting with an existing green infrastructure network, or creating woodland in close proximity to it, people and wildlife will be able to move more easily across it, so enhancing its capacity to provide social benefits. Such benefits may be particularly significant where communities are otherwise disadvantaged – for instance in terms of health or employment levels.

Green infrastructure is a network of multi-functional green and blue spaces that is capable of delivering a wide range of environmental and quality of life benefits for local communities.

Engagement with local community groups and representatives, regulatory authorities, and expert groups may help in identifying areas where new woodland is most needed to address gaps in provision and to complement existing green infrastructure.

Question 1.1: Is the woodland located in an area deficient in accessible natural green space?

Potential actions

- Map the location and characteristics of wooded and non-wooded green space in the local area to identify areas of need
- Hold discussions with community groups and community representatives in order to identify areas of greatest need
- Engage with regulatory authorities and other expert groups and draw upon their knowledge of local requirements
- Create a new woodland in a location where access to natural green space has previously been limited

Woodlands that are created close to where people live and work provide opportunities for access that may not have previously existed, and so can allow groups of people who may not have traditionally made use of woodlands to do so. Such access to woodland can be particularly beneficial for people from urban areas, disadvantaged social backgrounds, and those with disabilities or other **protected characteristics**.

Protected characteristics are: age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, and sexual orientation.

There is also growing evidence of health benefits associated with access to woodlands, including improvements in levels of physical activity, promotion of improved mental health, increased life expectancy and reduced health inequality. Encouraging people with health issues to use a woodland for recreation or volunteering can therefore be very beneficial to health. Outside activity can now even be prescribed in the UK, with woodlands providing a valuable location for such activities.

Volunteering, community work and initiatives with an environmental and conservation focus can also benefit woodland management as well as the individuals and communities involved. Buy-in from local communities as a result of engagement can also lead to reductions in vandalism and anti-social behaviour that might otherwise affect a newly created woodland.

Given the social benefits that can be realised through promoting the use of a woodland, it is worthwhile examining potential partnerships from the outset of the woodland creation process, and to involve diverse groups from local communities wherever possible. This could, for example, include developing partnerships with charities for educational activities, or working with health authorities to create volunteer programmes targeted at improving health and wellbeing.

Other outreach activities could include the promotion of the woodland via social media and the internet, newsletters and local newspapers, meetings with community groups and community representatives, and activities such as guided walks.

Question 1.2: Is the use of the woodland to be promoted to a range of groups across the community?

Potential actions

- Engage with community groups and community representatives to identify potential users and means of reaching them
- Look for expert advice on how best to communicate with hard to reach groups of potential woodland users
- Draw up and deliver a strategy on promoting the use of the woodland to different social groups

Goal #2: Create a woodland that is designed to help to meet the needs of the community

Woodlands can provide wide-ranging opportunities for community activities such as walking, cycling, picnicking, orienteering, camping, and arts and heritage events. In order to support such activities a woodland needs to provide the necessary facilities. The process of identifying the facilities required by a community should begin early, so as to develop woodland that meets as many of the needs of its users as possible.

Woodland facilities can range in scale, from the provision of information boards that welcome and inform visitors and paths for access, through to car parking, onsite shops, and the provision of recreational facilities such as mountain bike trails. Some woodland's will be suited to large organised events, others will be more peaceful

and reflective places, and, in some cases woods, can be zoned to create space for otherwise conflicting activities.

Choosing facilities to provide will depend on community demand, the costs of provision and ongoing maintenance, site suitability, and trade-offs with other objectives, such as wildlife conservation. To design a woodland that supports an appropriate range of community uses the following steps could be taken:

1. Explore the demand for particular woodland activities through engagement with the local community
2. Consider the types of facilities that might be required to support the activities identified
3. Consider the relative merits of these facilities in relation to site-specific and budget-related opportunities and constraints
4. Prepare a **design concept** that pulls this information together and incorporates the most suitable community facilities

The design concept sets out the underlying logic, thinking, and reasoning that will form the basis for a design.

By taking into account the needs of the community in this way, and then designing a woodland with the facilities required to help meet them, the capability of a new woodland to deliver a wide range of social benefits will be greatly enhanced.

Question 1.2: Has the woodland been designed in a way that supports community activities?

Potential actions

- Engage with community groups and representatives in order to assess demand for activities and associated facilities
- Consider the relative costs and benefits of different facilities relative to the needs of the local community
- Design and deliver a woodland that delivers facilities that help to meet the needs of the local community

Co-designing facilities with local communities can help to ensure that they are well suited to the needs of local people and are respected by woodland users. Local people also have expertise and knowledge that can be of great value when exploring opportunities to deliver a design that realises multiple social, environmental, and economic benefits, including the inputs of naturalists, historians, and other interest groups.

These benefits can be realised through a process of **community led design** that gives community representatives a leading role in the development of the plan for a new woodland. This process can involve community stakeholders and the woodland project team working together to:

- Develop a collective vision for change
- Establish a **design concept** informed by local knowledge
- Make decisions throughout the evolution of the design process
- Sign-off on key elements of the design

Community led design is an approach that puts local people at the heart of design and decision making processes

As it is unlikely to be practical to involve all stakeholders in the woodland design process it will be important to identify those individuals and organisations with the greatest potential to contribute. Such stakeholders can be identified through brain storming a list of potential contributors, open meetings to encourage volunteers to come forward, and by asking selected stakeholders to help identify others who might be involved.

Question 2.2: Have communities been involved in the design of the new woodland?

Potential actions

- Identify those community groups and representatives who are best placed to positively influence the design of the woodland
- Create opportunities for local community groups and representatives to provide direct input into the design process

Goal #3: Create a woodland that protects health and enhances the character of the local area

In addition to providing a space for active living, woodlands can also play a more direct role in the protecting health. A particularly important function in this respect is their capacity to intercept and absorb **air pollution**. Several air pollutants have known or suspected harmful effects on human health, and such pollution remains a

serious health concern in many areas of the UK, and especially in its towns and cities.

Air pollution refers to chemicals and particulates (dust) carried in the air. In terms of direct impacts on health, the most important pollutants are particulate matter, sulphur dioxide and ozone.

The planting of woodland in areas of high pollution is likely to deliver the greatest positive effects on health. Air pollution hotspots might include congested roads and traffic junctions, and areas subject to industrial pollution, such as waste transfer sites. Care is needed however as woodland can also prevent the escape of pollutants and so lead to increased concentrations in some circumstances. The advice of regulatory authorities and other expert groups is likely to be useful when determining an appropriate area for planting.

Species choice also choice has a considerable influence on the ability of woodland to reduce levels of air pollution. The advice of expert groups can help in selecting a suitable mix of species as there can be a need to balance the capacity of a tree to remove pollution with its ability to survive in a polluted environment. However, it should be noted that the large scale planting of almost all tree species will have a positive effect on air quality.

Woodlands can also directly influence human health by regulating the temperature of urban environments, which can be subject to the **urban heat island** effect. Higher temperatures in urban areas lead to premature deaths as a result of heat-related stress and can lead to more general impacts on wellbeing. These impacts are more pronounced during exceptionally hot periods and are likely to increase in the UK as a result of climate change.

Urban heat islands are city or metropolitan areas that are significantly warmer than surrounding rural areas as a result of a high density of human activities and a lack of cooling vegetation.

Trees that are placed in areas that are vulnerable to high temperatures or are home to more vulnerable groups such as the elderly, are likely to deliver benefits to health as a result of the cooling that is provided through evaporation from leaf surfaces and the reflection of solar radiation as well as the provision of shade beneath the canopies they provide. In order to choose the most appropriate woodland location in this regard, it will be useful to engage with regulatory authorities and expert groups with an understanding of urban design.

Question 3.1: Will the new woodland help to regulate air quality or temperature?

Potential actions

- Seek expert advice on the location and design of woodlands targeting improvements in air quality or temperature regulation
- Locate the woodland in an area that is a 'hot spot' for air pollution or high temperatures or contains vulnerable groups
- Deliver a woodland that is designed to lead to improvements in air quality or temperature regulation

Woodlands can have significant aesthetic value to people, and can work to enhance the character of the wider landscape or townscape and contribute towards a **sense of place**. They can often be the dominant element in the landscape, as their structure encloses space and frames views, whilst also providing colour, texture and scale that changes with the seasons and over the course time as the woodland matures.

Sense of place refers to the identity of a place that is established through its natural and cultural features. Places with a strong 'sense of place' have a clear identity and character.

In urban areas, even the presence of smaller areas of woodland can alter the visual appearance and 'feel' of an area and property values can be linked to the number of trees in a particular locality. Meanwhile, in more rural areas, woodlands can interplay with other blocks of habitat to create a rich and visually appealing tapestry that is appealing to both local communities and visitors.

Given the value that people place on the landscapes and townscapes that make up the backdrop to their lives, it is important to consider their views during the planning of a new woodland. For instance, valuable information could be gathered by asking people what they currently value the most about the landscape, and how they feel the local landscape could be improved.

Research shows that there are associations between particular woodland characteristics and perceptions of landscape value.

For example:

- Openness tends to be valued more than dense and closed off areas of woodland
- Diversity – for example, a mixture of species and settings – is preferred over more uniform designs
- Organic rather than geometric shapes – for instance, avoiding square blocks of woodland
- Still or flowing water which can enhance the attractiveness of a wooded landscape

These findings may provide a useful starting point when thinking about how to design a new woodland that is aesthetically appealing to people. However, it is important to remember that these are general findings and that the most important source of information will be views of local stakeholders.

The way in which woodland changes over time is an important consideration when planning how a new woodland will complement and enhance the existing landscape or townscape. The values people ascribe to a woodland are likely to change overtime, as the woodland matures and its structures change. At the same time, the character of the wider landscape may also shift due to natural and human pressures. By considering these aspects early on, it may be possible to adapt the design of a woodland to future circumstances.

In some areas of the country, **Landscape or Townscape Character Assessments** may have been completed. These studies can help in identifying where changes in woodland cover could contribute the most to enhancing the visual environment.

Landscape / Townscape Character Assessment are standard methodologies for identifying, describing, classifying and mapping what is distinctive about our landscapes or townscapes.

Question 3.2: Will the new woodland complement and enhance the existing landscape or townscape?

Potential actions

- Explore how the local community perceives the local landscape and feed these considerations into the woodland design
- Consider the broad-scale landscape/townscape character and other factors affecting the context of the new woodland
- Exploring future influences on the landscape / townscape and taking into account how the woodland will mature over time

Woodland and economy

Woodlands have an important role to play in supporting local and regional economies, and ultimately the national economy. The harvesting of timber and woodfuel can help to support various enterprises, such as furniture manufacturers and firewood merchants. Other woodland enterprises include country sports, such as hunting, shooting and deer stalking, and activities such as mountain biking. Woodlands can also provide opportunities for volunteering and a location for learning and the development of skills, which can support employability and economic development.

The way in which a woodland is designed and managed has a significant influence on the types of goods and services it is capable of generating. Understanding levels of local demand for particular goods and services, and then making connections with local enterprises that can capitalise on this demand, is key to making the most of the economic opportunities a new woodland presents.

The questions included in this section of the Woodland Benefits Tool capture the multiple economic benefits that can be realised through the careful planning and promotion of new woodland.

Goal #1: Create a productive woodland that provides goods and materials to the economy

Wood that is grown in Britain has the potential to provide low carbon material for use in construction and manufactured goods, and can help to reduce the UK's current dependency on timber imports. In recent years, the public has become increasingly aware of the

provenance of materials and, for many people, where a product comes is a factor in their buying decisions.

In order to support future timber production, new woodland can be designed to include species capable of producing good quality hardwood or softwood. A key choice is the split between:

- Fast-growing coniferous species that generally reach maturity in 30 to 60 years and tend to produce lower value softwood.
- Broadleaved species that generally reach maturity in 80 to 100 years and tend to produce higher value hardwood.

If producing timber is a main aim then concentrating on a small number of productive species may increase commercial viability. For example, managers could plant three principal timber species (covering approximately 70% of the site), two to three medium height species to provide balance and colour, plus three or four species of woody shrub to provide low cover.

Other elements of woodland design that can influence the quality of timber include the spacing and positioning of trees on the site. To grow high quality timber, planting at greater density is generally favoured. It is also important to consider how productive areas of a woodland can be accessed in the future – for instance via access roads and rides – and how such areas might be zoned off from other woodland activities if required.

Woodland size is also an important factor, as small woodlands are generally not large enough to provide an economically viable timber crop – although incidental timber harvesting may still occur, for instance through thinning activities, or as a result of windthrow.

Given the number of design factors associated with growing timber, either for softwoods on a commercial scale or for a high quality hardwood crop, it is advisable to seek advice from a specialist forestry consultant in order to ensure that the site's design is appropriate to site conditions and management aims.

As the woodland matures, it may also be appropriate to manage it in line with the principles of a recognised **forest certification** scheme that balances timber production objectives against wider environmental and social concerns. Auditable certification standards can reward responsible forest management by providing the timber produced with a recognisable label, so increasing its value to those seeking to make responsible purchases.

Forest certification is a mechanism for monitoring, tracing and labelling timber and non-timber forest products, where the quality of forest management is judged against a series of agreed standards.

Question 1.1: Has the woodland been designed with timber production as an aim?

Potential actions

- Consider how design factors such as species selection will affect the future commercial viability of the woodland
- Where commercial productivity is a core aim of the woodland, consider enlisting the help of a specialist forestry contractor

- Look to put in place a management plan that meets the principles of a recognised forest certification scheme

In addition to timber, woodlands are also capable of producing woodfuel and a diverse range of **non-timber forest products**. There is currently a burgeoning market for woodfuel and wood-burning stoves, driven by increasing gas and electricity prices and growing interest in reducing carbon footprints. In addition, whilst the majority of non-timber forest products produce limited income, economic opportunities do exist – particularly in terms of game shooting and other forms of outdoor sport and recreation.

Non-timber forest products are products or services other than timber produced in forests. These include edible and medicinal plants, mushrooms, and wild and managed game.

Increasing demand for woodfuel from homes and businesses represents an important opportunity for woodland income generation. The UK's woodfuel resource is very unevenly distributed at present and will not necessarily match future demand. As such, the creation of new woodland can help to fill gaps in supply where demand is high.

Woodlands managed for the production of woodfuel can also support biodiversity and woodland health by opening up the woodland floor to the sunlight and preventing the woodland from becoming overgrown and 'over-mature'. One such management technique is **coppicing**.

Coppiced wood is periodically cut and the trees allowed to regrow from the cut stumps. This creates a self-renewing source of wood poles which can be used for many purposes.

Areas of woodland set aside for coppicing tend to be harvested on a rotation of up to 30 years and can produce a range of goods, including woodfuel and poles. All broadleaved species of tree coppice, but some are especially responsive, including ash, hazel, oak, sweet chestnut and lime. Selecting such species may help to boost productivity. It should be noted that the majority of conifers species do not respond to coppicing.

Woodfuel can be processed to meet the needs of various end users, whose requirements can range from logs for domestic stoves through to wood pellets for automated boiler systems. It is important to consider the needs of such end users when producing woodfuel. To help ensure user needs are met, **certification schemes** have been developed setting out how woodfuel of a consistent quality can be produced. These may be worth investigating.

Woodlands are also critical to the success of many game shoots, which can provide a significant source of income. Hunting can also help to control deer, high populations of which can negatively impact woodland, agricultural crops, and other forms of habitat. Newly planted woodland can be of high value for game shooting when appropriately designed and managed. For instance, mixed conifer and broadleaved woodlands that contain a significant proportion of woody shrubs are considered to be ideal for game.

Specialist advice should ideally be sought when designing a new woodland with a focus on delivering habitat suitable for game

shooting. Advisors should also be able to help ensure that the establishment of game cover is sensitive to other woodland objectives, such as enhancing the woodland's biodiversity value.

Other woodland-based sports and recreational opportunities include mountain bike tracks and hire, horse riding, paintballing, fishing, and woodland cabins and campsites. The income opportunities associated with such activities are likely to be much higher once a new woodland begins to mature. However, thinking about such end uses early on can help ensure the new woodland and accompanying infrastructure support future activities and facilities.

Question 1.2: Is the new woodland expected to produce woodfuel or other non-timber products?

Potential actions

- Plant trees that are suitable for coppicing and manage them to produce woodfuel and other products
- Explore the opportunities to establish a woodland that can be used for game shooting or other forms of outdoor recreation
- Consider how economic uses of the woodland can be enabled through woodland design, such as by providing suitable access

Goal #2: Create woodland that supports local enterprises and economic development

For a woodland to support the local economy it is necessary for it to produce goods and services for which there is a demand and for woodland managers to make these known and accessible to those who can make use of them. By building relationships with users of woodland products and services from an early stage, a woodland can be designed and managed to support local enterprises whilst also helping to secure future income.

Market research can help to identify potential users of wood products and services, whilst advice is also available from woodland associations and regulatory authorities, such as the Forestry Commission. Talking to users about their requirements can, for instance, help identify appropriate species for planting or highlight the need for particular woodland features or infrastructure – such as access roads for timber extraction or glades for camping.

Market research is the process of assessing the viability of a new good or service through research conducted directly with the potential consumer of these goods or services.

Potential users of wood products and services include, amongst many others:

- Craftworkers requiring specific types of wood for the creation of bespoke products
- Sawmills and timber merchants requiring all grades of broadleaved and softwood saw logs

- Charcoal producers looking to source local and sustainably produced supplies of wood
- Firewood merchants who may wish to set up their machinery in woodlands to process wood ready for delivery
- Orienteering or mountain biking clubs who may wish to use the woodland for their sports activities

In addition to allowing the extraction of materials, or occasional access for sports or recreation, there are also opportunities to allow certain groups more permanent access to the woodland. For example, there is a growing trend to allow green timber craft workshops to set up in woodlands – particularly where **coppicing** can be used to make products such as rustic furniture. Some recreational users of woodlands, such as camp site operators, may also wish to make use of a woodland on a more permanent basis and could be involved in the woodland design process.

Question 2.1: Is the new woodland expected to support local enterprises in the future?

Potential actions

- Identify potential future users of woodland products and services and engage with them to establish their needs
- Take into account the species, structure and infrastructure needs of potential users when designing the woodland
- Examine whether there are opportunities to allow ongoing use of the woodland by certain enterprises

Woodland products, services, and enterprises can be particularly effective in delivering economic benefits when they support rural livelihoods and **rural diversification**, or provide new economic opportunities in urban areas that are undergoing regeneration.

Rural diversification is the establishment of new enterprises to help broaden the economic activity of rural areas, providing opportunity and creating a more balanced and stable economy.

Establishing new woodland in rural areas can bring many economic benefits. The materials generated by a woodland can often be used in farm operations, such as low quality timber for fencing materials and wood chips for animal bedding. Timber and woodfuel can also provide a separate source of farm income that can be ‘cashed in’ with a degree of flexibility, so making the business more resilient.

The production of farm materials can be maximised through the selection of suitable species and management techniques during the woodland creation process. In addition, the positioning of woodland on a farm can deliver important benefits to farm businesses, by providing shade and shelter for livestock.

Raw materials generated by woodlands in deprived rural areas can support forestry harvesting and processing sectors, which are often important sources of rural employment. Many forestry sector businesses are family owned small or medium-sized enterprises that have strong roots in local communities. Such enterprises are likely to be particularly supported by larger, softwood producing woodlands which will generate large amounts of wood material to bring to market – although there is still often demand for good quality hardwoods for use in higher value and specialist products.

In both urban and rural areas, woodland **social enterprises** can also be set up or invited to make use of a woodland and its resources. These enterprises can provide training and activities for local communities, whilst selling products such as firewood and providing various services, including educational activities and green burials. The profits from such social enterprises can be invested in the ongoing management of the woodland and activities that support community development.

Social enterprises are organisations that apply commercial strategies to achieving specific social and/or environmental missions through the investment of their profits.

Question 2.2: Is the new woodland expected to contribute to rural diversification or urban regeneration?

Potential actions

- Plant a new woodland in an area of existing rural or urban deprivation and design it to deliver key goods and services
- Aim to meet the needs of local forestry and farm businesses in deprived rural areas
- Explore opportunities to develop or link with social enterprises that can use the woodland to further community development

Goal #3: Create a woodland that supports volunteering and skills development

The work of volunteers in the creation and longer term maintenance of woodlands can contribute to the economy by supporting the delivery of woodland goods and services that might otherwise be unviable given limited resources. The range of **volunteering activities** associated with woodland creation and management is extremely diverse, encompassing practical activities, such as tree planting and scrub clearance, and wider roles – for instance, event assistants and biodiversity recorders.

Volunteer activities involve spending unpaid time doing something to benefit the environment or another individual or group.

Whilst many volunteers are motivated by a desire to help improve the local environment, they also often seek personal benefits including the learning of new skills, opportunities to meet others, and a chance to improve quality of life. Such benefits can help volunteers build the skills, contacts, and confidence needed to find employment in the wider economy, and many volunteer programmes seek to support people in achieving this.

A number of steps can be taken to attract volunteers to a woodland creation project. These include:

- Running taster sessions that introduce woodland volunteering activities and opportunities to people
- Establishing partnerships with existing volunteer centres and programmes, such as those supporting the unemployed

- Engaging with local community groups that may want to boost the confidence and skill sets of their members
- Contacting local companies that might wish to volunteer for team building and corporate social responsibility purposes

During such activities it is important that adequate resources are put in place to provide management and ensure that volunteer activities are worthwhile to both parties. Also, whilst volunteers can often contribute positively towards woodland creation and management, in some cases the services of forestry contractors may also be necessary given their technical understanding and skills.

Question 3.1: Is the woodland expected to provide opportunities for volunteering?

Potential actions

- Develop partnerships and deliver volunteer activities with local organisations, including those helping people into employment
- Establish or link to volunteer programmes that help people to develop new skills, confidence, and social connections
- Put in place the resources to ensure positive volunteering experiences, and where necessary seek specialist help

Woodlands can be places of learning that encourage understanding of the natural world and provide an interactive space for gaining the skills to enhance employability. Outdoor education activities can supplement formal education and provide an inspiring environment in which to learn – particularly for those who find traditional forms of

learning more difficult. Such woodland-based training is also crucial to the forestry sector at large, which faces a growing skills shortage.

Woodlands can provide a setting for a wide range of educational activities including programmes that reflect aspects of the national curriculum, university studies, arts projects, and the establishment of **forest schools**. There are also opportunities to support woodland-based apprenticeships that help people to gain experience and achieve qualifications in land and visitor management. Such opportunities may be particularly valuable to those facing significant barriers to employability, such as a lack of qualifications or previous experience.

Forest schools work with people in the outdoors to increase confidence, emotional resilience, independence, communication skills, and levels of physical activity and mental wellbeing.

Linking to educational programmes that support skills development and the achievement of qualifications can help to support not only the wider economy, but also the forestry sector itself. Businesses operating in the forestry sector often report having difficulty recruiting appropriately skilled people, including young people with practical skills and experience developed through apprenticeships or relevant vocational training.

Question 3.2: Is the woodland to be used as a place to deliver training and skills?

Potential actions

- Establish links with educational organisations and skills and careers initiatives
- Consider whether there are opportunities to take on apprentices and support the award of qualifications
- Look to support activities and courses that will help to address the key skills gaps facing the forestry sector

Reporting of results

The final output of the Woodland Benefits Tool is a PDF report – the Woodland Benefits Assessment – that concisely summarises the scores obtained by the project under the Biodiversity, Water, Community and Economy categories, whilst providing further background on the nature of the woodland creation project and the activities that have led to these scores being awarded.

The Woodland Benefits Assessment is made up of the following sections, some of which require the direct input of the user:

Project name	The name of the woodland creation project.
Project description	A short description of the woodland project. This should provide information on the location of the woodland and the objectives of the woodland creation scheme.
Scores	This section automatically displays the scores generated by the Woodland Benefits Tool under the Biodiversity, Water, Community, and Economy categories. No user input is required.
Comparative scores	This graph displays how the woodland has scored under the Biodiversity, Water, Community and Economy categories. No user input is required.

Supporting commentary	In the supporting commentary section, provide information on how the woodland project is delivering benefits to biodiversity, water, community, and economy. These commentaries help interested parties to build a picture of the activities that have been undertaken as part of the woodland creation project and how these relate to the scores generated by the Tool.
Unique benefits	Use this box to clarify any unique benefits that the woodland provides – i.e. those that have not been captured by the questions included in the Tool.

Unique benefits could include woodland features that are unusual, such as distinctive archaeological remains, or woodland activities that fail to fit adequately into the other categories included in the Woodland Benefits Tool but merit communicating.

The Woodland Benefits Assessment provides a useful basis for reporting the social, environmental, and economic benefits of a new woodland to a variety of audiences. For instance, the information generated by the Woodland Benefits Tool can be used to:

- Capture the wider benefits of woodland creation in the Project Design Documents that are submitted as part of the **Woodland Carbon Code** validation process.

- Highlight the social, environmental, and economic benefits of investments in woodland to business stakeholders, such as customers or shareholders.
- As an aid to the woodland design process when considering the types of social, environmental, and economic benefit that a new woodland could deliver.

Overall, the Woodland Benefits Tool provides a greater understanding of the benefits that woodlands are capable of providing and a means of communicating them clearly.