WOODLAND
TRUST SCOTLAND

Urquhart Bay

Management Plan
2018-2023

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MAPS

THE WOODLAND TRUST

INTRODUCTION

The Trust's corporate aims and management approach guide the management of all the Trust's properties, and are described on Page 4. These determine basic management policies and methods, which apply to all sites unless specifically stated otherwise. Such policies include free public access; keeping local people informed of major proposed work; the retention of old trees and dead wood; and a desire for management to be as unobtrusive as possible. The Trust also has available Policy Statements covering a variety of woodland management issues.

The Trust's management plans are based on the identification of Key Features for the site and setting objectives for their management. A monitoring programme (not included in this plan) ensures that these objectives are met and any necessary management works are carried out.

Any legally confidential or sensitive species information about this site is not included in this version of the plan.

PLAN REVIEW AND UPDATING

The information presented in this Management plan is held in a database which is continuously being amended and updated on our website. Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.
Please either consult The Woodland Trust website www.woodlandtrust.org.uk or contact the Woodland Trust (wopsmail@woodlandtrust.org.uk) to confirm details of the current management programme.

There is a formal review of this plan every 5 years and a summary of monitoring results can be obtained on request.

WOODLAND MANAGEMENT APPROACH

The management of our woods is based on our charitable purposes, and is therefore focused on improving woodland biodiversity and increasing peoples' understanding and enjoyment of woodland.

Our strategic aims are to:

- Protect native woods, trees and their wildlife for the future
- Work with others to create more native woodlands and places rich in trees
- Inspire everyone to enjoy and value woods and trees

All our sites have a management plan which is freely accessible via our website www.woodlandtrust.org.uk. Our woods are managed to the UK Woodland Assurance Standard (UKWAS) and are certified with the Forest Stewardship Council® (FSC®) under licence FSC-C009406 and through independent audit.

In addition to the guidelines below we have specific guidance and policies on issues of woodland management which we review and update from time to time.

We recognise that all woods are different and that the management of our sites should also reflect their local landscape and where appropriate support local projects and initiatives. Guidelines like these provide a necessary overarching framework to guide the management of our sites but such management also requires decisions based on local circumstances and our Site Manager's intimate knowledge of each site.

The following guidelines help to direct our woodland management:

1. Our woods are managed to maintain their intrinsic key features of value and to reflect those of the surrounding landscape. We intervene when there is evidence that it is necessary to maintain or improve biodiversity and to further the development of more resilient woods and landscapes.
2. We establish new native woodland using both natural regeneration and tree planting, but largely the latter, particularly when there are opportunities for involving people.
3. We provide free public access to woods for quiet, informal recreation and our woods are managed to make them accessible, welcoming and safe.
4. The long term vision for our non-native plantations on ancient woodland sites is to restore them to predominantly native species composition and semi-natural structure, a vision that equally applies to our secondary woods.
5. Existing semi-natural open-ground and freshwater habitats are restored and maintained wherever their management can be sustained and new open ground habitats created where appropriate.
6. The heritage and cultural value of sites is taken into account in our management and, in particular, our ancient trees are retained for as long as possible.
7. Woods can offer the potential to generate income both from the sustainable harvesting of wood products and the delivery of other services. We will therefore consider the potential to generate income from our estate to help support our aims.
8. We work with neighbours, local people, organisations and other stakeholders in developing the management of our woods. We recognise the benefits of local community woodland ownership and management. Where appropriate we allow our woods to be used to support local woodland, conservation, education and access initiatives.
9. We use and offer the estate where appropriate, for the purpose of demonstration, evidence gathering and research associated with the conservation, recreational and sustainable management of woodlands. In particular we will develop and maintain a network of long-term monitoring sites across the estate.
10. Any activities we undertake will conform to sustainable forest management principles, be appropriate for the site and will be balanced with our primary objectives of enhancing the biodiversity and recreational value of our woods and the wider landscapes.

SUMMARY

This public management plan briefly describes the site, specifically mentions information on public access, sets out the long term policy and lists the Key Features which drive management actions. The Key Features are specific to this site – their significance is outlined together with their long (50 year+) and short (5 year) term objectives. The short term objectives are complemented by a detailed Work Programme for the period of this management plan. Detailed compartment descriptions are listed in the appendices which include any major management constraints and designations. A short glossary of technical terms is at the end. The Key Features and general woodland condition of this site are subject to a formal monitoring programme which is maintained in a central database. A summary of monitoring results is available on request.

1.0 SITE DETAILS

Site name:	Urquhart Bay
Location:	Drumnadrochit
Grid reference:	NH519297, OS 1:50,000 Sheet No. 26
Area:	22.90 hectares (56.59 acres)
Designations:	Ancient Semi Natural Woodland, Ancient Woodland Site, Candidate Special Area of Conservation, Site of Special Scientific Interest, Special Area of Conservation

2.0 SITE DESCRIPTION

2.1 Summary Description

On the banks of Loch Ness, Urquhart Bay is one of the best examples of surviving ancient wet woodland in Europe. Tree species include alder, ash, bird cherry and white willow. Footpaths form a rough figure of eight through the centre of the wood.

2.2 Extended Description

Urquhart Bay Wood, locally known as ‘The Cover’, is one of very few intact floodplain or alluvial woodlands remaining in the UK; a habitat which is considered to be rare throughout Europe. It can be described as a ‘carr’ i.e. a wet woodland which is hydrologically connected with a river system. The Woodland Trust acquired the site in in 1988, adding a second parcel in 1991. The 23 hectares now in Woodland Trust ownership are part of a larger woodland, which is designated as a Site of Scientific Interest (SSSI) and a Special Area of Conservation (SAC). These woods are recorded on the Ancient Woodland Inventory as ‘Ancient Semi-Natural Woodland’, and are part of a major concentration of ancient woodlands along Loch Ness and in neighbouring glens, including Glen Urquhart and Glen Affric.

The wood was once part of the Glen Urquhart Estate - originally granted to the Earls of Seaforth by King James IV in 1509, and finally broken up after the second world war. Much of the estate was

planted with both native and exotic species during the mid to late 18th century by the then laird Sir James Grant, who resided at nearby Balmacaan House (now demolished) where the woodlands are also in Woodland Trust care. There were periods of felling at Urquhart Bay, mainly ash and elm in the 18th and 19th century, and also replanting with sycamore in the 18th century; but the site has remained relatively untouched due to its frequent flooding.

The wood is situated on a flat low-lying area of alluvial sand and gravel deposits between the deltas of the Rivers Coiltie and Enrick, where they flow into Loch Ness. These are very dynamic river systems; floods cause frequent changes in the river channels and leave accumulations of fallen trees and woody debris in their wake. Soils are generally thin, but lower lying areas are periodically overlaid with flood-borne, nutrient-rich, organic material. The changing stream channel patterns produce shingle banks and redundant river channels with static ponds. Accumulations of woody debris, either wholly or partially within rivers, are an important feature of the site; influencing siltation and erosion patterns as well as colonisation and succession of woodland species.

There is a graduation from the seasonally flooded alderwood and fen communities, to more mixed broadleaved woodland on the drier ground further inland. The principal tree species are alder and ash, along with a proportion of bird cherry, hazel, blackthorn, white willow and goat willow, and smaller numbers of wych elm, gean, holly, rowan and elder. The woodland has a reasonably diverse age structure, with steady recruitment from seedling regeneration, notably bird cherry. Mature sycamore were removed through a programme of felling, ring barking and stem injection from 2001-2012. Sycamore continues to regenerate, however, and remains a feature of other woodlands throughout the catchment.

The ground flora is diverse and typical of alluvial woodland. It includes a number of characteristic ‘ancient woodland’ species, such as dog’s mercury, which, along with bluebells and ferns, carpets swathes of the woodland floor in spring. Colonisation by non-native, garden-origin species has been a long-term feature of the woods, exacerbated by the frequent flooding which deposits seeds washed downriver on bare, newly eroded ground. An on-going project, led by Coille Alba, is aimed at eliminating the most invasive of the non-natives species from the entire river catchment area. Control methods in the past 3 years have included herbicide application (Japanese knotweed, white butterbur) and cutting, uprooting and grazing (Himalayan balsam).

There is a significant lichen community within the wood reflecting its antiquity and long term woodland cover. A lichen survey of Urquhart Bay Wood (Coppins 2001) recorded 130 epiphytic taxa and assessed the woodland as being of ‘Regional Importance’ for its lichen flora. Several notable ‘old woodland’ species were recorded, of which the most significant is Pannaria ignobilis (Red Data Book category- Vulnerable).

Blackcap, willow and wood warbler, spotted and pied flycatcher are present during the summer months, with great spotted woodpecker and buzzard all year round. European protected species, otter and bats, are present in the wood, along with other mammals including hare, roe deer and mink. Important invertebrates have been recorded, including crane fly, hoverfly and snipe fly species.

The site is clearly visible from any elevated vantage point in the valley around Drumnadrochit - including the A82 Loch Ness tourist route - and constitutes an important feature in the landscape.

The 2 km path network is well used by the local community and visitors, as well as horse riders from the neighbouring riding centre. There are no footpaths in the north-western section of the wood, nor on the wooded islands by Loch Ness on the east side of the site. In recent years a footbridge gave access over the River Coiltie to Loch Ness; however this was removed in 2007 for safety reasons. Access through the woods to Loch Ness is a key aspiration in the local area, and there is an on-going, community-led initiative to develop and deliver a new bridge project

3.0 PUBLIC ACCESS INFORMATION

3.1 Getting there

General location
Urquhart Bay Wood is situated on the Eastern outskirts of the village of Drumnadrochit by Loch Ness on the A82. The wood is approximately 1km along a sign-posted route from the Tourist Information Centre (TIC) in the middle of the village. From the TIC head south on the A82 for approximately 250m, then turn first left into Kilmore Road. Access to the woods is beside Kilmore Graveyard, approximately 750m after the turn off.

Paths & entrances:
The paths within the wood are reached by using the flat firm gravel and tarmac path, with two pedestrian sprung gates to the edge of the wood. From there, two looped routes are shown on the Orientation Panel. The shorter loop paths are wide, firm, gravel or sandy surfaced with some sections becoming loose and uneven seasonally due to water erosion. The longer loop is mostly flat and firm with a gravel or sandy surface with one section being rough and rocky. During high water, much of the path network may be under water, or become rapidly eroded. Great care must be taken when using these sections of paths as the speed and colour of the water can mean that it is not possible to see if the path has been eroded.

Parking
A Highland Council parking area for up to twelve cars is available at Kilmore Graveyard. Additional public parking is available at the Tourist Information Centre in the village centre, approximately 1km from the wood.

Public Transport:
Regular bus and coach services are available from Inverness to Drumnadrochit. The village is also on the main coach routes from Inverness to Portree on Skye and to Fort William. All services stop close to the Tourist Information Centre in the middle of Drumnadrochit approximately 1 km from the wood.

For further information contact Traveline tel. 0871 200 2233 www.travelinescotland.com

Public Toilets
Accessible public toilets are available at the Tourist Information Centre in the centre of Drumnadrochit, approximately 1km from the wood.

Additional Information
There is an Orientation board at the entrance to the wood. In 2019, a leaflet will be available showing Urquhart Bay, Balmacaan, and Abriachan Woods.

3.2 Access / Walks

4.0 LONG TERM POLICY

The long term vision for Urquhart Bay Wood (50 years plus) is for a biologically-rich, alluvial woodland, which forms part of a functional woodland habitat network on the north western shore of Loch Ness.

The processes of natural succession will remain dynamic within the woodland resulting in evolving age structures and densities of predominantly native cover. There will be a secure, vigorous and diverse ground flora characteristic of wet woodland (NVC W7 & W9). The canopy will be punctuated with frequent mature and over-mature trees and there will be frequent standing and fallen deadwood.
Natural processes associated with the functioning of alluvial woodland, such as flooding, movement of river channels and accumulation of woody debris will remain a significant influence on the site

The woodland will provide an area of quiet informal recreation to a wide range of users, both from the local community and from further afield. Paths will provide loop routes suitable for walkers and horse riders, and link to the surrounding path network. Interpretation will be maintained and renewed as required to highlight the conservation value of the site.

5.0 KEY FEATURES

The Key Features of the site are identified and described below. They encapsulate what is important about the site. The short and long-term objectives are stated and any management necessary to maintain and improve the Key Feature.

5.1 Ancient Semi Natural Woodland

Description

Urquhart Bay Wood is a fantastic example of an intact ancient semi-natural alluvial woodland. The canopy is mostly made up of alder and ash, with a number of other native deciduous species well represented. The site is sandwiched between two dynamic rivers, the River Enrick to the North and River Coiltie to the South, which meet on the Eastern edge of the site and acts as a delta floodplain on the edge of Loch Ness. The dynamic nature of these rivers has resulted in a long history of erosion and deposition of sand, gravels, and seed from other location up stream. This process continues with erosion of river banks and deposition throughout the woodland. These new bare areas are quickly colonised by non-native plant species, as well as alder.

There is a well-balanced age structure and adequate natural regeneration of native tree species, as browsing by deer is very low due to the human disturbance throughout much of the site. While ancient woodland ground flora is well represented throughout much of the site, this is threatened by established non-native plant species, with the potential for new species being brought downstream.

Lower plants are well represented in the woodland, due to the closed canopy woodland structure, and the humid microclimate created being within close proximity to the rivers and Loch Ness. These species thrive, not only on the ash, and alder, but on the deadwood throughout the site, that is also an important resource in the wood for invertebrates and birds.

The assemblage of the dynamics of the rivers, the woodland, and the species that thrive here warrant the UK designation of a Site of Special Scientific Interest (SSSI), and the European designation, a Special Area of Conservation (SAC).

Significance

Floodplain forests have disappeared rapidly in recent times, with the majority of those surviving in a highly fragmented condition, subject to interference, such as river rectification and channel regulation. From a UK perspective, there are very few ‘natural’ alluvial forest habitats remaining. Urquhart Bay Woods – second only to Spey Bay SAC – is one of the best examples of prime alluvial woodland in the UK.

The wood has been designated as a Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC). It forms part of a large concentration of ancient woodlands along the side of Loch Ness.

There is diverse bird life and a characteristic invertebrate fauna associated with the woodlands and transition wetland communities. Important invertebrate species have been noted including craneflies: Cheilotrishia flara, Hexatoma bicolour, Pilaria batura, Bonomifa simplex and Tipula couckei; snipe fly: Rhagis notatu; hoverflies: Sphegina kimackowiczi and Crenosia floricanda (Stubbs 1976).

The site is assessed as of Regional importance for its lichen interest. 130 epiphytic lichen taxa have been recorded including several notable ‘old woodland’ species, of which the most significant is Pannaria ignobilis (Red Data Book category Vulnerable). This lichen was seen on 30 trees, which constitutes a major population.

Opportunities & Constraints

There are two very significant threats to this site, the disease of ash, Chalara fraxinea, and the accumulation of non-native plant species.

If Chalara reaches Urquhart Bay, it has the potential to radically alter the entire canopy and ground flora of the site, through the loss of the ash component, allowing an increase in light to the ground and, potentially, a very sudden increase in deadwood, which would allow a pulse of saproxyllic invertebrates that could also damage other live trees. Although all mature sycamore were removed some years ago, there are areas where there is significant regeneration. Sycamore is thought to be a suitable surrogate species for many lower plant species reliant on ash. A certain level of tolerance will have to be afforded to sycamore to fulfil this role, should Chalara kill ash, but as far as possible without reducing the native woodland character..

The extent and impact of non-native plant species is not fully known and attempts at control may pose significant operational difficulties and/or risks to native woodland flora. The accumulation of these species may affect the status of the designated site.

A project launched in March 2018 called the Scottish Invasive Species Initiative seeks to eradicate certain key invasive species from riparian ecosystems throughout Scotland. Overseen by the Rivers and Fisheries Trusts of Scotland (RAFTS) and managed around Urquhart Bay by the Ness and Beauly Fisheries Trust, the project will target Japanese knotweed, Himalayan balsam, and mink throughout the catchment.

The accumulation of other non-native species, that are not part of the HLF project, will also threaten the diversity and integrity of the native woodland flora, and to the processes of natural succession. Piggyback plant is present, and appears to be spreading, with the potential to exclude other field layer species. White butterbur is also throughout parts of the site and risks excluding native ground flora species. Ground elder is present in patches, often in similar areas to white butterbur. Snowberry is also present in patches and the suckering of this species would allow the shrub to colonise areas quickly. Lupins are beginning to colonise the banks of the River Coiltie, with the risk of this species spreading quickly through the bare ground created by the dynamic nature of the river.

An increase in frequency and severity of flood events will continue, impacting hugely on this site. Flood prevention measures upstream may also have an effect on the rate of erosion. Trees and debris from other woods, and this site, will be lodged in the rivers, resulting in dynamic erosion, flooding, channels and pools being created and removed. Working with Ness and Beauly Fisheries Trust, Scottish Natural Heritage, and local interests provides the opportunity to manage accumulations of woody debris to balance habitat benefits with fisheries interests.

The dynamic nature of the River Enrick, together with its large catchment and increase in severe flood events, has resulted in the River moving to former channels and causing concern for the owners of Kilmore Farm. Close communication with the owners, SEPA, SNH, Highland Council and the Community Council to monitor this situation, particularly given new proposed flood prevention measures upstream, is essential.

Factors Causing Change

The arrival of Chalara fraxinea could result in the loss of a significant proportion of the ash component of the woodland, with several knock on effects.
The tolerance of sycamore as a vital component of the woodland structure may result in a loss of feeling of a native woodland.
The accumulation of non-native plant species, and the difficulty and cost of management of many of these species.
The movement of rivers, channels, and debris creating new land forms, removing others, and the impacts these have on other land owners and their interests.

Long term Objective (50 years+)

The processes of natural succession will remain dynamic within the woodland resulting in evolving age structures and densities of predominantly native cover. There will be a secure, vigorous and diverse ground flora, characteristic of wet woodland (NVC W7 & W9). The canopy will be punctuated with frequent mature and over-mature trees and there will be frequent standing and fallen deadwood.

Natural processes associated with the functioning of alluvial woodland, such as flooding, movement of river channels and accumulation of woody debris will remain a significant influence on the site.

It is almost inevitable that a significant proportion of ash within this woodland will be lost to the ash disease Chalara fraxinea in the medium to long term. In the face of this drastic change, the species that rely on ash will be accommodated on other species as suitable for the objectives of the site, either through planting of native species, or tolerance of non-native species such as sycamore for the benefit of some species.

Short term management Objectives for the plan period (5 years)

Retaining a diverse woodland structure:
• Annual monitoring for the presence of Chalara fraxinea, and sending suspect samples to Forest Research.
• A desk exercise looking at existing data, JNCC documents, and SNH advice, followed by a ground survey to ensure species currently reliant on ash would have an appropriate surrogate species to move to. Survey to take place in 2019. Following this, planting of select native tree species may be required that are appropriate to the site, or a closer look at the density and age structure of sycamore. This would be done through consultation with SNH.

• Browse monitoring will be undertaken in 2020 and 2022 to ensure regeneration is continuing to establish.
Protecting native ground flora:
• A baseline survey of the ground flora, that will show percentage ground cover of white butterbur, piggyback plant, and snow berry, and presence of other non- native species. The results of this survey would highlight locations of native ancient woodland plants that are high quality and most under threat. Priority areas for management, if an appropriate means of management can be found that is not detrimental to native ground flora, would be locations where ancient woodland plants are most under threat, and areas where non-native plants have yet to colonise. This survey would be undertaken in 2019, and the survey would be repeated every five years.
• Japanese knotweed and Himalayan balsam will be eradicated from the site by the end of 2023, working in partnership with the Ness and Beauly Fisheries Trust. As part of this project, mink will be monitored and controlled if necessary to benefit the wider programme across the catchment.

5.2 Connecting People with woods & trees

Description

Urquhart Bay, locally known as 'The Cover' is an easy-to-access woodland with a feast for the senses. The River Enrick and River Coiltie, on the right day, appear inviting for a dip, or an easy wade across to informal paths that reach the shores of Loch Ness, but shape and change this wood dramatically. The two rivers, when at their highest, flood much of the path network, eroding the path surface and dragging debris down, taking this quiet wander to a full on adventure that has to be taken with the greatest of care, or best of all, not at all.

The wood itself is characterful, with lots of different tree species providing a diversity of structure to the woodland. This diversity is enjoyed by resident and migratory bird species, insects, and plants utilising old trees, deadwood, open ground, and bare ground created through the dynamic rivers. All of this sits within a small but perfectly formed woodland on the edge of Drumnadrochit, and can be seen from the A82, or viewed from higher up, at the Craigmonie viewpoint in the Woodland Trust's Balmacaan Wood. Drumnadrochit itself is well served for café's, restaurants, and tourist shops, and is only 14 miles south of Inverness, and can be reached by car or a direct bus link.

Parking for up to 12 cars is available in the Highland Council's Kilmore Cemetery car park at NH515295, where a welcome board across the road marks the entrance gate. Additional parking can be found at the Tourist Information Centre in the centre of Drumnadrochit, and it is around a 1km walk from there. Once in the wood, there are two circular paths, one short and one slightly longer. In total, there are around 2km of paths. There is no way-marking in the site, but the rivers on either side, and the circular nature of the routes means it is difficult to find yourself disorientated.

The paths within the wood are reached by using the flat firm gravel and tarmac path, with two pedestrian sprung gates to the edge of the wood. From there, two looped routes are shown on the orientation panel at the entrance to the woodland itself. The shorter loop paths are wide, firm, gravel or sandy surfaced with some sections becoming loose and uneven seasonally due to water erosion. The longer loop is mostly flat and firm with a gravel or sandy surface with one section being rough and rocky. During high water, much of the path network may be under water, or becoming suddenly eroded. Great care must be taken when using these sections of paths as the speed and colour of the water can mean that it is not possible to see if the path has been eroded.

The wood is well used by local people as quiet walk, and is popular with dog walkers and horse riders. The wood is also used by the many thousands of tourists who flock to Drumnadrochit. As well as a beautiful walk, they seek a route across the River Coiltie to the shore of Loch Ness as this is one of few locations where it is possible to stand on the shore itself. A bridge was located here, but removed in 2007 as the foundations had become dangerously eroded.

The area receives 200,000 overseas visitors per year. Drumnadrochit annual statistics from Visit Scotland recorded 19,000 day-trip and 76,000 overnight stays. Urquhart Castle, just two miles south of Drumnadrochit, received 380,152 visitors in 2017, up 13% from the previous year. The 2016 census shows the population of Drumnadrochit to be 1,160.

The site lends itself well to public engagement, as there is good parking, the paths are flat and mostly easily walked, and there is a great deal to show people and talk about. In 2017, an interactive self led bluebell trail was a success, although twice subject to vandalism. Due to the

possibility of vandalism and the dynamics of the rivers, there are only parts of the site where static long-term pieces of information or infrastructure would be suitable or appropriate. With radical changes likely in the wood with the loss of ash a possibility due to the disease Chalara fraxinea, and work to manage and remove non-native plants, topical interpretation in the right locations would be desirable to inform users of the purpose behind management and the importance of the work being done to protect this fragile woodland.

A proactive local volunteer lives nearby the site and runs a Facebook page 'Cover Notes' that informs people who are interested in the wood about what to look out for at certain times of year and any upcoming management work, events, etc.

The site is a short walk from both the High School and Primary School, and could provide opportunities for partnership working with the school or for the site to be used as a base for educational activities.

Significance

The site is used by a great many local people who use this on a daily basis for exercise for themselves or their dog, and a network of safe, well-maintained paths are essential to the continued enjoyment by these people.

There is a huge volume of tourists in Drumnadrochit who look for a quiet walk to enjoy the peace and tranquillity of this part of the Highlands.

Paths within the site are generally level and a 1.2km circular route is navigable with a mobility scooter. There are few other woodland sites locally with this level of accessibility.

The site is situated within a 20 mile radius of a population of over 50,000, including the city of Inverness.

The status of the site as a SSSI and SAC for the habitats and assemblage make the site particularly interesting to visit, but also important to exercise access rights responsibly.

Opportunities & Constraints

Drumnadrochit is a popular tourist destination by Loch Ness and a popular aim for tourists is to walk to the shore. Since the bridge was removed, this can only be done by wading across the River Coiltie and negotiating a network of eroded, slippy, and wet paths on private ground to reach the shore. While developing a bridge here may be desirable by some, the nature of the rapid movements by the River Coiltie could result in the bridge once again being eroded or left high and dry. Any project here would have to be in partnership with the landowner to the south of the river, with significant external funding for the bridge and path network, with support and consent from SNH.

Due to the erosion to the banks and paths by both rivers, maintenance of the path surface throughout is an ongoing operation that will have to be carried out each year. Where there is significant undercutting or erosion of the path itself, particularly from the River Enrick, sections of path may have to be moved inland to ensure a safe route round the wood. The River Coiltie is now pushing further into the corner of the wood, resulting in more water flowing down or across a section of path roughly 250m in length. This path route cannot readily be moved without altering the hydrology of the site, and an annual top up of material is pointless. A solution needs to be found in this location that does not adversely affect the hydrology, but provides a walkable surface for the majority of the year.

There would be the opportunity to place more information and interpretation in the site. Given the experience of vandalism in 2017, this would need to be robust in the face of that threat, as well as from erosion.

The site is well suited to guided walks and app-based information, where the public can self-lead themselves round a themed walk. The development of accessible free wifi in Drumnadrochit in coming years would be a benefit for this.

Sections of the site are used frequently by horse riders, which will exacerbate the erosion and damage issues on the path surfaces.

There are opportunities to develop volunteering on the site with partners such as Abriachan Forest Trust, RSPB and Ness and Beauly Fisheries Trust. Opportunities on the site could range from work party days combing for specific non-natives, to guided walks, ‘Obervatree’ volunteers looking for the presence of Chalara, or fixed point photographers recording the changes to the rivers.

With the High School and Primary school both within short walking distance of the wood, there are opportunities to engage with both schools using Curriculum for Excellence, John Muir Award, Duke of Edinburgh’s Award, etc. There are a range of practical and survey tasks that could be undertaken by young people with support from Woodland Trust. In particular, the unusual geology in the wood and protected woodland gives opportunities for geography, biology, and wider environment discussion.

The site is extensively used by horse riders which contributes to the erosion of footpaths.

Factors Causing Change

Flood events are expected to occur more frequently, and for them to be more severe. These events will further erode the banks and paths, and will deposit more sand and gravels, resulting in the costs and freuqnecy of maintenance to increase over the coming years.

The number of tourists to Scotland is increasing which could put increased pressure on the site in terms of visitor numbers, local facilities and maintenance.

Long term Objective (50 years+)

Urquhart Bay Wood will provide an extensive area of quiet informal recreation to a wide range of users both from the local community and from further afield. The use of the site by tourists will be promoted through a positive relationship with the neighbouring tourist sites, with good signage and interpretation.

Entrances and signage will have a welcoming appearance, and there will be a network of well-maintained paths providing a safe and relaxing exploration of this woodland.

The site will be used as part of the curriculum within the local Primary and High School looking at geology, land use, environment, forestry, and other relevant topics. The use by the schools would be part of John Muir Awards, Duke of Edinburgh's Award, Rural Skills SVQ's or any other link that uses the site to build on the pupils educational accomplishments.

With time and a growing interest and awareness of the woodland in Drumnadrochit, an increase in volunteers would be a benefit to the site taking on a variety of tasks.

Short term management Objectives for the plan period (5 years)

Access provision will be in keeping with Woodland Trust access guidelines. Achieved by:
a) Entrances and signage are welcoming to visitors, relevant, and well cared for (annually).
b) All managed paths are kept well-drained and free from encroaching vegetation, and that access features (e.g. entrances, boundary features, etc. are kept in good order (annually).
c) The site is kept safe and welcoming by: repair of vandalism (when needed); clearing of fallen trees where access is obstructed (as needed); and regular site safety surveys (as per risk assessment).

The visitor welcome and experience will be further enhanced by the following:
• Annual maintenance, when required, to the path surface of the shorter loop to retain the routes near all abilities surface, and of the entire network as required. This will be done through the importing of appropriate materials, and using any materials deposited on the path surfaces.
• Proactively assessing the requirement to move sections of path away from the River Enrick before they become hazardous as part of the monitoring of the site following a flood.
• In 2019, to address the rough section of the longer loop with advice from competent contractors and SNH to create a surface that is easily walkable and low maintenance.
• Developing the WTS Loch Ness sites leaflet in 2018, ready for production in 2019.
• Replace the existing orientation board in 2022 and review opportunities for the installation of other interpretation on the site.

In addition to these infrastructure improvements:
• To organise at least one volunteer work party in conjunction with Ness and Beauly Fisheries Trust in 2018.
• To organise at least one guided walk in 2019 as a pilot to measure interest. If sufficient interest, to run at least one annually.
• To ensure the existing volunteer is supported and is part of the management of the site.
• To seek ways to encourage additional volunteering opportunities on the site such as Observatree volunteers to assist in looking for presence of Chalara fraxinea.

6.0 WORK PROGRAMME

Year	Type of Work	Description	Due By

APPENDIX 1: COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Key Features Present	Designations
1a	7.16	Alder species		Min-intervention	Mostly wet ground/exposed site, No/poor vehicular access within the site	Ancient Semi Natural Woodland	Ancient Semi Natural Woodland, Site of Special Scientific Interest, Special Area of Conservation
Almost flat, low-lying area of uneven ground bordered by the River Enrick to the north and agricultural land to the south. The site is periodically disturbed by seasonal flooding resulting in redundant river channels, small pools, and the deposition of layers of organic matter. There are accumulations of debris in the form of tree trunks, branches and occasionally domestic litter at points along the riverbank. The sites of erosion and deposition vary from year to year as the course of the river changes. The sub-compartment supports a mature, uneven aged, ash dominated mixed broadleaved woodland in the northern part, nearest the river, grading to an uneven aged, alder dominated woodland towards the southern field boundary. There are occasional wych elm, gean and white willow. The understory consists of bird cherry and hazel with occasional holly, rowan and goat willow. There is occasional to frequent sycamore seedling regeneration. There is a rich ground flora including dogs mercury, bluebell and fern species, among a variety of soft grasses. Invasive non-native spp. have become locally dominant. While some spcies, such as himalayan balsam, japanese knotweed, and giant hogweed, are part of an HLF control project, white butterbur, piggy back plant, and other emerging plants such as lupins as not currently controlled.							
1b	13.75	Ash		Min-intervention	Mostly wet ground/exposed site, No/poor vehicular access within the site	Ancient Semi Natural Woodland	Ancient Semi Natural Woodland, Site of Special Scientific Interest, Special Area of Conservation

Almost flat, low-lying area comprising of the large central section of the woodland. The sub-compartment is bordered by the River Enrick to the north and the River Coiltie to the south. There are accumulations of debris in the form of tree trunks, branches and at points along the riverbank, and particularly at the confluence of the Coiltie and the Enrick. The sites of erosion and deposition vary from year to year as the course of the river changes. The southern and eastern parts are dominated by mature, uneven aged, alder woodland on wet, seasonally disturbed ground. The central section is dominated by mature and semi-mature, mixed alder, ash and bird cherry with occasional elm on flat, fairly damp ground. The western section is supports a mature, uneven aged, ash dominated mixed broadleaved woodland on marginally higher and drier ground. There is frequent sycamore seedling regeneration. Glades created by felling of sycamore and beech (2001-2005) have been colonised by natural regeneration (ash, elm, sycamore, bird cherry). The ground flora is rich and includes dogs mercury (locally dominant), bluebell, herb robert, wood speedwell, wild garlic, red campion and wood anemone with fern species and soft grasses. Japanese knotweed has, in the past, been locally dominant in the SE portion of the sub-compartment, but has now been reduced to occasional, small plants, which are subject to an on-going programme of control. Himalayan balsam was also frequent throughout, but has been significantly reduced since 2008 with an on-going programme of cutting and pulling. There are colonies of piggy-back plant, which is not currently controlled. A 2km path network provides access within the sub- compartment.

1c	2.44	Alder species		Min-intervention	Mostly wet ground/exposed site	Ancient Semi Natural Woodland	Ancient Semi Natural Woodland, Site of Special Scientific Interest, Special Area of Conservation

Flat, sandy, low-lying area of very uneven and disturbed ground forming the delta of the River Enrick at the lochside. This sub-compartment is periodically disturbed by seasonal flooding resulting in a large number of deep, criss-crossing redundant river channels, pools, bogs and occasional large accumulations of organic debris.

There is open, mature, uneven aged, mixed woodland with ash and alder in the northern section, grading to dense, mature, uneven aged, alder dominated mixed woodland with ash the southern section. There are also occasional white willow and bird cherry some grey willow near the shore. Large numbers of sycamore were cleared from this compartment in 2003-04, leaving an open canopy throughout. The understorey is patchy and consists mainly of frequent groups and individuals of regenerating alder, hazel, bird cherry and sycamore saplings. The ground flora is sparse in places, probably as a result of frequent disturbance.

Japanese knotweed has, in the past, been locally dominant the sub-compartment, but has now been reduced to occasional, small plants, which are subject to an on-going programme of control. Himalayan balsam was also frequent throughout, but has been significantly reduced since 2008 with an on-going programme of cutting and pulling. There are colonies of white butterbur which are currently not controlled.

GLOSSARY

Ancient Woodland

Ancient woods are defined as those where there has been continuous woodland cover since at least 1600 AD. In Scotland ancient woods are defined strictly as sites shown as semi-natural woodland on the 'Roy' maps (a military survey carried out in 1750 AD, which is the best source of historical map evidence) and as woodland all subsequent maps. However, they have been combined with long-established woods of semi-natural origin (originating from between 1750 and 1860) into a single category of Ancient Semi-Natural Woodland to take account of uncertainties in their identification. Ancient woods include Ancient Semi-Natural Woodland and plantations on Ancient Woodland Sites (see below). May support many species that are only found in ancient woodland.

Ancient Semi - Natural Woodland

Stands in ancient woods defined as those consisting predominantly of native trees and shrubs that have not obviously been planted, which have arisen from natural regeneration or coppice regrowth.

Ancient Woodland Site

Stands in ancient woods that have been converted to plantations, of coniferous, broadleaved or mixed species, usually for timber production, including plantations of native species planted so closely together that any semi-natural elements of the understorey have been suppressed.

Beating Up

Replacing any newly planted trees that have died in the first few years after planting.

Broadleaf

A tree having broad leaves (such as oak) rather than needles found on conifers (such as Scots pine).

Canopy

The uppermost layer of vegetation in a woodland, or the upper foliage and branches of an individual tree.

Clearfell

Felling of all trees within a defined area.

Compartment

Permanent management division of a woodland, usually defined on site by permanent features such as roads. See Sub-compartments.

Conifer

A tree having needles, rather than broadleaves, and typically bearing cones.

Continuous Cover forestry

A term used for managing woods to ensure that there are groups or individual trees of different ages scattered over the whole wood and that some mature tree cover is always maintained. Management is by repeated thinning and no large areas are ever completely felled all at once.

Coppice

Trees which are cut back to ground levels at regular intervals (3-25 years).

Exotic (non-native) Species

Species originating from other countries (or other parts of the UK) that have been introduced by humans, deliberately or accidentally.

Field Layer

Layer of small, non-woody herbaceous plants such as bluebells.

Group Fell

The felling of a small group of trees, often to promote natural regeneration or allow planting.

Long Term Retention

Discrete groups of trees (or in some cases single trees) that are retained significantly past their economic felling age. Operations may still be carried out within them and thinning is often necessary to maintain stability.

Minimum Intervention

Areas where no operations (such as thinning) will take place other than to protect public safety or possibly to control invasive exotic species.

Mixed Woodland

Woodland made up of broadleaved and coniferous trees.

National vegetation classification (NVC)

A classification scheme that allows an area of vegetation to be assigned to the standardised type that best matches the combination of plant species that it contains. All woodlands in the UK can be described as being one of 18 main woodland types (W1 - W18), which principally reflect soil and climatic conditions. For example, Upland Oakwoods are type W11, and normally occur on well drained infertile soils in the cooler and wetter north and west of Britain. Each main type can be subdivided into numerous subtypes. Most real woods contain more than one type or sub-type and inevitably some woods are intermediate in character and can't be properly described by any sub type.

Native Species

Species that arrived in Britain without human assistance.

Natural Regeneration

Naturally grown trees from seeds falling from mature trees. Also regeneration from coppicing and suckering.

Origin & Provenance

The provenance of a tree or seed is the place where seed was collected to grow the tree or plant. The origin is the geographical location within the natural range of a species from where seeds/tree originally derives. Thus an acorn collected from a Turkey oak in Edinburgh would have an Edinburgh provenance and a southern European origin.

Re-Stocking

Re-planting an area of woodland, after it has been felled.

Shrub Layer

Formed by woody plants 1-10m tall.

Silviculture

The growing and care of trees in woodlands.

Stand

Trees of one type or species, grouped together within a woodland.

Sub-Compartment

Temporary management division of a compartment, which may change between management plan periods.

Thinning

The felling of a proportion of individual trees within a given area. The remaining trees grow to fill in the space created.

Tubex or Grow or Tuley Tubes

Tubes placed over newly planted trees or natural regeneration that promote growth and provide protection from animals such as rabbits and deer.

Weeding

The control of vegetation immediately around newly planted trees or natural regeneration to promote tree growth until they become established. Either by hand cutting or with carefully selected weed killers such as glyphosate.

Windblow/Windthrow

Trees or groups of trees blown over (usually uprooted) by strong winds and gales.