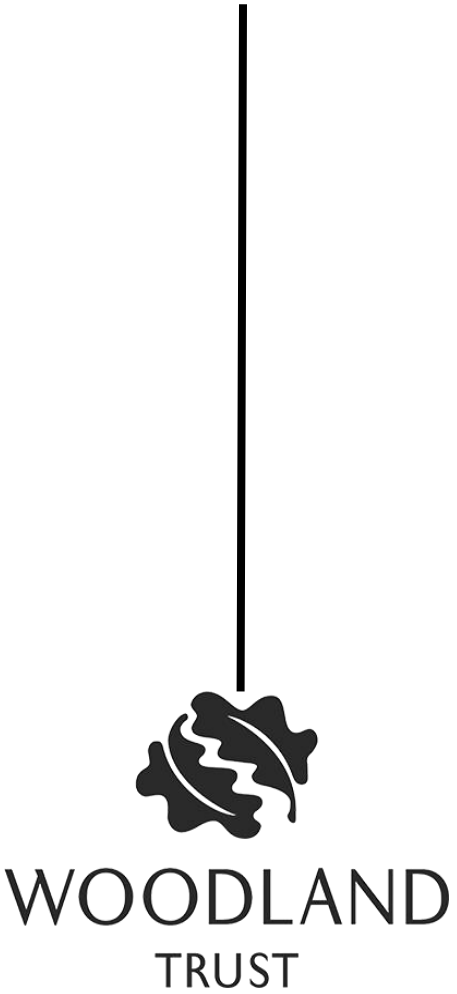
Urquhart Bay

(Plan period – 2023 to 2028)



Management Plan Content Page

Introduction to the Woodland Trust Estate

The Woodland Trust owns and cares for well over 1,250 sites covering almost 30,000 hectares (ha) across the UK. This includes more than 4,000ha of ancient semi-natural woodland and almost 4,000ha of non-native plantations on ancient woodland sites and we have created over 5,000ha of new native woodland. We also manage other valuable habitats such as flower-rich grasslands, heaths, ponds/lakes and moorland.

Our Vision is:

"A UK rich in native woods and trees for people and wildlife."

To realise all the environmental, social and economic benefits woods and trees bring to society, we:

- **Create Woodland** – championing the need to hugely increase the UK's native woodland and trees.
- **Protect Woodland** – fighting to defend native woodland, especially irreplaceable ancient woodland and veteran trees; there should be no loss of ancient woodland
- **Restore Woodland** – ensuring the sensitive restoration of all damaged ancient woodland and the re-creation of native wooded landscapes.

Management of the Woodland Trust Estate

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.

The following principles provide an overarching framework to guide the management of all our sites but we recognise that all woods are different and that their management also needs to reflect their local landscape, history and where appropriate support local projects and initiatives.

1. Our woods are managed to maintain their intrinsic key features of value and to reflect those of the surrounding landscape. We intervene in our woods when there is evidence that it is necessary to maintain or improve biodiversity, safety and to further the development of more resilient woods and landscapes.

2. We establish new native woodland for all the positive reasons set out in our Conservation Principles, preferably using natural regeneration but often by planting trees, 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. Where possible, we pro-actively engage with people to help them appreciate the value of woods and trees.

4. The long term vision for all our 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 natural and cultural heritage value of sites is taken into account in our management and in particular, our ancient trees are retained for as long as possible.

7. Land and woods can generate income both from the sustainable harvesting of wood products and the delivery of other services. We therefore consider the appropriateness of opportunities 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 encourage our woods to be used for 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. We maintain a network of sites for long-term monitoring and trials leading to reductions in plastics and pesticides.

10. Any activities we undertake are in line with our wider Conservation Principles, conform to sustainable forest management practices, are appropriate for the site and balanced with our primary objectives of enhancing the biodiversity and recreational value of our woods and the wider landscapes.

The Public Management Plan

This public management plan describes the site and sets out the long term aims for our management and lists the Key Features which drive our management actions. The Key Features are specific to this site – their significance is outlined together with our long, 50 years and beyond, and our short, the next 5 years, term objectives for the management and enhancement of these features. The short term objectives are complemented by an outline Work Programme for the period of this management plan aimed at delivering our management aims.

Detailed compartment descriptions are listed in the appendices which include any major management constraints and designations. Any legally confidential or sensitive species information about this site is not included in this version of the plan.

There is a formal review of this plan every 5 years and we continually monitor our sites to assess the success of our management, therefore this printed version may quickly become out of date, particularly in relation to the planned work programme.

Please either consult The Woodland Trust website

www.woodlandtrust.org.uk

or contact the Woodland Trust

operations@woodlandtrust.org.uk

to confirm details of the current management programme.

A short glossary of technical terms can be found at the end of the plan.

Location and Access

Location maps and directions for how to find and access our woods, including this site, can be found by using the following link to the Woodland Trust web-site which contains information on accessible woodlands across the UK

https://www.woodlandtrust.org.uk/visiting-woods/find-woods/

In Scotland access to our sites is in accordance with the Land Reform Act (of Scotland) 2003 and the Scottish Outdoor Access Code.

In England, Wales and NI, with the exception of designated Public Rights of Ways, all routes across our sites are permissive in nature and where we have specific access provision for horse riders and/or cyclists this will be noted in the management plan.

The Management Plan

1. SITE DETAILS

Urquhart Bay

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

2. SITE 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 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.

Although the two dominant canopy species are alder and ash, ash die back has quickly impacted this site. Since it's first discovery in 2019, around 80% of mature ash in the wood were showing significant infection in 2022 and management had to commence to begin to reduce tree risk around the path network. The understorey is rich and benefits from little browsing due to high visitor numbers. Bird cherry, hazel, blackthorn, white willow and goat willow, and smaller numbers of wych elm, gean, holly, rowan and elder are throughout the drier areas of the site. 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 but the now vigorous regeneration will be necessary to permit to act as a surrogate for alkaline loiving lower plant species with the likely loss of ash.

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. In the last Management Plan cycle, the Scottish Invasive Species Initiative had aimed to eradicate the most invasive of these but has been unsuccessful in doing so.

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, and spotted 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. 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. Although discussions and feasibility studies have assessed the suitability of replacing the bridge over the River Coiltie, no suitable way forward has been found for all parties concerned.

3. LONG TERM POLICY

The long term vision for Urquhart Bay Wood 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 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, cyclists, and horse riders, and link to the surrounding path network where possible. Interpretation will be maintained and renewed as required to highlight the conservation value of the site.

4. KEY FEATURES

4.1 f1 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. Through the recent significant impact of ash die back, the component of ash in the canopy will decline quickly, providing space for other native species and sycamore to occupy those gaps. In time, it is likely the high forest element of the site will be an alder/ sycamore canopy. 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. Sycamore will play a crucial role in the retention of the diversity of the lower plants in the wood, acting as a surrogate for the alkaline loving lower plants currently living on the mature ash stems. The woodland partially has boundaries with agricultural fields. Through low water levels and failing fencing, some localised damage to the site has been experienced. A new building development in Drumnadrochit has installed a SUDS scheme into the SAC without consent, with discussion ongoing with Nature Scot. This is likely to increase the rate at which non-native plant seed is introduced to the woodland. 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: Gonempeda flava, Hexatoma bicolor, Neolimnomyia batava, Gonomyia simplex and Tipula couckei; snipe fly: Rhagio notatus; hoverflies: Sphegina elegans; and muscid: Coenosia rufipalpis
(Stubbs 1976). Although Gonempeda flava and Neolimnomyia batava are widespread in parts of the Highlands, the Great Glen is still the northernmost known limit (on NBN Atlas). Coenosia rufipalpis may also be on the northern edge of its known range.

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.

Ash die back was discovered on a single young ash in summer 2019 and since then it has very quickly altered the ash component of the wood. Although devastating to the ash component of the wood, the creation of space and light provides an opportunity to plant under represented trees in the woodland, such as aspen and wych elm, to develop a more diverse canopy.

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.

The renewal of the Scottish Invasive Species Initiative (SISI) along with additional funding for a Project Officer to manage the project more effectively for 2023 to 2026 provides an opportunity to meaningfully tackle the key invasive non-native plants (Japanese knotweed, Himalayan balsam) at a catchment scale.

White butterbur sits outwith the SISI programme but has increased across the site significantly in the last five years. Working with Nature Scot will allow control of this species aiming to eradicate the species across the whole designated site area.

The accumulation of other non-native species 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. Snowberry is also present in patches and the suckering of this species would allow the shrub to colonise areas quickly. Alaskan 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, Nature Scot, 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, Nature Scot, Highland Council and the Community Council to monitor this situation, particularly given new flood prevention measures upstream, is essential.

Factors Causing Change

Ash die back resulting in the canopy of the wood being drastically altered.
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.

Diversity of lower plants will not be diminished despite the likely near loss of ash through a tolerance of suitable non-native tree species and a more diverse native canopy.

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

Retaining a diverse woodland structure:
• With existing sycamore regeneration, thin through the 13 hectares of sub compartment 1b to permit dominant stems to develop quickly. Across the stand, this will result in the removal of up to 30% of sycamore narrower than 10cm dbh. Work will be carried out over two years to minimise the stark visual impact.
• In new canopy gaps created through the loss of ash, to plant a combination of aspen, oak, goat willow, hazel, wild cherry with species numbers and mix selected based on canopy gap size, surrounding tree species, and dampness of ground. By the end of the plan period, to have planted up to 1000 trees. All planting to be carried out by volunteers and school pupils as far as possible.
• To retain standing dead ash for as long as practically possible, assessing ash loss each summer. When removing dangerous ash, when safe to do so, fell at a height that the standing stem can be left without concern of hitting path while ensuring the standing stem hosts lower plants for as long as possible while sycamore develops to a suitable size. When carrying out tree safety work, to remove a proportion of ash cut from the site to allow tree planting activities to be carried out effectively and reduce volume of material in gaps to allow natural regeneration to establish where

possible.
• To carry out repairs to the 220m section of stock fence on the north western boundary of the wood to prevent cattle damage in the wood. To annually assess the condition of all fencing and carry out repairs where necessary.

Ensuring a healthy native woodland ground flora:
As a minimum:
• To annually remove Himalayan balsam from the site, aiming to eradicate as far as practically possible.
• To annually stem inject Japanese knotweed from the site, aiming to eradicate as far as practically possible.
• To work with the Scottish Invasive Species Initiative (SISI) to reduce the presence of the two above species from the wood owned by Woodland Trust, the wider designated site and catchments of the River Enrick and Coiltie.
• To annually monitor the encroachment of White butterbur, Alaskan lupin and snowberry. With lupin, to remove any plants colonising beyond their current range of the bank edge of sub compartment 1c. With snowberry, to remove any regrowth from the areas removed in sub compartment 1b through the course of the last plan period. White butterbur control would only commence with appropriate external funding to meaningfully tackle the issue.

As an aspiration:
• Through external funding and collaboration with neighbouring landowners, Nature Scot, and SISI, to target Himalayan balsam, Japanese knotweed, and white butterbur across the two river catchments, with the aim of eradicating the three species within the life of the Management Plan, and having trained local volunteers or contractors able to mop up any new growth efficiently, knowing the site well.

4.2 f2 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 Loch Ness Hub 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 slightly 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 a 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. A recently recruited Guided Walk leader will be trialling a programme of walks in 2023 with the aim of having a programme of walks annually. The proactive Woodland Warden 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.

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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.

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. Feasibility studies and discussions in the last five years haven't found a practical outcome to this.

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 reviewed and 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. Managing the path network in a way that doesn't interfere with the hydrological integrity of the site is a constraint to the methods used and increases maintenance costs.

Although some addition interpretation on site may be desirable, the dynamic nature of the site and materials moving through in flood water make installation of anything beyond the entrance impractical beyond some short term signage for particular initiatives.

The site is well suited to guided walks and app-based information, where the public can self-lead themselves round a themed walk. Mobile phone signal and the 4G network has improved considerably in the wood in recent years making online interpretation options more feasible.

The next five years will present lots of opportunities for volunteer engagement and consideration to a regular work party alongside the work the Craigmonie Woodland Association do in the community could help with removal of Himalayan balsam, sycamore thinning, and tree planting.

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.

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 frequency 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). This will include tree risk management to reduce risk from failing ash.

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.
• To resurface the 80m section of path from the lower path junction to the confluence of the two rivers in 2023, ensuring the path does not interfere with the hydrological integrity of the wood.

• 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 addition to these infrastructure improvements:
• To organise at least one volunteer work party annually.
• To organise at least four guided walks in 2023 and review interest, aiming to hold at least two annually after that.
• Volunteers provided with information to provide to visitors to increase awareness of their rights of responsible access and how to avoid non compliance of the Scottish Outdoor Access Code where there are issues.
• To invite the Primary School and the High School to the site annually to help with site management as part of Rural Skills, John Muir Award, or other initiatives.
• Review site leaflet annually along with the other sites featured in the Loch Ness Woods leaflet and print sufficient to have a stock at the entrance to the wood and other locations leaflet is available.

5. WORK PROGRAMME

Year	Type Of Work	Description	Due Date
2023	WMM - General Site Management	Works associated with maintaining conservation and physical features within the sites such as boundary ditches, fences and walls, hedges,	July
2023	WMM - Invasive Plant Control	Works associated with the on-going management of invasive plants– such a repeat cutting and control treatments	September
2023	SL - Tree Safety Works - Zone B	Work associated with planned tree safety works alongside routes such as paths and rides within the woodland	November
2024	HF - Invasive Plant Control	Works associated with the control of invasive plants / vegetation posing a threat to a historical or cultural feature/ building or area – such as Japanese knotweed	July
2024	HF - Invasive Plant Control	Works associated with the control of invasive plants / vegetation posing a threat to a historical or cultural feature/ building or area – such as Japanese knotweed	September
2024	SL - Tree Safety Emergency Work	Work associated with unplanned emergency tree safety works – such as clearance of fallen trees/branches and associated repairs	October
2024	WMM - NR Management	Work associated with the ongoing maintenance / protection of areas of Natural Regeneration – such as fence and shelter maintenance	November
2025	WC - Tree Planting / Seeding	Works associated with tree planting / tree seeding for woodland creation sites	March
2025	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	March
2025	HF - Invasive Plant Control	Works associated with the control of invasive plants / vegetation posing a threat to a historical or cultural feature/ building or area – such as Japanese knotweed	July
2025	HF - Invasive Plant Control	Works associated with the control of invasive plants / vegetation posing a threat to a historical or cultural feature/ building or area – such as Japanese knotweed	September
2025	WMM - NR Management	Work associated with the ongoing maintenance / protection of areas of Natural Regeneration – such as fence and shelter maintenance	November
2025	SL - Tree Safety Emergency Work	Work associated with unplanned emergency tree safety works – such as clearance of fallen trees/branches and associated repairs	November

Year	Type Of Work	Description	Due Date
2026	WC - Tree Planting / Seeding	Works associated with tree planting / tree seeding for woodland creation sites	March
2026	HF - Invasive Plant Control	Works associated with the control of invasive plants / vegetation posing a threat to a historical or cultural feature/ building or area – such as Japanese knotweed	July
2026	HF - Invasive Plant Control	Works associated with the control of invasive plants / vegetation posing a threat to a historical or cultural feature/ building or area – such as Japanese knotweed	September
2026	SL - Tree Safety Emergency Work	Work associated with unplanned emergency tree safety works – such as clearance of fallen trees/branches and associated repairs	November
2027	WC - Tree Planting / Seeding	Works associated with tree planting / tree seeding for woodland creation sites	March
2027	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	March
2027	HF - Invasive Plant Control	Works associated with the control of invasive plants / vegetation posing a threat to a historical or cultural feature/ building or area – such as Japanese knotweed	July
2027	HF - Invasive Plant Control	Works associated with the control of invasive plants / vegetation posing a threat to a historical or cultural feature/ building or area – such as Japanese knotweed	September
2027	SL - Tree Safety Emergency Work	Work associated with unplanned emergency tree safety works – such as clearance of fallen trees/branches and associated repairs	November
2028	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	March
2028	WC - Tree Planting / Seeding	Works associated with tree planting / tree seeding for woodland creation sites	March

APPENDIX 1 : COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
1a	6.52	Alder species		Min-intervention	Mostly wet ground/exposed site, No/poor vehicular access within the site	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 and west. 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 species have become locally dominant. Himalayan balsam has been controlled in this compartment in the last few years through contractors and Japanese knotweed has gone from being absent to rare. White butterbur has quickly established in the south eastern corner of this compartment without control.						
1b	13.05	Ash		Min-intervention	Mostly wet ground/exposed site, No/poor vehicular access within the site	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). Ash Die Back was confirmed in this compartment in 2019 and very						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
quickly spread in the canopy with around 80% of all mature ash showing significant symptoms by summer 2022. 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 south eastern portion of the sub compartment, but has now been reduced to occasional plants but this has increased since 2020 in particular. Himalyan balsam is common on the banks of the Enrick in small clusters with little coordinated control in recent years. Piggy-back plant is occasional in the sub compartment and not controlled. White butterbur has become locally dominant in the eastern third of this sub compartment in recent years. A 2km path network provides access within the sub- compartment.						
1c	2.86	Alder species		Min-intervention	Mostly wet ground/exposed site	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. The ash in this sub compartment are looking particularly affected by Ash Die Back, perhaps due to the additional stresses of waterlogging. Japanese knotweed has, in the past, been locally dominant in the sub compartment, but is now occasional, although is re-establishing. Himalayan balsam was also frequent throughout, but has been significantly reduced since 2008 with an on-going programme of cutting and pulling but has quickly re-established in recent years. 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.

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