

Ulill PARK

National Park Biodiversity Action Programme 2018-2023

Contents

Contents	2
Foreword from James Stuart	3
Executive Summary	4
Wild Park 2020	5
Wild Challenge Action Plans	5
Project List	5
Tackling Key Environmental Threats	6
Poor Quality of Lochs & Rivers	7
Unsustainable Grazing Impacts	10
Invasive Non-Native Species	12
Climate Change Pressures	19
Appendix: Wild Park Project List	21

Foreword from James Stuart

The habitats and wildlife of the Loch Lomond & The Trossachs National Park are key to its success and popularity. The natural capital that the National Park provides underpins the social and economic value of the area, so it is vital that we protect and enhance it.

The National Park is a landscape which has been moulded not only by natural forces for millennia, but by generations of land managers, with both negative and positive impacts on our wildlife. It is therefore vital that we work with those who manage the land to ensure that we balance viable land use businesses, such as farming and forestry with creating more diversity and a landscape that is richer in nature, which continues to be internationally recognised and celebrated.

Wild Park is the biodiversity action programme for Loch Lomond & The Trossachs National Park and is the main delivery vehicle for our nature conservation work. It sets out the key environmental threats to our natural environment and how, by working with our delivery partners and others, we intend to tackle these. This will allow habitats to recover, the wildlife which they support to thrive and ecosystems to become more resilient to climate change. This will in turn drive an even greater range of economic, cultural and other benefits for generations to come.

Wild Park is also a long-term programme; we intend to focus for the coming years on the key threats which are currently having the biggest impact on our National Park. It will evolve as time goes on and will adapt to the dynamic environment in which we operate. It is a plan that we want people to know about, to value and to get involved in, and by doing so have a hand in shaping our collective natural legacy for the future.

James Stuart

Convener

Loch Lomond & The Trossachs National Park Authority

Executive Summary

Wild Park is the biodiversity action programme for Loch Lomond and The Trossachs National Park. First produced in 2014, the original plan, Wild Park 2020 set out a vision and a series of outcomes associated with protecting and enhancing biodiversity, along with five 'Wild Challenges', which were focuses for awareness raising and action.

Wild Park is delivered in partnership with the public, private and third sectors and is a commitment to delivering Scotland's international 'Aichi' obligations on the conservation of biodiversity as set out in the <u>Scottish Biodiversity Strategy</u>.

The programme has been reviewed to update its strategic and operational position, particularly in relation to National Park Partnership Plan 2018-23 priorities and targets. To date 65% of the original projects have been completed or are in progress.

The new, refreshed Wild Park further raises awareness of the importance that our natural capital plays in underpinning economic and social wealth in the National Park, and refocuses action around tackling the Key Environmental Threats which affect the National Park's biodiversity and natural environment. These Threats are:

- Human activities that lead to poor quality of some lochs and rivers, such as pollution and erosion from adjacent land use;
- Unsustainable levels of grazing from livestock and wild mammals, which reduces woodland and natural vegetation cover;
- Invasive, non-native species which have no natural control and displace native biodiversity;
- Climate change pressures which are rapidly changing the ancient patterns of nature.

The existing 'Wild Challenges' will be changed to reflect these threats and raise awareness of them and the need for collective action. There will be a new Wild Park Steering Group with an independent chair that will help to maintain a strategic overview of the development and delivery of actions and targets, and Working Groups to focus on tackling the Threats; a dedicated Wild Park Officer post; and the inclusion of private land management and community delivery partners.

Individual action plans for the Threats are listed, including priority areas for geographic focus of delivery over 2018-23 and a list of projects under the 4 threats have been provided to show the breadth of projects that come under the Wild Park banner.

Wild Park 2020

Wild Park 2020 is the biodiversity action programme for the Loch Lomond & the Trossachs National Park. It is the main delivery vehicle for nature conservation work by the National Park Authority, in conjunction with a variety of delivery partners.

WildPark2020 set out a vision and 25 year outcomes and has accomplished many biodiversity wins since its inception. We wish to continue this positive momentum by evolving and refocusing the Action Plan to help deliver the vision and targets for conservation and land management set out in the Partnership Plan. This will be best done by focussing efforts on tackling the 'Key Environmental Threats' to biodiversity and natural capital in the National Park. The following Action Plan sets out our focus until 2023.

Wild Challenge Action Plans

The Wild Challenges are an effective media tool and a focus for action, therefore the decision was made to continue the format focusing on the Key Environmental Threats (although how we term these challenges may change). This document sets out the objectives, indicators of success and geographic focus for the four threats and provides a framework for the continuation and development of projects that will allow us to tackle the threats.

Wild Park Project List

The Project List holds the detail of how we are going to achieve the objectives set out in the Action Plans below. It shows the delivery partners involved, the resources committed and required and the intended timescales.

A summary of the projects can be found in the Appendix.

Tackling Key Environmental Threats

The health of an ecosystem or habitat is fundamental to their function and the benefits that they can provide. The natural environment of the National Park faces many threats, mostly resulting from human impacts or resulting pressures, but four environmental threats are considered to be the key pressures on the National Park's biodiversity and natural capital. These threats are also recognised at a national level¹. They are:

> Poor quality of some lochs & rivers

Negative impacts on freshwater and marine water bodies from problems such as pollution from surrounding land uses.

> Unsustainable levels of grazing

Unsustainable levels of wild and domesticated grazing and browsing animals in some upland and woodland areas, leading to reduced tree cover and the erosion of soils, which are important carbon stores.

> Invasive, Non-Native Species

The spread of invasive non-native species, which displace our rich native wildlife.

> Climate Change Pressures

The impacts of climate change leading to warmer, wetter weather patterns and a subsequent increase in flood events, major landslides and rapid shifts in natural ecosystems.

Tackling these threats must be a collective priority; our aim is to work towards overcoming these threats and achieving a vision of improving ecosystems, in order to create a more sustainable long term future for both people and nature.

Each Key Environmental Threat is outlined in further detail and the objectives and indicators of success to achieve by 2023, along with the geographic focus of efforts are listed. Where appropriate designated sites will be prioritised for action as these are our most important sites for biodiversity, with conservation effort focusing on actions which tackle sites or features which are classed as being in unfavourable or deteriorating condition.

¹ <u>https://www.gov.scot/Publications/2015/06/8630</u> - Pages 8-9 The Route Map sets out the priority work over the next five years to help us deliver the '2020 Challenge for Scotland's Biodiversity' to meet the international Aichi Targets for biodiversity. Action is co-ordinated into six 'Big Steps for Nature', under which priority projects are identified which focus on delivering benefits for biodiversity.

Poor Quality of Lochs & Rivers

There are 92 river and loch water bodies that fall completely or partially within the Loch Lomond and the Trossachs National Park and the 5 coastal water bodies which partially border the National Park.

Freshwater

The major river systems in the National Park are the Tay, Forth & Teith and Lomond catchment. There are also many small burns and rivers draining directly into the coast and narrow sea lochs on our western edge. They all provide a wide variety of wildlife habitats both in-stream and marginal, and can act as important wildlife corridors. As well as providing an important biological resource, they influence the characteristics of the surrounding landscape, supply water for domestic, agricultural and industrial use and provide opportunities for recreation.

Their ability to function as a vital part of National Park ecosystems is affected by many different pressures, such as pollution from surrounding land uses including agriculture and forestry operations (felling and roading), bank erosion control measures, flood defences and alterations to improve drainage so their ability to adapt to changing conditions is often much reduced. The restoration and enhancement of degraded waterbodies and peatlands, in order to aid their water and carbon storage natural functions, is highly important, as is their role as major sources of drinking water and hydro-electricity generation.

Scottish Environment Protection Agency (SEPA) produces an annual Water Framework Directive (WFD) Classification for all the water bodies in Scotland. Currently 44% of waterbodies within the National Park have been given the status of either high or good overall² condition by SEPA which is below the national average of 62%.

There are healthy populations of species such as Atlantic salmon, River lamprey and Otter. A number of physical barriers such as weirs are present in the Teith and Loch Lomond catchments, which are currently preventing or delaying migration of species such as Atlantic salmon and River lamprey to their spawning habitats. There are fragmented populations of Water vole present in the National Park; however the Trossachs Water Vole Project which has had notable successes over the last 10 years following re-introductions which has seen the species spread its range.

Stretches of several rivers within the National Park are designated or lie within designated sites, such as the River Tay SAC, River Teith SAC, Endrick Water SAC and Loch Eck SSSI.

Objectives by 2023

- Working with land managers to reduce point source and diffuse pollution and /or nutrification entering water bodies, fencing off riparian corridors to livestock)
- Explore opportunities to pilot and demonstrate re-naturalisation of river channels in Strathard

² Overall Condition – includes 5 categories and is based on measurements of chemistry, hydrology (changes to water levels and water flows) morphology (changes to the beds, banks and shores of water bodies) and assessment of invasive non-native species (INNS).

- Work with partners to re-naturalise rivers, removing artificial barriers, carrying out river bank protection/ restoration and re-connecting and re-watering back channels
- Work with partners to monitor current health of fish populations
- Work with Partner to deliver Education in schools and the community to highlight aquatic biodiversity
- Plant riparian woodland to enhance aquatic ecosystems, strengthen woodland habitat networks, and help manage flooding

Indicators of Success by 2023

• Increase the percentage of freshwater water bodies achieving at least good ecological condition the 2016 baseline of 44% to 59% by 2023

Geographic Focus

We will concentrate on the areas where we can have an impact on the condition by changing land management practices and where SEPA has the condition set as being Moderate, Poor or Bad, such as Lochan Larig SSSI (Glen Ogle) and Lake of Menteith SSSI.

Designated sites will be a key focus.

- FCS
- FES
- Forth Rivers Trust
- Land Manager Representative
- LLTNPA
- Loch Lomond Fisheries Trust
- SEPA
- SNH

Marine

The National Park in Cowal includes 39 miles of coastline around three sea lochs: Loch Long, Loch Goil and the Holy Loch. Upper Loch Fyne and Loch Goil, some of which is in the Park, are Marine Protected Areas.

This marine environment within the National Park includes the intertidal zone and is extremely rich in biodiversity. The National Park coastline has a range of habitats including rocky shores, cliffs, small areas of salt marsh and mudflats rich in marine invertebrates, which in turn support a range of wading birds and also provides great opportunities for people who live and visit the area to enjoy the wildlife found along the seashore and in marine waters.

Objectives by 2023

- To raise awareness of marine litter and pollution affecting the National Park's coastal environment and communities
- To produce and begin implantation of a strategic plan that addresses how to tackle the problems with marine litter and pollution in the Sea Lochs of the National Park

Indicators of Success by 2023

- Increase in awareness of marine litter and pollution affecting the National Park's coastline
- Increase the number of NPA/ Marine Conservation Society beach clean litter picks using volunteers and community members
- Increase the number of businesses, organisations and communities within the marine environment of the Park engaged with the issues of litter marine and pollution
- Zero Waste Scotland Litter Prevention Action Plans and Community Litter Prevention Action Plans (as appropriate)
- Outreach and education initiatives in communities and schools are encouraged as a means of preventing the creation of litter

Geographic Focus

The coastline around the three sea lochs: Loch Long; the Holy Loch; and [Upper Loch Fyne and] Loch Goil MPA.

Where appropriate designated sites will be a key focus.

- Clyde Marine Planning Partnership
- Land Manager Representative
- LLTNPA
- Marine Conservation Society
- Marine Scotland
- SEPA
- SNH

Unsustainable Grazing Impacts

On our moorlands and in our woodlands, domesticated and wild herbivores, including sheep, cattle, deer and feral goats are widespread. As well as being central to the land management economy, they are also part of the National Park's cultural and natural heritage. Unsustainable levels of wild and domesticated grazing animals in upland and woodland areas can however lead to loss of species in the ground flora, simplified woodland structure without shrubs or climbing species, reduced tree cover and the erosion of soils, which are important carbon stores.

The condition of habitats out with upland Designated Sites is largely unknown and SNH has been working with Deer Management Groups to collect data to assess the level of herbivore impacts on habitats, such as dwarf shrub heath and blanket bog.

There are 37 out of a total of 67 sites (some of them overlapping, i.e. SSSIs and SACs) where the designated features are under pressure from over grazing. But there are also 5 sites where designated features are under-grazed proving that this is a complex issue that needs careful collaborative management.

The Native Woodland Survey of Scotland (NWSS) published in 2014 identified the level of herbivore impacts within native woodlands. A low or medium level of herbivore impact is natural and required for sustainable woodland ecosystems and a low level of impact indicates natural regeneration is unlikely to be inhibited by herbivores and in general this is the ideal level of optimum long term woodland condition.

Within the National Park there are 5,787 ha (NWSS 2014) of native woodland of which 5,063 ha has some herbivore impacts recorded. In the table below, the level of impacts recorded in the National Park is compared with the national (Scottish) average.

Herbivore Impact Category	National Park	Scotland
Low	3%	14%
Medium	60%	53%
High	17%	13%
Very High	21%	20%

A sustainable woodland ecosystem requires herbivore impacts to be in the low and medium categories; the national average is 67% in these 2 categories. The woodlands within in the National Park fall below this average at 63% demonstrating a higher level of unsustainable grazing compared to the national level.

Objectives by 2023

- Work with Deer Management Groups to gain a greater understanding of the wild herbivore grazing pressures throughout the National Park
- Increased number of land managers involved in habitat impact assessments and using the data to inform management decisions
- Decrease the number of designated sites with the pressure recorded as over-grazing from wild or domesticated herbivores, to be monitored via Herbivore Impact Assessments (Site Condition Monitoring) in future

- Decrease the percentage of native woodlands with High or Very High NWSS Herbivore Impact categories
- Improve upland and woodland condition by support rural businesses to achieve viable and sustainable grazing livestock levels using SRDP or equivalent

Indicators of Success by 2023

- Park wide habitat impact assessments occurring in upland and woodland habitats
- Number of native woodlands in the high and very high herbivore impacts categories reduced or management in place to ensure there will be a reduction in impacts

Geographic Focus

Areas with designated sites under pressure from over grazing, such as Ben Lomond SSSI, Meall na Samhna SAC and Conic Hill SSSI, and woodlands with High or Very High NWSS Herbivore Impact categories, such as the woodlands around Loch Lomond SAC, Coille Coire Chuilc SSSI, in Balquhidder Glen and on the south side of Loch Earn (and the areas in between). Herbivore management will also be an important element in the implementation of the Greater Cononish Glen Management Plan.

Designated sites will be a key focus.

- Deer Management Groups &/or Land Manager Representative
- LLTNPA
- RSPB
- Scottish Rural College
- SNH

Invasive Non-Native Species

The National Park has several botanical and mammalian invasive non-native species (INNS) which are having an adverse impact on our native biodiversity. The species that are being targeted for control include:

- Rhododendron (*Rhododendron ponticum*);
- Riparian: Japanese knotweed, Himalayan balsam, Giant Hogweed and American Skunk Cabbage; and
- Mammalian: Grey Squirrel and North American mink.

Rhododendron

The presence of *Rhododendron ponticum* is a major cause of designated native woodlands being classified as in unfavourable condition within the National Park – there are 35 designated sites (some of them overlapping, i.e. SSSIs and SACs) with designated features are affected by invasive species. Ten³ of them are affected by rhododendron.

Rhododendron, if left untreated, can inhibit the growth of all vegetation growing beneath its canopy, and eventually out-compete nearly all native tree and shrub regeneration. It casts dense shade and produces poor quality leaf litter, impacting on water quality and reducing invertebrate abundance. Re-colonisation with native species after removal of Rhododendron is slow, resulting in a loss of native biodiversity and therefore the value of the woodland.

The NWSS in 2014, stated that the National Park had 5,787ha hectares of native woodland, with an estimated 7% (396 ha) being adversely affected by the presence of rhododendron. This may seem a small percentage, however, the task is a large and difficult one and key to controlling rhododendron is colony scale control which is co-ordinated, if required, over multiple land holdings.

Objectives by 2023

- Active Management of Rhododendron in all ten designated sites by 2023
- Expand control of rhododendron to create a buffer zone to protect all areas under current active management, such as designated sites
- All sites within the National Forest Estate will remain in active management
- NPA and partners will identify priorities and opportunities for control programmes on a landscape scale, through both grant funding and officer time.
- Work with partners, such as PlantLife, to monitor control sites that will produce data on clearance and habitat restoration that can be used by land managers to inform future management.
- Ensure all long term forest plans detail management of invasive rhododendron in line with the FCS publication⁴.

Indicators of Success by 2023

• Reduction in the number and size of colonies of Rhododendron in the National Park

Geographic Focus

Designated sites with key rhododendron pressures: Loch Lomond catchment including Inversnaid and Loch Arklet, Loch Katrine catchment and Strathard, Hell's Glen and Craighoyle SSSIs.

- FCS
- FES
- Land Manager Representative
- LLTNPA

³ Ben A'an and Brenachoile Woods, Boturich Woodlands, Craig Royston Woods, Cuilvona and Craigmore Woods, Fairy Knowe and Doon Hill, Glen Loin, Inchlonaig, Inchtavannach and Inchconnachan, Stronvar Marshes, and Trossachs Woods

⁴ Managing invasive and non-native forestry species.

- Loch Lomond & The Trossachs Countryside Trust
- SNH

Riparian INNS

The presence of Invasive Non-Native Species within the riparian (waterside) zone can inhibit access and can reduce ecological connectivity due to the robust, structural growth of many INNS and the possibility of disturbance and spread.

The removal of INNS allows smaller native plants to recolonise including grasses, ferns and flowering plants. Re-colonisation of native species will result in an increase in native biodiversity and has the potential to encourage the expansion of vulnerable native species.

This Working Group aims to prevent, monitor and control the introduction, spread and extent of INNS that affect the riparian zones of the rivers and lochs in a sustainable manner on a catchment-wide scale. The focus will concentrate primarily on the control of invasive nonnative plants: Giant Hogweed; Japanese Knotweed; Himalayan Balsam; and American Skunk Cabbage. Coordination will be included where overlap with the Rhododendron Working Group occurs in the riparian zones.

It is recognised that complete eradication of INNS may not be attainable due to the high risk of re-infestations. The strategy is to manage INNS so that they do not severely affect the riparian corridor of the Park's water courses.

Objectives by 2023

- Reduction in riparian INNS that is negatively affecting water bodies in the National Park along with active control, of any spread, prioritising designated sites
- Control programmes are underway at a catchment level to remove known riparian INNS from the Upper Tay, Upper Forth, Teith, Loch Lomond, Endrick, Loch Eck and Loch Goil catchments, and ensure management of contamination downstream
- Continue to use agreed monitoring and recording process which will also report on indicators of success
- Land managers, fishery trusts, government agencies and volunteers are working together to reduce the extent and damaging impact of these species and wherever possible, these species will have been removed completely
- Rapid response measures are in place for removal and control to any new outbreaks
 of riparian INNS
- Trained volunteers and land managers involved in projects to control riparian INNS.
- Raising awareness of how to avoid spreading riparian INNS

Indicators of Success by 2023

- Map locations of INNS and use treatment and survey data to devise an overarching INNS strategy
- Action Plans in place for all major catchments to tackle riparian INNS
- Reduce the number of riparian designated sites in unfavourable condition due to INNS
- Increase number of trained volunteers and/or land managers

Geographic Focus

- Tay
- Forth
- Lomond
- Endrick
- Eck

• Goil

Priority areas will be designated sites, however working at the top of the catchment and working downstream is the most efficient and effective method of control.

- Argyll Fisheries Trust
- FES
- Forth River Trust
- Land Manager Representative
- LLTNPA
- Loch Lomond & Trossachs Countryside Trust
- Loch Lomond Fisheries Trust
- SEPA
- SNH

Mammalian INNS

Non-native animals are having a significant negative impact on our native ecosystems, being responsible for the decline of native species by direct predation, carrying diseases and viruses to which our native species have no resilience and out-competing our native species. In combination with direct control of the mammalian non-native species we want to undertake habitat restoration that will encourage the return of our native wildlife.

The work that is being carried out in the National Park complements that <u>Scottish Invasive</u> <u>Species Initiative</u> (SISI) which is led by Scottish Natural Heritage (SNH) and is funded by the Heritage Lottery Fund, SNH and by in-kind support from project partners and volunteers. This initiative is a 4-year partnership project set up to tackle invasive non-native species alongside rivers and watercourses in northern Scotland.

The Working Group will concentrate primarily on the control of invasive non-native animal species – Grey Squirrel and North American Mink, which will have beneficial results to the Red Squirrel and Water Vole populations, respectively.

Objectives by 2023

- Reduce the population and re-colonisation of grey squirrel and North American mink in National Park through a network of community led groups and land managers continuing responsible trapping effort in vulnerable areas.
- Retain effective grey squirrel and mink control in areas where populations have declined to ensure densities do not regain.
- Land managers and local communities involved in the reporting of INNS species
- Continue to promote recording of squirrel sightings through SWT site
- Increased presence of water voles found during annual surveys
- Improved habitats from native species, such as better connected native woodlands and more naturalised water courses
- Provide information on responsible land management to encourage land managers to have good forest and riparian management that benefits native species, such as creating water bodies, reducing bank side poaching, planting the correct tree species etc.
- Collaborate with partners to deliver native mammal conservation education throughout the park through public events, interpretation, social media etc.

Indicators of Success by 2023

- Increased sightings of Red Squirrels
- Increased population distribution of water voles
- Annual increase in volunteer involvement in surveys
- Continued and increased collaboration with land managers to reduce the presence of mammalian INNS but also to improve habitats to favour native species
- Increase in active volunteers (monitoring and control)

Geographic Focus

- Riparian corridors, such as the Callander area on the River Teith
- Frontier between Red & Grey squirrel populations in areas such as along the west side of Loch Lomond from Helensburgh up towards Tarbet/Arrochar and on the east side of the park from Stirling up towards Callander.

- FCS
- Forth Rivers Trust
- Land Manager Representative
- LLTNPA
- RSPB
- Scottish Wildlife Trust (SSRS)
- SNH

Climate Change Pressures

We need to ensure that our ecosystems in the National Park are resilient to the effects that climate change is bringing to our native biodiversity, and wider environment. These ecosystems can also help mitigate climate change by maintaining carbon stores, sequestering carbon, and storing surface water. The National Park's peatlands holding an estimated 20 million tonnes of carbon and our forests hold another 2.5 million tonnes.

Local land managers will need to adapt to a changing climate and can help mitigate against it by embracing technologies and practises that capture carbon. By taking a more integrated approach to land use planning, we can also help deliver significant adaptation to and resilience against climate change for our communities and wildlife.

The National Park is seen as a place to demonstrate and pilot innovative approaches to managing these habitats with partnerships between private and public land interests, industry, public bodies, third sector organisations, and local communities.

Over decades our moorlands have been drained and eroded. We need to block those drainage systems, halt the erosion, and cover bare peat to retain water in the hills for longer. This can reduce the risk of flooding in the lowlands and move towards restoring healthy peatlands that are capturing, rather than emitting, carbon-based greenhouse gases. Our woodlands and forests are important stores of carbon, timber, and biodiversity and an expansion of woodlands will increase the value of these natural resources. These habitats provide huge and multiple public benefits. Investment in this natural capital is a key target at a local, regional and national level.

Objectives by 2023

- Create and begin implementation of Trees & Woodland Strategy for the National Park
- Increased uptake of forestry grant schemes through Integrated Land Management Advice
- Improve upland and woodland condition by support rural businesses to achieve viable and sustainable grazing livestock levels using SRDP or equivalent
- Increase carbon capture through expansion of woodlands and forests and improve management of existing areas
- Reduce carbon and water loss through restoration of peat bogs and raise awareness of the climate change value of peatlands
- Piloting the use and management of trees, woodlands, peatlands and waterways upstream to reduce risk of downstream flooding
- Working with land managers to protect and enhance soils, and remove INNS in order to increase resilience to climate change impacts
- Involvement with the projects to look at natural flood management options to alleviate flooding in Aberfoyle, Callander and in the Loch Lomond catchment
- Increase public's understanding and appreciation of the value of peatland habitats by working in partnership to host public events and talks, visitor centre displays and increasing volunteering opportunities to get involved in improving peatland habitats e.g. constructing peat dams, removal of INNS, surveys (e.g. juniper), mountains & the people project.
- Promote management of designated sites which move these protected areas towards favourable condition

Indicators of Success

- Percentage of peatland and woodland under positive management
- Increase area (Ha) of peatland restored
- Increase area (Ha) of woodland expansion
- Increase number of people engaged in peatland restoration
- Increase number of people engaged in woodland creation and management through training or demonstration days

Geographic Focus

- Areas with degraded peatland, such as areas surrounding Balquhidder Glen and to the east and west of Loch Lomond, including Strathard
- Areas of native woodland created or where woodland condition can be improved by reducing grazing or removing INNS, such as the woodlands around Loch Lomond, in Balquhidder Glen, and on the south side of Loch Earn
- Climate change measures will also be investigated in the implementation of the Greater Cononish Glen Management Plan

Designated sites will be a key focus.

- FCS
- FES
- Land Manager Representative
- National Trust for Scotland
- Peatland ACTION
- SEPA
- SNH
- Woodland Trust Scotland

Appendix

Wild Park Project List - Ongoing

Kev	Project Title	Project Description
Environmental Threat		
Climate Change	Rest & Be Thankful A83 Tree Planting	The aim of this project is to establish approximately 100 ha of native woodland with the objective of helping to stabilise the hill slopes above the A83 at the Rest & be Thankful.
Herbivore Impacts	Gleann a'Chlachain Mountain Woodland - Biodiversity Monitoring Project	This project will see what impact the establishment of mountain woodland has had on the biodiversity of the glen.
Herbivore Impacts	Glen Dochart Wader Project	This project aims to stabilise and ideally increase the population of breeding waders.
Herbivore Impacts	Habitat Improvements for Priority Species	The deployment of cattle into the Loch Katrine area as a grazing tool for habitat management will help improve the ecological diversity of both woodlands and open areas.
Herbivore Impacts	Glen Finglas Heather Moorland Management	This project is a Scotland Rural Development Fund five year funded project which seeks to manage the habitat of the open hill to restore heather.
Herbivore Impacts	Montane Scrub Restoration - The Great Trossachs Forest	This project will involve initial surveys to assess the extent of this existing habitat across The Great Trossachs Forest Project Area.
Herbivore Impacts	Natural Habitat Regeneration on Lower Ptarmigan	This project aims to increase natural regeneration of species such as dwarf willow over a 60 ha area on Lower Ptarmigan.
INNS: Mammalian	Trossachs Water Vole Project	This project is a continuation of the successful Trossachs Water Vole Reintroduction Project and will continue to monitor the reintroduced populations and the habitat management and quality of the project area.
INNS: Multiple	Control of INNS - The Great Trossachs Forest	This project aims to eradicate invasive non-native species across The Great Trossachs Forest Project area.
INNS: Riparian	Endrick and Blane INNS	This project aims to reduce the number of riparian invasive non-native species along the riverbanks of the Blane and Endrick.

Key Environmental Threat	Project Title	Project Description
Waterbodies Condition: Fresh	River Fruin Salmon Project	This project aims to firstly establish the current carrying capacity within the River Fruin for salmon. The subsequent stages of the project aim to restore the salmonid habitat.
Waterbodies Condition: Fresh	Tay Salmon in the Classroom	Children in primary schools across the Tay catchment area learn about salmon ecology, conservation, threats and salmon related economics.
Waterbodies Condition: Marine	Beachwatch	This nationwide project supports local individuals, groups and communities to care for their local shoreline with assistance from the National Park Ranger team and National Park volunteers where required.

Project List – Proposed

Key Environmental Threats	Project Title	Project Description
Climate Change	Peatland ACTION	Restoring peatland habitat which has been drained or damaged will help ensure these areas remain as long term carbon sinks which will help to reduce greenhouse gas emissions into the atmosphere.
Climate Change	Small Tree/ Woodland Planting Grant	This project will support small scale native plantings that would not receive any grant aid through the normal grant routes.
Herbivore Impacts	East Loch Lomond Land Management Forum (ELLLMF)	This project will look to support Land Managers within the Forum area to collaborate on managing grazing impacts of all herbivores.
Herbivore Impacts	Lonely Tree Project	Protecting incredibly rare mountain trees and 'sub-montane scrub' habitats, through protective fencing, planting and management of wild deer and sheep in the Breadalbane area.
Herbivore Impacts	Pollochro Woods SSSI	Work with RSPB to reduce herbivore impacts from feral goats and deer.
Herbivore Impacts	Upland and Woodland Habitat Impact Assessments with Deer Management Groups	This project will support the engagement and training of deer managers in understanding the impacts of herbivores, both wild and domestic, on the condition of the upland and woodland habitats.
Herbivore Impacts	Wild Strathfillan	Building on work associated with the Greater Cononish Glen Management Plan and the nearby Coille Coire Chuilc Caledonian Pinewood NNR, expand the rare woodland resource of this area, through management of grazing animals and associated native planting, involving local communities and landowners in delivery.

Key Environmental Threats	Project Title	Project Description
INNS: Mammalian	Mammalian INNS Mapping	Produce distribution maps of red & grey squirrels and water vole, continue to collate and verify national public sightings records.
INNS: Mammalian	Mammalian INNS Reporting	Monitoring of Grey squirrel and Mink by relevant means (sightings and rafts) by collaborating with local wildlife recording groups, community groups and volunteers.
INNS: Multiple	NPA Estate INNS control	Control programmes are underway on all known invasive non-native species on land owned by the National Park Authority, a full survey of NPA owned land is planned.
INNS: Rhododendron	Rhododendron Awareness Raising for Residents	Raise awareness and encouraging behaviour change in residents and visitors to the National Park. This will be delivered through targeted events prioritising designated sites.
INNS: Rhododendron	Wild Trossachs Recovery Project	This project would deliver a landscape scale partnership Rhododendron and riparian invasive non-native plant species control programme in the wider Trossachs area.
INNS: Riparian	FINNS	This project will control the riparian invasive non-native species on the River Forth and Teith in partnership with Forth Rivers Trust.
INNS: Riparian	INNS location Collation and Mapping	Collation and mapping of existing data of known riparian invasive non-native species locations and the evaluation of existing management.
Multiple Threats	Callander Landscape Partnership	The "Restore" theme of the CLP focuses on conservation and land based projects such as dry stone walling, fencing and habitat restoration.
Multiple Threats	Greater Cononish Glen Management Plan	This management plan for Cononish Glen is being implemented to deliver environmental benefits in the glen surrounding the Cononish Gold Mine
Multiple Threats	Saving the Lomond Rainforest	Project aimed at ensuring a sustainable future for our best native forests into by managing invasive non-native species (Rhododendron) and grazing animal impacts
Waterbodies Condition: Fresh	Cool Rivers! On the Balvaig	This project would seek to reduce trampling and erosion damage to river banks from livestock along the River Balvaig to protect the river and wildlife within it.
Waterbodies Condition: Fresh	Cool Rivers! On the Larig	Riparian habitats improvement such as fencing off livestock from entering water, introducing watering alternatives, planting trees and brash banking. Installation of temperature logging system and monitoring network.
Waterbodies Condition: Fresh	Flood Management Communications Campaign	Communications campaign regarding natural flood management and the positive impacts this can have on the environment and communities affected by flooding.
Waterbodies Condition: Fresh	Lake of Mentieth Improvement Event	Event to highlight diffuse pollution to local land managers in partnership with Soil Association and SEPA.
Waterbodies Condition: Fresh	Strathard Initiative	The initiative will trial using an 'nature-based solutions' approach to inform decisions about land and water management as promoted in the Scottish Government's Land Use Strategy and Biodiversity Strategy.
Waterbodies Condition: Marine	Communications Campaign about Marine Litter &	Communications Campaign about Marine Litter & Plastic - raising awareness of the increasing amount of marine litter, the impacts this has on the marine environment and local

Key Environmental Threats	Project Title	Project Description
	Plastics	communities, and how this might be tackled.
Waterbodies Condition: Marine	Marine litter and pollution strategic plan - Cowal Coastal Action	Work with partners to produce a strategic plan to tackle marine litter and pollution, including spatially mapping the litter sinks around the National Park's coastline.