



Water of Leith Management Plan 2020-2030

Prepared for

Water of Leith Action Group

By

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Acknowledgements

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Contents

- 1. Introduction**
- 2. Scope and Structure of the Plan**
- 3. Overview of The Water of Leith**
 - 3.1 Facts and Figures - geography, history, wildlife and designation**
 - 3.2 Key Issues and Pressures**
 - 3.3 Water of Leith Action Group, Stakeholders and Partners**
 - 3.4 Current Management Initiatives**
- 4. The Management Plan**
 - 4.1 Vision**
 - 4.2 Aims and Strategic Objectives**
 - 4.3 Action Plans to deliver Objectives**
 - **Water Action Plan**
 - **Habitat and Species Action Plan**
 - **Access and Recreation Action Plan**
 - **Engagement, Education and Interpretation Action Plan**
 - **Heritage Action Plan**
 - **Landscape and Geodiversity Action Plan**
 - **Planning, Development & Resilience to Climate Change Action Plan**
- 5. Implementation and Monitoring**
- 6. Appendix**

1. Introduction

This is a management plan for the Water of Leith. It has been designed to last for 10 years from 2020 to 2030 and covers all the major uses and issues related to the river. The action plan is designed to deliver environmental improvement for the Water of Leith whilst balancing the needs of all stakeholders and user groups and working within the legislative framework of the Water Framework Directive. The plan has been prepared for The Water of Leith Action Group (detailed in section 3.3), with funding from most partners in the group, and produced by Helen Brown, Trust Manager at the Water of Leith Conservation Trust. Other stakeholders have been consulted and involved in the production of the plan. It has been agreed by key stakeholders that the plan should be a working document which includes monitoring and flexible enough to respond to funding opportunities, changes in key organisations and legislation.

A management plan is needed to provide direction for all stakeholders and landowners over the future management of the river, especially in the context of a changing climate and increasing pressure on the resource from development and by user groups. The setting of objectives and priorities will give clarity to the programming of works along the river and a unified and agreed plan will mean greater support for all stakeholders. Defining roles and responsibilities and reporting on performance against objectives will continue to deliver a cohesive approach to the river's management.

Seven topic areas have been identified and each topic contains an aim, a list of objectives and a series of SMART actions, with partners involved listed against each action.

The plan is based on existing published and readily accessible information and follows on from the 2010-2020 Water of Leith Management Plan. A list of key organisations contacted during the preparation of the plans is featured in Appendix A along with the details of the public consultation carried out in March 2020. **This document takes account of comments raised during the consultation exercise, and the wishes of stakeholders who participated in the production of the plan.**

2. Scope and Structure of the Plan

The plan has been written for groups and organisations who are already involved with the management of the Water of Leith, and follows on from the 2010-2020 Water of Leith Management Plan. Like the previous plan this is 'action led' rather than aspirational, however aspirational actions have been included in certain areas where there is a strong statutory or community will to see projects achieved.

The plan focuses on the management of the river from where it rises in the Colzium Springs to where it enters Leith docks at the Victoria Swing Bridge. It considers some aspects of the management of Harperigg Reservoir and the Bavelaw Burn, a major tributary of the river. However the main concentration of issues and management actions focuses on the urban section of the river from Balerno to Leith, the section which also contains the Water of Leith Walkway.

Section 3 of the plan includes an overview of the management issues facing the river and the pressures which need action. These have been identified through consultation with key partners and stakeholders, and a review of the 2010-20 topic papers (which can be seen at www.waterofleith.org.uk/management) This section gives some facts and figures about the river and a brief overview of the rivers history, geography, ecology, statutory designation, and ecosystem services. It also provides an update from the Action Group members, key partners, and identifies current projects, plans and strategies which influence the actions within this plan.

Section 4 describes the overall vision, aims and objectives for the management of the Water of Leith. Seven topic areas have been selected and each topic area has an overall aim and a series of objectives relating to the aim. To achieve the objectives, specific actions have been written and partners involved identified (if more than one group or agency is involved a lead will be nominated in bold).

All actions will be coded and numbered according to their area within the 7 topic sections of the plan;

W – Water

B – Habitats & Species

R – Recreation and Access

E – Engagement and Education

H – Heritage

L – Landscape and Geodiversity

P – Planning, Development and Resilience to Climate Change

Each Action will also be given a corresponding colour.

Green - Ongoing action and/or statutory responsibility likely to continue through the life of the plan

Blue Short Term – Year 1 to 2

Yellow Medium Term – Years 3 to 5

Purple – Long Term following review in 2025 Year 5 +

All actions which are subject to funding, resources and/or partnership agreement will be given a * which can be removed once funding / agreements have been secured.

For example B8* Investigate additional locations for new woodland plantings in the upper catchment is action 8 in the Habitats and Species Section, scheduled for years 3-5 subject to funding / resources / agreements being available.

So actions can be grouped by topic area (letter) or time for implementation (colour).

Finally each action will be set targets or milestones which can be reported on twice yearly at Water of Leith Action Group meetings. Green – Ongoing action and/or statutory responsibility will only be reported on if there is a significant change or event which requires the Action Groups attention.

3. The Water of Leith, its issues and pressures

3.1 Facts and Figures - geography, history, wildlife and designation

The river drains the north western slopes of the Pentland Hills and has a catchment area of 117km² and the total length of the main stream is 31.7km. The source of the Water of Leith is at the Colzium springs on the North side of the Pentland Hills. It has a number of tributaries, of which the most significant is the Bavelaw Burn, which drains Threipmuir and Harlaw Reservoirs, others include Poet, Murray, and Stank Burns. Around 70% of the catchment is rural, with rough grassland and moorland forming the major land use for around half of this area. Less than 5% of the rural area is woodland and forest. On its route the river passes through the former milling villages of Balerno, Currie, Juniper Green and Colinton, into the city at Slateford, Roseburn, Dean Village, Stockbridge and Warriston to its outflow into the Firth of Forth at Leith. Its journey can be followed for 12 ³/₄ miles (18 km) from Balerno to Leith along the Water of Leith Walkway. The Walkway passes through many sites of historic and environmental interest, and offers a range of recreational opportunities including walking, cycling, angling and bird watching. The Walkway is managed by City of Edinburgh Council's Natural Heritage Team.

The ability of the Water of Leith to provide water, power, disposal facilities and safe mooring at its mouth, means that it has been actively used for many hundreds of years. This has changed flow characteristics and water quality from what would be expected in a “natural” river. Above Harperrig Reservoir the river is still relatively natural in form, but from the Reservoir downstream the river is considered to be “heavily modified”.

By 1791 there were 76 mills along the Water of Leith which were used for a variety of industries including grinding grain, wood, spices and snuff; paper making; washing and waulking (fulling) cloth;

tanning hides; and cutting timber and stones. Weirs and mill lades were constructed to provide adequate water for the mills. In the mid 1800s the flow was further altered through the tapping of the headwaters to provide a clean water supply for Edinburgh and the consequent construction of Harlaw, Threipmuir and Harperrig reservoirs, which ensured continuity of water supply in the river for mill owners. Throughout the 20th Century the number of mills has declined, to the point where there are no working mills left on the river. Many of the features associated with the mills have also degenerated. Some weirs do remain, but in general these are not maintained. In recent years the use of the river for micro-hydro power generation has been considered and several sites identified as having potential. In 2015 a small community hydro project was constructed at the outfall of Harlaw Reservoir and an Archimedes screw type hydro was installed at Saughton / Gorgie Weir in late 2019.

River flow is regulated via discharges from Harperrig Reservoir (Approximately 29% of the Water of Leith catchment). The flow in the Bavelaw Burn is also regulated via discharges from Harlaw and Threipmuir Reservoirs. Currently a minimum compensation flow of 34.38 megalitres per day (Ml/d) (as measured at Colinton) is maintained to replace the natural flow and there is a mean flow of 1233 litres per second (l/s).

The Water of Leith discharges to the Firth of Forth via Leith Docks. Flow out into the Forth is controlled by lock gates. At times of high flow the lock gates are opened by Forth Ports, to enable discharge of excess flows.

The Water of Leith performs an important flood control function in the City and the river hosts an extensive Flood Prevention Scheme.

The industrial use of the river led to the development of several villages and settlements along its banks, causing a reduction in water quality, which were recognised during the 19th Century. Until this time both raw sewage and industrial effluent flowed directly into the river. In 1864 the Water of Leith Commissioners introduced the first Water of Leith sewer, with a second one being constructed 15 years later. The route of the sewer closely follows the river along much of its urban journey with dozens of CSO's and surface water drains potentially discharging into the water.

In spite of being a predominantly urban river, the Water of Leith is fairly natural for much of its course. Downstream of Harperrig Reservoir the main modifications are largely defunct weirs. The river is bridged in places, but is not culverted. For the most part the river is also fairly natural and has received little modification in terms of alteration of its course, mainly because it is a hard rock river. The channel is more modified in its tidal sections, particularly in the docks and a two stage channel and berm has been created as part of the flood prevention scheme at Murrayfield. In other areas, such as adjacent to Saunders Street in Stockbridge, the river is confined within walls, but exhibits signs of natural channel features such as vegetated side bars.

Numerous statutory and non-statutory designations are in place for parts of the Water of Leith. The majority of the river and its corridor has been identified as Local Biodiversity Sites (LBS) and several protected species live along its banks. There is a collection of habitat survey information and extensive records of wildlife sightings with WOLCT and The Lothian Wildlife Information Centre (TWIC). There are 10 LBS within the catchment including The Dells which is an area of ancient woodland.

The river flows from upland grassland and heathland, past wetland reservoir habitats through agricultural grassland and forestry into the almost continuous riparian woodland, from Balerno to Leith. In the urban area it passes a number of the city's parks, numerous private gardens, meadows, community gardens, allotments and some living landscape areas. An extensive survey of aquatic invertebrate species and fish populations was carried out in 2010, and SEPAs monitoring continues to sample invertebrate populations as indicators of water quality. Notable bird species resident on the river include; grey wagtail, heron, dipper and kingfisher. The woodland areas next to the river are considered important for a variety of bird species, with records kept by WOLCT. Mammals resident to the river include; Otter, Badger, Roe Deer, Grey Squirrels, Stoats, Foxes and Bats (Common and soprano pipistrelle and Daubentons). Up to 14 species of fish have been

recorded however in the 2009 survey 9 species were noted including Brown Trout, European Eel and various species of Lamprey. There is one Site of Special Scientific Interest (SSSI) within the catchment the Balerno Common and Bavelaw Marsh SSSI is adjacent to Harlaw Reservoir and one Special Protected Area SPA for the Tern colony in Leith Docks.

There is an active brown trout fishery on the river run by a team of voluntary fishery officers with support from CEC Natural Heritage, with free permits issued on a catch and release basis from 1st April to 30th September. In addition angling occurs on Harperigg, Threipmuir and Harlaw reservoirs.

Today the river is used for recreation and access, providing a welcome open space through the heart of Scotland's capital city. The Water of Leith Walkway is a continuous 12 $\frac{3}{4}$ mile path through the city and is designated as a Core Path. The route forms part of the National Cycle Network route 75, from Balerno to Slateford and again towards the lower reaches around Canonmills and Leith. The path is an important Active Travel route and its widely used for commuting. The rural stretches are also used by horse riders. The development of the route began in the 1980's, and received a huge investment between 1999 and 2002 as the Millennium Project completed the previously inaccessible sections of route and upgraded all sections, including the installation of art works and signage. Today the main components of the path are the route itself including its surface, steps, ramps and boardwalks, seats, signs, lighting and litter bins.

The WOLCT has provided a focus for learning on the river for over 30 years with a curriculum based formal education programme supported by CEC Children and Families department operating since 2000, this regularly reaches over 2000 city school children annually. The Water of Leith Visitor Centre opened in May 2000 operates daily as an educational visitor attraction and community resource, providing refreshments for walkers, an extensive public events programme, exhibition space and a hub for local groups.

Interpretation on the river includes: information panels at Balerno, Slateford and Leith, an audio trail available online and via the 'Water of Leith Walkway' app, various works of art, a map and information leaflet. The river provides many opportunities to contribute to formal lifelong learning and provides an accessible resource for experiencing wildlife, important landscapes, and cultural history. Volunteer participation and community engagement projects delivered by WOLCT improve knowledge and understanding of the river, help to manage the resource and raise awareness of the need to avoid litter and dog fouling, or to avoid damaging trees and setting fires.

The landscape character of the river valley has been described, both as a feature in its own right and how it relates to the wider landscape of the City of Edinburgh. Sections of the river lie within Special Landscape Areas (SLA) and a landscape assessment conducted in 2009 has assigned 14 'landscape character types; and 75 'landscape character areas' to the Water of Leith catchment including; geometric wooded farmland, sloping hillside rising towards the Pentlands, steeply incised river valley. Two sections of the river are designated as Local Geodiversity sites: The Dells and The Dean Valley, celebrated for their variety of rocks, landforms and evidence of geomorphological processes.

The area from Roseburn to Stockbridge is part of the Edinburgh World Heritage site. Scheduled Monuments, Historic Gardens and Designed Landscapes, Conservation Areas and numerous listed buildings are also present along its banks. Further details of these designations can be found at <https://www.historicenvironment.scot/advice-and-support/> where you can use the excellent map search to discover features along the river. The river has a rich history dating back to pre-historic times, with Bronze Age remains and Neolithic sites. From the medieval era there are manor houses, castles and mill sites some as old as 12th Century, and an extensive industrial archeological history which peaked in the late 1700's when there were 76 mill sites over 23 miles of river. There are numerous remains of the many mills that once worked the river and a book available from the WOLCT of 'The Water Mills of the Water of Leith'. Leith harbour and docks also has a rich and varied history and was of strategic importance for battles and trade.

The Water of Leith is an important resource to the City, in terms of its natural, cultural and built heritage, amenity and landscape quality. It also provides a "sense of place" and a haven of

tranquillity. It contributes to the achievement of policy initiatives such as the Core Path Network, open space strategy, Edinburgh Adapts, Active Travel Plan and Local Biodiversity Action Plan. It also performs important “services” for the City, such as carrying excess rainfall and the assimilation pollution and waste.

Useful links and mapping tools

www.waterfleith.org.uk provides an excellent overview of all the issues and opportunities the river provides and details of the work of WOLCT and how you can take part.

Water

Water levels can be tracked daily <https://www2.sepa.org.uk/waterlevels/default.aspx> and past data is available at National River Flow Archive:

19012 Colinton <https://nrfa.ceh.ac.uk/data/station/info/19012>

19006 Murrayfield <https://nrfa.ceh.ac.uk/data/station/info/19006>

<https://www.floodlinescotland.org.uk/>

Designations, Locations and Sites

Historic designation can be view using Historic Environment Scotland extensive mapping tool -

<http://historicscotland.maps.arcgis.com/apps/Viewer/index.html?appid=18d2608ac1284066ba3927312710d16d>

SEPA, NatureScot, and Land and Forestry Scotland Environmental designations can be viewed at–
<https://map.environment.gov.scot/sewebmap/>

City of Edinburgh Council online Atlas provides many details and designations including environmental data, planning and heritage areas and features, transport and administration boundaries - <https://edinburghcouncil.maps.arcgis.com/>

Map Page

Map of Catchment SEPA

River Basin Management Area - Forth

Catchment Area – 122km

Surface Water Bodies – 9

Main Stream Length – 31.7km

Est Pop; 300,000

Land use; Agriculture, Forestry, Low to High Density Urban Fabric, Urban Greenspaces, Parks and Gardens, Construction and derelict sites, Sports and leisure sites, Docks

Climate: Temperate, Oceanic

Rainfall; 706mm average

Geology/ Geomorphology: Underlying Sedimentary rocks from Silurian, Devonian and Carboniferous eras, formation of the river valley and channel course from the end of the Pleistocene

Key services; Agriculture and Forestry, Sewage disposal, Surface water alleviation, Power generation (micro hydro), Wildlife Habitats, Recreation, Tourism, Active Travel, Historic and Educational Asset, Economic and Population growth

3.2 Key Issues and Pressures

Flood management: Flood Risk Management (Scotland) Act 2009 establishes the requirement for Flood Risk Management Strategies and Local Flood Risk Management Plans to be produced. SEPA has classified the Water of Leith Catchment and 'Potentially Vulnerable Area 10/18. 3,300 residential and 480 non-residential properties are at risk. Five agreed objectives and numerous actions have been agreed to minimise the causes and impacts of flooding. Following a major flood event in 2000, the flood prevention scheme for the City of Edinburgh has been implemented. Harlaw, Threipmuir and Harperrig have been purchased and modified to include measures which include lowering of water levels in the reservoirs to increase storage capacity. Walls and other flood defence measures have been constructed from Murrayfield downstream to Bonnington. A re-modelling exercise is being carried out to include the impact of climate change on the river system and the efficacy of the flood prevention scheme.

Litter and debris: Litter and debris can accumulate quickly at various locations along the river. The Water of Leith Conservation Trust organises around 100 volunteer clean-up operations annually along the river, which reduces the amount of material that is swept down river. A collection boom has been installed at the entrance to Leith Docks to prevent it from entering the docks and creating a shipping hazard. Voluntary partnerships between the Council and private landowners have been established to remove the litter around the basin areas and at a boom at the entrance to the docks. The issue for the management plan is to continue to manage and remove the vast amounts of litter and debris that enter the river, in order to retain the aesthetic and water quality.

Micro hydro generation: The potential to introduce micro hydro schemes along the Water of Leith has been investigated and two sites have been implemented; Harlaw Hydro and Saughton Park Archimedes screw. A number of other sites have potential to generate renewable energy and could provide a link to the river's past industrial use, but there are also issues relating to impacts on biodiversity, fish populations, and measures to "re-naturalise" the river to achieve good ecological potential under the Water Framework Directive.

Water Framework Directive: This Directive, which is implemented in Scotland through the Water Environment and Water Services (Scotland) Act 2003, requires the creation of a river basin planning system that will promote sustainable water use while protecting and improving the water environment, which is being co-ordinated by SEPA. This will include a range of local measures to drive improvements to achieve good ecological status. These measures will be delivered by a range of responsible authorities and through working in partnership with local groups and individuals e.g. landowners. Actions for the Water of Leith will be included within these plans. Of the 9 Water Bodies on the river SEPA have identified pressures and measures relating to the 7 water bodies listed below. Actions have been identified and relate to issues concerning morphology, fish continuity, water flow, water levels, and water quality; 3700 Murrayburn confluence to Estuary, 3701 Murrayburn, 3702 Poets Burn to Murrayburn Confluences, 3703 Harperigg Reservoir to Poets Burn confluence, 3705 Bavelaw Burn, 100291 Threipmuir Reservoir, 100293 Harperigg Reservoir.

Water Quality: Overall the water quality is good in the Water of Leith however both point source and diffuse pollution impact on the river especially at times of low flow. The impact of run-off from farmland, roads, housing area, commercial properties and greenspaces can accumulate in the catchment, and the point source issues from the Combined Sewer Overflow and Surface drainage network all puts a pressure on the river to dilute and disperse any pollution incidents.

Invasive species: Invasive plant species are present at a number of locations along the river. The control of Giant Hogweed (*Heracleum mantegazzianum*) using topical spraying with glyphosate has been carried out since 2000 and recent projects have begun to study the efficacy of alternative methods. Himalayan Balsam is wide spread and volunteer tasks are conducted annually to hand pull. Japanese Knotweed populations are localised and managed by the WOLCT and CEC Grounds Maintenance teams. A long-term strategy for the control of these species is needed. Other plant species including; few flowered leek, yellow archangel, snowberry, rhododendron are a cause for

concern. Mink (*Neovision vison*), which may be impacting on wildfowl populations, are also present along the river and a better understanding of the impacts of these alien animal species is required.

Access & Recreation: The path is used by local residents and visitors. The condition of the path is monitored frequently, and measures to maintain it in a safe condition are implemented. However, it is now some time since the path was completed, and many areas show signs of deterioration and inconsistent signage which can cause confusion. A steady rise in use over the past 5 years has meant a greater pressure on the infrastructure and can lead to conflict between user groups. The issue for the management plan is to improve this deteriorating infrastructure and enhance the image of the Water of Leith through improved and consistent signage and interpretation, promote the 'share with care' approach on multiuse path and to maintain the Visitor Centre as a focal point from which education and information can be provided.

Climate Change and Adaption: Changes in seasonal rainfall and extreme weather events may cause the river to flash flood more frequently in winter and experience drought conditions in summer, potentially impacting on wildlife habitats, affecting properties near the river and the ability of the river to cope with point source and diffuse pollution incidents. There is also a need to enhance the natural capacity of soils, vegetation, river floodplains and wetland habitats to reduce flood risk as part of a catchment approach to flood risk management planning. The adaptation of wildlife to cope with these changes could be supported by projects which reduce fragmentation of habitat and enhance connectivity. The increase in the use of the Water of Leith walkway as an active travel route may also put pressure on the infrastructure and integrity of the corridor.

Fishery Management: The Water of Leith is unusual in that it provides an opportunity for free trout fishing, for visitors and residents. The focus is on game fishing as good coarse fishing opportunities are available elsewhere on the Union Canal, and it avoids potential conflicts of interest between seasons for game and coarse fish. Understanding the fish population in the river and the pressures due to the physical modification of the natural course of the river is important to continue to provide healthy fish populations and angling opportunities in the river. The river is not stocked and 'catch and release' rules are in place however this is at risk of exploitation if permits are not issued and fishing rules enforced.

Urban Development: The River currently has a mosaic of more open, undeveloped areas, and parts that are densely developed and more enclosed. Green, brown and blue field areas are under threat from over development. The current Local Development is being updated and City Plan 2030 is due early 2022. Key issues for the river include a lack of recognition of the integrity of the river valley, designation breaks for the landscape of the river and safeguarding the special nature of the Water of Leith whilst enabling the Cities economic growth and meeting the need for housing.

Public involvement: Over 10,000 hours of practical work are carried out by volunteers on the Water of Leith on an annual basis, through the work of the WOLCT. The issue for the management plan is to ensure that this resource is maintained and used effectively.

3.3 Water of Leith Action Group, Stakeholders and Partners

The Water of Leith Action Group was established in the 1980s and will form the Steering Group for this Management Plan. The Action Group members meet twice a year to discuss all the issues which affect the management of the river. Members of the group include:

- The Water of Leith Conservation Trust (WOLCT)
- Scottish Environment Protection Agency (SEPA)
- NatureScot formerly Scottish Natural Heritage
- City of Edinburgh Council: Place Management Planning
- City of Edinburgh Council: Flood Prevention (CEC FP)
- City of Edinburgh Council: Parks and Greenspaces, Natural Heritage (CEC NH)
- City of Edinburgh Council: Archaeology Service (CEC AS)
- Water of Leith Volunteer Fisheries Officers
- Forth Ports
- Scottish Wildlife Trust
- Scottish Water
- Edinburgh Flood Prevention Group

Other key stakeholders with an interest in the management of the river have been involved in the production of the plan and have actions within. These include;

- Friends of the Water of Leith Basin (FWOLB)
- Friends of the Pentland Hills (FOP)
- Edinburgh and Lothians Greenspace Trust (ELGT)
- Dean Valley Regeneration Ltd (DVRL)
- Rosebery Estates
- Water of Leith Fishery Officers
- The National Galleries
- Historic Environment Scotland (HES)
- Sustrans
- Water of Leith 2000 Ltd
- Forest and Land Scotland
- Pentland Hills Regional Park
- City of Edinburgh Council: Active Travel Team
- City of Edinburgh Council: Thriving Greenspaces Team
- City of Edinburgh Council: Adaptation
- City of Edinburgh Council: Bridges and Structures
- City of Edinburgh Council: Forestry
- City of Edinburgh Council: Parks
- Edinburgh World Heritage Trust (EWHT)
- Forth District Salmon Fishery Board (FDSFB)

In addition community councils, residents associations, community groups, Friends of Parks groups, volunteers etc have been contacted where practical to support actions or consult on proposed actions While the general public will be interested in the plan, the primary audience is the organisations who actively manage the river.

3.4 Current Management Initiatives – to be updated and finalised

Edinburgh Biodiversity Action Plan (EBAP)

Flood Risk Management Plans – Forth Estuary Local Plan

Water Framework Directive and River Basin Management Plan: Forth

Pentland Hills Regional Park Management Plan

Edinburgh Woodland Strategy

Central Scotland Green Network

Gardens and Designed Landscapes

DVRL Feasibility Studies and Reports

EWHT Management Plan

Access Strategy / Active Travel / National Cycle Network

Special Landscape Area - Landscape designation – European?

Planning Policy – Local Development Plan and City Plan 2030, City of Edinburgh Council - Adaption Plans.

4. The Management Plan

4.1 Vision

Our vision is of a healthy river, flowing through a mosaic of habitats from the hills to the sea. A haven for wildlife which is enjoyed and protected by everyone, valued for its accessibility, built and cultural heritage and resilient to future challenges.

4.2 Aims and Strategic Objectives

The Management Plan aims:

- To achieve co-ordinated action between all stakeholders who hold management interests in the Water of Leith.
- To maintain and create a river that is as clean and natural as possible and reaches good ecological potential within the confines of an urban setting, whilst protecting homes and businesses from flooding.
- To safeguard and enhance the biodiversity associated with the Water of Leith, including the management of invasive species.
- Enhance the connectivity of the path and river habitats with other routes and city wide greenspaces.
- To provide quality recreational and active travel opportunities along the Water of Leith.
- Protect the Water of Leith as an urban game fishery and promote responsible angling.
- To ensure the river is well-valued and understood by all, with local communities and stakeholders who enjoy, engage with and protect the river.
- To identify, safeguard and promote features of archaeological, historical and cultural importance.
- To safeguard and enhance the landscape character and visual amenity of the setting of the Water of Leith and to promote awareness and understanding of the important geological, natural and designed features.
- To create a planning and policy framework that will safeguard the special qualities of the Water of Leith including its integrity, tranquillity, amenity, historical, archaeological, landscape and natural heritage value.
- To ensure the river is resilient to the impact of climate change and supports Edinburgh's vision for carbon reduction.

4.3 Action Plans to deliver Objectives

- **Water Action Plan – Quantity and Quality - page 12**
- **Habitat and Species Action Plan – page 16**
- **Access and Recreation Action Plan – page 19**
- **Engagement, Education and Interpretation Action Plan – page 24**
- **Heritage Action Plan – page 27**
- **Landscape and Geodiversity Action Plan – page 31**
- **Planning, Development & Resilience to Climate Change Action Plan – page 33**

Water Action Plan – Quantity and Quality

Aim: To maintain and create a river that is as clean and natural as possible and reaches good ecological potential within the confines of an urban setting, whilst protecting homes and businesses from flooding.

Objectives for Water:

- To manage the river to minimise flood risk and reduce the impact of flooding whilst mimicking natural flow variations.
- Improve water quality.
- Improve riparian morphology to meet Water Framework Directive good ecological potential in the water bodies within the catchment.
- Work towards a litter free river.

A Green – Ongoing actions and/or statutory responsibility likely to continue through the plan

B Blue – Year 1 and 2

C Yellow – Years 3 to 5

D Purple – Years 5 +

* = subject to funding, resources and/or partnership agreement

Objective	Action	Partner	Target / Milestone
To manage the river to minimise flood risk and reduce the impact of flooding whilst mimicking natural flow variations.	W1 - Work toward achieving the objectives set in the Local Flood Risk Management Plan – Water of Leith Catchment Potentially Vulnerable Area 10/18 (p 331-353) Obj numbers 10059-63.	CEC Place Flood Prevention , SEPA, Scottish Water	Review Actions in LFRMP
	W2 - Analyse the findings of the Catchment remodelling report and produce a new flood risk management plan for the Water of Leith. Within the context of 1 in 200 year flood event with a plus 40% climate change adjustment.	CEC Place Flood Prevention , ARUP, SEPA, Scottish Water	Review findings of remodelling and produce flood risk management plan by 2022
	W3 - Manage the flood defences and landscaping at Murrayfield with the local community to reduce the impact of flooding on properties, access and habitats. Devise a suitable landscaping plan and implement action for vegetation management.	CEC Place Flood Prevention , CEC Parks & Greenspaces, WOLCT	Produce a Landscaping Plan by 2022
	W4 - Monitor and modify the water levels within the dock to mitigate the impact of high tides and water flow on the lower reaches, ensuring that water levels do not exceed 3.047mAOD within the harbour.	Forth Ports , CEC Place Flood Prevention, SEPA	Ongoing
	W5 - Provide information to those in flood risk areas on action which can reduce the impact of flooding and increase the resilience of communities to the threat, include reference to SEPA flood warning service.	CEC Place Flood Prevention, WOLCT, SEPA	Produce information, promote locally and make available online by 2021

	W6 - Manage Harperrig, Harlaw and Threipmuir Reservoirs under the condition of the CAR licence and reservoir operations guide. Meet regularly with the Harperigg local management group to discuss issues and potential projects.	CEC Place Flood Prevention, Harperrig Management Group	Ongoing with annual management group meeting
	W7* - Explore opportunities in the upper catchment to minimise flood risk and maximise water resources through the creation of floodplain habitat and the attenuation of water in the wider landscape.	WOLCT, PHRP, Private Landowners, CEC Place Flood Prevention	Pilot project 2022/23
	W8 - Continue to monitor the siltation in the basin areas of Leith within the context of flood risk.	CEC Place Flood Prevention	Review annually with a visual inspection
	W9 - Compensation flows are set and maintained to ensure that flows at Colinton are achieved by discharges along both the Bavelaw Burn and Water of Leith.	CEC Place Flood Prevention	Ongoing
	W10 - Compensation flows from the reservoirs are set and adhered to, under the agreement with SEPA.	CEC Place Flood Prevention, SEPA	Ongoing
	W11 - Address the issues of Water Scarcity when they arise. Highlighting the potential non-dilution of CSO waste or surface water, algae growth and impact on aquatic life.	SEPA, Scottish Water, WOLCT	As required
Improve water quality.	W12 - Implement SEPA's ongoing programmes of chemical and biological monitoring and assessment, share regime and results with partners on request.	SEPA, Action Group	Ongoing
	W13 - Safeguard water quality through reporting all suspect pollution incident to SEPA.	SEPA and all organisations and individuals	Ongoing, SEPA report to WOLAG annually
	W14 - Analyse the data collected by the University of Stirling's water quality and biogeochemical testing programmes to influence Action W15.	University of Stirling, WOLCT	Report produced and conclusions investigated 2023
	W15* - Identify sources of diffuse pollution and promote strategies to tackle issues through community engagement and practical projects.	SEPA, WOLCT, CEC and private landowners	Pilot project 2023-24
	W16 - Sources and reasons for downgrading in the water and aesthetic quality of the river should be identified and strategies developed for their improvement.	Scottish Water, SEPA	Ongoing

	W17 - Upgrade 13 CSO's and associated infrastructure between Balerno and Longstone to reduce the risk of sewage related debris entering the Water of Leith and removing the risk of Unsatisfactory Intermittent Discharges (UIDs).	Scottish Water	Complete 2021
	W18* - Review the finding of the Integrated Catchment Studies and continue the programme of sewer system upgrading work within the Seafield catchment.	Scottish Water	Review complete 2025
	W19 - Hold awareness raising campaigns, highlight the link between the surface water and sewage network and the river and what action should be take when problems arise and by individuals.	Scottish Water, WOLCT	1 campaign p.a. linked to CSO work in 2020, with visits to local Primary Schools
Improve riparian morphology where appropriate to meet Water Framework Directive good ecological potential in the water bodies within the catchment.	W20 - Co-ordination of actions required under the WFD as set out in the River Basin Management Plan – linked to fish barriers, physical condition, flows and levels and more investigations.	SEPA	RBMP objectives
	W21 - Verify pressures needed for good ecological potential and explain measures needed to address the issues.	SEPA	Meet RBMP objectives
	W22 - Investigate and engage with stakeholders to determine options to tackle impassable fish barriers within catchment.	SEPA, WOLCT, CEC AS, FRT, CEC Place Flood Prevention	Plan and deliver a scoping walk over of the river and all it barriers
	W23* - Assess each weir within the context of the 'catchment remodelling', heritage value and ecological gain and devise a programme of work to improve the ecological potential of the river within the context of a cost benefit analysis.	SEPA, WOLCT, CEC AS, FRT	Assessment complete by 2023
	W24* - Discuss necessary morphological improvements for Harperrig Reservoir, Murrayburn, and Water of Leith (Poets Burn to Murray Burn and Murray Burn to Estuary) with stakeholders and devise a programme of work to improve the ecological potential of the river within the context of a cost benefit analysis.	SEPA, CEC various departments, WOLCT, Landowners	Work programme agreed 2023 – funding sought
	W25 - All proposals for dredging or river modifications should be subject to an ecological and archaeological appraisal process (excludes dredging in the docks, which is subject to a	SEPA, CEC Place Flood Prevention, CEC Place Management	As proposals arise.

	different consent process).	Planning, CEC AS, Forth District Salmon Fishery Board (FDSFB)	
	W26 - Identify areas of Best Practice for land and water management in the PHRP and upper catchment and publicise this to land owners and user.	PHRP , SEPA, CEC NH	Initial Partnership meeting held 2024
	W27 - That all new and novel uses of the river (e.g. micro hydro generation) are fully assessed for their impacts upon the natural and historic environment of the river.	WOLAG , CEC Place Management Planning, SEPA, FRT	As necessary
Work towards a litter free river	W28 - Deliver a programme of clean up events along the Water of Leith, focusing on local community engagement and highlighting links between riparian and coastal litter.	WOLCT , CEC Place Waste	Target set Annually in WOLCT Business Plan circa 100 p.a.
	W29 - Implement actions in the Partnership Agreement on litter and debris accumulations at the Victoria Bridge Boom and basin corners in the Water of Leith.	WOLCT , CEC Place Waste, Forth Ports, Water of Leith 2000, FOWL B	Monitor regularly, WOLCT clean-up up to 12 times annually, contractor works as required
	W30 - Public awareness of litter issues should be raised.	WOLCT , Keep Scotland Beautiful, Leithers against Litter	1 campaign / event annually

Habitat and Species Action Plan

Aim: To safeguard and enhance the biodiversity associated with the Water of Leith.

Objectives for Habitat and Species:

- Maintain and enhance a mosaic of habitats of high biodiversity value.
- Promote and deliver opportunities for habitat resilience through creating and preventing fragmentation of habitat networks.
- Remove, monitor and prevent the spread of Invasive Non Native Species (INNS) plant species along the Water of Leith.
- Improve condition and biodiversity of riparian areas.
- Protect biodiversity through public engagement, education and research.
- Understand the current and potential fish population, with the aim of maintaining and improving the habitat for brown trout (and other fish species, such as lamprey and Atlantic salmon).

A Green – Ongoing actions and/or statutory responsibility likely to continue through the plan

B Blue – Year 1 and 2

C Yellow – Years 3 to 5

D Purple – Years 5 +

* = subject to funding, resources and/or partnership agreement

Objective	Action	Partners	Target / Milestone
Maintain and enhance a mosaic of habitats of high biodiversity value.	B1 - Review the Local Biodiversity Sites network across river catchment and identify where positive management, projects or management plans should be implemented.	WOLCT, TWIC, CEC Natural Heritage, CEC Place Management Planning	1 LBS site per year – and agree an order of priority
	B2.- Maintain and enhance the Bavelaw Marsh, part of Balerno Common SSSI, take particular account of the habitat requirements of the nationally scarce bryophytes which require periodic lowering of the water levels.	NatureScot, PHRP, SWT, CEC Place Flood Prevention	Finalise the Management plan by 2020 Maintain the agreed schedule of level management
	B3* - Maintain the six Biodiversity Boost habitat improvement sites along the Water of Leith. Seek funding to extend this network to more sites.	WOLCT, Friend of Parks Groups, CEC Parks and Greenspaces	Maintain 6 sites with a minimum of 20 tasks p.a.
	B4 - To implement actions specific to the Water of Leith that are included in the Edinburgh LBAP.	All relevant partners in EBAP	Complete by 2022
Promote and deliver opportunities for habitat resilience through creating and preventing fragmentation of habitat networks.	B5* - Implement and manage Living Landscape sites near the river, enhancing the connectivity with other parks and greenspaces.	CEC Parks and Greenspaces Friend of Parks Groups, Living Landscape Partners, WOLCT	X new sites p.a.

	B6* - Identify opportunities to manage and restore wetlands and peatlands for species enhancement, water attenuation and carbon storage in the upper catchment.	PHRP, NatureScot, WOLCT Private Landowners, Harperigg Management Group	1 pilot project by 2023
	B7* - Respond to all opportunities for tree planting, biodiversity improvements, and the creation of new greenspaces connected to the river catchment*.	ELGT, WOLCT, CEC Place Management Planning, CEC NH	Year 1 - Coalie Park Project
	B8* - Investigate additional locations for new woodland plantings in the upper catchment.	WOLCT, PHRP, Private Landowners, Harperigg Management Group, NatureScot, Forest and Land Scotland	1 pilot project by 2023
	See also B15* and B16* for fish habitat connectivity and resilience.		
Remove, monitor and prevent the spread of Invasive Non Native Species (INNS) plant species along the Water of Leith.	B9 - Continue research, in association with Napier University, looking at practical alternative control methods of Giant Hogweed to herbicides.	WOLCT, Napier University	Publish and promote finding 2022
	B10 - Continue and extend the volunteer hand pulling Himalayan Balsam programme established in 2018 with the view to significantly reducing the riparian population.	WOLCT	Promote methodology and experiences 2022
	B11 - Using research findings and experiences from volunteer projects to develop an integrated INNS management plan specific to the WOL with a focus on reducing herbicide use.	WOLCT, CEC Parks and Greenspaces, NatureScot	Produce INNS management plan by 2023
	B12 - Feed into a citywide INNS programme – sharing good practice from Giant Hogweed (GHW) treatment project and volunteer Balsam projects.	CEC Place Management Planning, CEC Parks and Greenspaces, NatureScot	City Wide INNS strategy by 2024
	B13 - Ensure the Special Grounds Maintenance Team continue the programme of control of GHW and Japanese Knotweed (JKN) from Slateford to Leith.	CEC Parks and Greenspaces	Ongoing
	B14 - Promote “ Be Plantwise ” campaign and Check Clean Dry – focusing on river users and events .	WOLCT, SEPA, NatureScot	Ongoing
Improve condition and biodiversity of in	B15* - Investigate and engage with stakeholder to determine options to	SEPA, WOLCT, CEC AS	Plan & deliver a scoping walk

channel habitats.	tackle impassable fish barriers within catchment (W22).		over of the river and all it barriers
	B16* - Assess each weir within the context of the 'catchment remodelling', heritage value and ecological gain and devise a programme of work to improve the ecological potential of the river within the context of a cost benefit analysis - W23.	SEPA, WOLCT, CEC AS, FRT	Assessment complete by 2023
	B17* - Discuss necessary morphological improvements for Harperrig Reservoir, Murrayburn, and Water of Leith (Poets Burn to Murray Burn and Murray Burn to Estuary) with stakeholders and devise a programme of work to improve the ecological potential of the river within the context of a cost benefit analysis - W24*.	SEPA, CEC various departments, WOLCT, Landowners, FRT	Work programme agreed 2023 – funding sought
Protect biodiversity through public engagement, education and research.	B18 - Continue a programme of volunteer, training, patrols and surveys for the Water of Leith to enable the monitoring of wildlife sightings, meadow surveys and river bank habitats and pass all sightings and records to TWIC.	WOLCT, TWIC	250 patrols p.a.
	B19 - Survey, record and monitor for the presence of EBAP and European protected Species and monitor their resilience to changes. Otter, Bat, Kingfisher, Swift, Tern.	WOLCT, CEC NH, Edinburgh Nats	1 Survey p.a.
	B20* - Engage with local communities and landowners about the ecological and heritage importance of Local Biodiversity sites and how adaptation to the impact of climate change may affect sites or communities.	WOLCT, CEC Place Management Planning, TWIC	1 event or promotional activity
	B21*- Monitor Freshwater invertebrate population in the river using River Fly Monitoring.	WOLCT, FRT	Begin monitoring 2022
	B22 - Monitor the Tern SPA within Leith Docks.	NatureScot, Forth Ports,	ongoing
	Understand the current and potential fish population, with the aim of maintaining and improving the habitat for brown trout (and other fish species, such as lamprey and Atlantic salmon).	B23 - Continue the 2019 survey of potential brown trout spawning beds in the river to cover the whole river.	WOLCT, Fishery Officers, FRT
B24*- Seek funding for and enable an electro-fishing survey to establish the health and diversity of the fish populations.		WOLCT, FRT, Fishery Officers,	Survey complete by 2022
B25 * - Utilise survey data to inform WFD project to improve fish passage within the catchment (see B14,15 &16).		SEPA, FRT, WOLCT,	Work programme agreed 2023 – funding sought

Access and Recreation Action Plan

Aim: To provide quality recreational and active travel opportunities along the Water of Leith and its Walkway and enhance its connectivity to other routes and city wide greenspaces, while supporting actions which reduce carbon emissions.

Objectives for Access and Recreation:

- Maintain and improve the condition of the path and associated infrastructure, while protecting and enhancing the rural character of the river corridor and Walkway.
- Identify opportunities to create new routes and links associated with the path.
- Promote responsible recreational use of the path and river.
- Promote the Water of Leith using consistent “high quality” branding.
- Increase the use of the Water of Leith for physical activity and Active Travel, through connectivity projects and support actions which reduce carbon emissions.
- Protect the Water of Leith as an urban game fishery and promote responsible angling.
- Promote existing artworks and heritage projects along the river and consult on all new and novel used of the resource.

A Green – Ongoing actions and/or statutory responsibility likely to continue through the plan

B Blue – Year 1 and 2

C Yellow – Years 3 to 5

D Purple – Years 5 +

* = subject to funding, resources and/or partnership agreement

Objective	Action	Partner	Target / Milestone
Maintain and improve the condition of the path and associated infrastructure, while protecting and enhancing the rural character of the river and Walkway.	R1 - Maintain the current regular contact between the WOLCT and CEC NH to discuss immediate management / maintenance concerns. Where possible facilitate volunteer tasks to resolve concern and/or seek funding.	CEC NH, WOLCT	Monthly contact and 5 path maintenance projects p.a.
	R2* Upgrade the route surface from Balerno to Slateford.	CEC NH, Sustrans, EGLT, WOLCT	Upgrade complete by March 2021
	R3* Review condition of remote bridges and draw up priority list of maintenance action.	CEC NH, WOLCT	Review complete by March 2022. Action plan produced by 2023
	R4 - Ensure Paths and associated infrastructure (railings, access steps etc) are maintained to appropriate standards within available resources.	CEC NH, WOLCT	On going
	R5* - Seek funding to improve path surfacing and associated infrastructure.	CEC NH, WOLCT	Identify projects and seek funding
	R6 - Restrict approval for increased lighting on the Walkway to avoid adverse impacts on wildlife and to maintain rural character of parts of path	CEC NH, WOLCT	ongoing
	R7 - Ensure CEC lighting strategy is	CEC NH,	Ongoing

	adhered to for any development or path improvement projects.	WOLCT, Active Travel, Sustrans	
	R8* - Review the findings of the Dean Valley Restoration Project phase 1 feasibility and draw up a priorities list of actions to upgrade the path network based on the findings of the study. Seek funding for the urgent improvements and/or project as a whole.	CEC Parks & Greenspaces, DVRL, WOLCT	Review complete by March 2021. Action plan produced by 2022
	R9* - Continue to seek resolution to the walkway closure between Belford and Dean Village, with the aim of re-opening and reinstatement the path.	CEC Parks & Greenspaces, CEC various departments	Re-open the path when safe to do so
	R10* - Review the benches audit and identify areas for new benches, and upgrading of existing stock.	CEC NH, WOLCT	Review complete by March 2022. Action plan produced by 2023
Identify opportunities to create new routes and links associated with the path.	R11* - Support the Pentland Hills Regional Park action to <i>'encourage and support the network of non-motorised routes that lead to the PHRP,</i> by scoping and seeking funding to facilitate access from Currie to Harlaw through the shelter belts.	WOLCT, FOP, Rosebery Estate, PHRP, ELGT	Scoping walk held with partners in 2020. Action plan prepared
	R12 - Maintain the path though Poets Glen and review the potential to improve access to the PHRP.	FOP, WOLCT Rosebery Estate, PHRP	Two workdays p.a.
	R13* - Seek community support and funding for projects which upgrade access to the Walkway by communities near to the river. Current projects suggestions include; Chesser Loan link, Longstone and Redhall Park Accessibility Project and the Mill Workers Trail (Currie, Kinleith and Blinkbonny).	WOLCT, CEC NH, CEC Parks & Greenspaces, Local Community Councils and Residents Associations, TGP	3 projects 1 in years 1-2, 1 in years 3-5 1 in years 5+
	R14* - Access routes and signage around Bonnington and Leith following completion of the new developments and integrate into the Walkway route.	CEC NH, WOLCT	Complete post development
	R15 - Promote and distribute the 'On foot by bike' maps through the Visitor Centre.	WOLCT, Active Travel	Ongoing
Promote responsible recreational use of the path and river	R16 - Promote the CEC Code of Conduct and 'share with care' message with the aim of supporting a citywide unified behaviour for use on off road paths. Use river patrol data to identify areas of increased use / conflict and	Active Travel, CEC NH, WOLCT, TGP	1 campaign / awareness raising event annually

	target a campaign accordingly.		
	R17- Encourage responsible behaviour with regard to littering, especially fly tipping, dog fouling and discarded fishing line. Use river patrol data to identify areas where the issues are prevalent and target a campaign accordingly.	WOLCT, CEC NH, CEC Parks & Greenspaces, TGP	1 campaign / awareness raising event annually
	R18 - Ensure the Regulation around fishing on the Water of Leith are followed by all Anglers and promote positive behaviour using the leaflet and signposting the advice detailed on https://www.fishforth.org/about/ .	Fisheries Officers, WOLCT, CEC NH, FRT	Distribute leaflets with permits. 1 campaign / awareness raising event annually. Patrol regularly to ensure compliance
	R19- Collect and analyse data on walkway use collected by walkway counters and volunteer patrols to monitor path usage and identify areas of user group conflict, heritage crimes, dog fouling and/or maintenance issues.	WOLCT, CEC NH	Report 2022
Promote the use and recognition of Water of Leith Walkway using consistent “high quality” branding.	R20* - Ensure a consistent and unified feel to the walkway signage while balancing the needs of local waymarking, NCN, and Active Travel Routes. If you are following the walkway on foot or bike it should be easy to follow and the mileage accurate.	CEC NH, Sustrans, ELGT, WOLCT, Active Travel	Ongoing
	R21* - Upgrade the signage and place making of the route from Balerno to Slateford as indicated in the 2019 ‘Signage Strategy’ as part of surface upgrading project (R2).	CEC NH, Sustrans, ELGT, WOLCT	Signage and place making installed as part of R2
	R22* - Seek funding to complete a full audit of signage along the whole route, following on from R18 and the TP&E ‘Signage Strategy’ and explore all way marking and place-making opportunities.	CEC NH, Sustrans, ELGT, WOLCT, Active Travel	Aim for route to be completely redone by 2030
	R23 - Utilise the WOLCT Visitor Centre, Website and Social media channels to promote walkway use, provide up to date information for users and offer merchandise (information map, walkway app, branded products).	WOLCT, CEC NH	ongoing
	R24* - In conjunction with R2*, R18 and R19 review the path connectivity and signage and suggest ‘nodes’ good places to join the walkway and link to	WOLCT, TGP, CEC NH, Active Travel, Sustrans,	Review 2023

connectivity projects, and support actions which reduce carbon emissions	other networks or parks. Nodes should have good opportunities for placemaking, interpretation and connectivity to communities, other off road or active travel route, local facilities or attractions.	ELGT,	
	R25 - Support actions relevant to the Water of Leith contained in the Open Space Strategy, Active Travel Action Plan and other CEC Council documents that promote open air recreation and non-motorised travel.	WOLCT , TGP, CEC NH, Active Travel, Sustrans, ELGT	Ongoing
	R26* - Scope, design and seek funding for a project to create a wheelchair accessible route along the walkway and NCN from Balerno to link with the canal, Redhall Park and the walkway in Slateford.	WOLCT , TGP, CEC NH, Active Travel, Sustrans, ELGT,	Scope 2020
	R27 - Support local walking groups, healthy outdoor projects and walking challenges use of the walkway for initiatives and training sessions.	WOLCT , CEC NH	4 Projects / events supported annually
Protect the Water of Leith as an urban game fishery and promote responsible angling.	R28 - Publicise the fishing on the Water of Leith through social media, leaflet distribution, articles, notices.	Fishery Officers , CEC NH, WOLCT	On going
	R29 - Improve rate of angling returns. Options to investigate include: (a) establishing an on-line record system through the Water of Leith Conservation Trust website; (b) Facebook Group (c) "returns" boxes in angling shops and visitor centre (d) Fishery Officers keeping a record of catches made during their bank inspections.	Fishery Officers , WOLCT	Trial one initiative p.a. Year 1 - Facebook
	R30 - Identify ways of increasing revenue returns from angling to provide security of funding and assist with long-term planning.	Fishery Officers , WOLCT, Forth District Salmon Fishery Board	Trial one initiative
	R31 - Engage in the Fish Forth Project and use the good practice and information on the website to educate and inform anglers.	Fishery Officers , Forth District Salmon Fishery Board, WOLCT	Ongoing
	R32* - Explore ideas which encourage young people to take up fishing. Work with CEC and Community Education and Forth Rivers Trust to deliver short courses on how to fish. Support WOLCT 'family fundays' by providing fishing demonstrations / instruction.	Fishery Officers , FRT, CEC C&F, WOLCT,	Join in funday year 1 and review

	R33 - Promote Check, Clean, Dry campaign for anglers – look at reviewing biosecurity enablers for specific location.	Fishery Officers WOLCT, SEPA, FRT	Ongoing
Promote existing artworks and heritage projects along the river and consult on all new and novel uses of the resource – event, films etc	R34 - Promote walkway attractions including Colinton Tunnel, 6 Times Gormley statues, St Bernard Well, Water of Leith Visitor Centre, Saughton Park.	WOLCT, GMA, Colinton Tunnel, CEC various departments	Ongoing
	R35 - Encourage artistic and film projects to showcase the various stories of the river and walkway.	WOLCT, CEC various departments	Ongoing

Engagement, Education and Interpretation Action Plan

Aim: To ensure the river is well-valued and understood by all, with local communities and stakeholders who enjoy, engage with and protect the river.

Objectives for Engagement, Education and Interpretation:

- Increased local understanding, use and stewardship of the river and its walkway.
- To achieve co-ordinated action between all stakeholders who hold management interests in the Water of Leith.
- Increasing public knowledge of the rivers heritage and wildlife through community engagement activities and events.
- To increase the number of ways and locations in which the public can obtain information about the Water of Leith.
- To promote the Water of Leith as an educational and amenity resource for angling.
- To implement consistent branding on all materials linked to the Water of Leith Walkway.

A Green – Ongoing actions and/or statutory responsibility likely to continue through the plan

B Blue – Year 1 and 2

C Yellow – Years 3 to 5

D Purple – Years 5 +

* = subject to funding, resources and/or partnership agreement

Objective	Action	Partner	Target / Milestone
Increased local understanding, use and stewardship of the river and its walkway.	E1 - Design diagrams or info graphics to accompany the Management Plan which explain how the river is managed with regard to the key issues of: <ul style="list-style-type: none"> • Water (abundance and scarcity) • Trees and Woodland • Fly tipping / litter accumulations • Pollution incident • Problems along the walkway such as bridges broken, rock / landslide, blockages etc • Sewage / foul drain discharge • Managing habitats – grassland / meadows etc • Park Management Rules and regimes • Heritage Crime 	WOLAG members to all contribute	2 information sheets p.a.
	E2 - Identify and contact all 'friends of groups' associated with the river with the aim of improving collaboration and achieving habitat improvement actions B1, B5, B7.	WOLCT , CEC Park & Greenspaces, Thriving Greenspaces Project	Focus on one LBS area p.a.
	E3 - Facilitate the delivery of projects which help meet Action Plan objectives by empowering people to own local issues and promote and take action on local solutions.	WOLCT , CEC Park & Greenspaces, Thriving Greenspaces Project, EGLT	Year One - Coalie Park

	E4 - Promote volunteer action in the management and maintenance of the Water of Leith. Maintain the current programme of events for volunteers including litter clean-ups, access and habitat management projects and provide support for community groups to help maintain the river.	WOLCT	200 tasks year one. Refer to targets for volunteer activities and events in the WOLCT Business Plan
To achieve co-ordinated action between all stakeholders who hold management interests in the Water of Leith.	E5 - Ensure WOLAG meetings are held twice a year and representatives from all key management organisations attend and report back on Management Plan Actions.	WOLAG members	Two meeting p.a.
	E6 - Develop appropriate stakeholder groups to drive Management Plan Actions / Projects forward and report back to main WOLAG meetings. For example Pentland Links, Coalie Park.	WOLAG members, various stakeholders and partners depending on the projects	Year 1-2 Coalie Park and Pentland Links
	E7 - Ensure actions in the 'Partnership Agreement on litter and debris accumulations in the Water of Leith' are delivered by all stakeholders.	WOLCT, CEC Place, Forth Ports, WofL2000 and Bluefield 1502 LLP	Review agreement annually
Increasing public knowledge of the rivers heritage and wildlife through community engagement activities and events.	E8 - Provide visits to community groups. Provide public event, guided walks and seasonal children's activities along the river Provide education programmes linked to curriculum for excellence to school groups.	WOLCT	Targets in the WoLCT Business Plan circa 200 p.a.
	E9 - Identify opportunities to deliver joint education programmes with other groups to provide "added value".	WOLCT, TGP, Friends of Groups	Year 1-2 Saughton Park
	E10 - Promote the Water of Leith Visitor Centre to reach wider audiences.	WOLCT, CEC Park & Greenspaces,	ongoing
	E11 - Improve the Heritage interpretation available at the Visitor Centre.	WOLCT	Complete renovation and interpretation upgrade 2021
	E12 - Identify interpretation themes and awareness raising campaigns to improve understanding of the river, its heritage and wildlife (E1, R16 and R17)	WOLCT, CEC Park & Greenspaces,	1 project p.a. Year 1 - Pollinator Hotspots
To increase the number of ways and locations in which the public can obtain information about the Water of Leith.	E13 - Identify new "outreach" centres, which will provide information about the river and include details about the Water of Leith in interpretation material produced for public parks.	WOLCT, CEC Park & Greenspaces, Thriving Greenspaces Project	Pilot project with Saughton Park by 2023

	E14 - Include information about, Heritage, Landscape and Geological features in interpretive material for the river and informative communications over all media (website, social media, apps, videos, podcasts, blogs, vlogs etc) H18 and L10.	WOLCT	Ongoing
	E15 - Include Heritage and Wildlife interpretation and access signage in works to improve the Dean Valley– See H16.	DVRL, CEC Parks & Greenspaces, WOLCT	Subject to funding
	E16 - Update and promote the Audio Trail App and Webpage.	WOLCT	complete 2023
	E17 - Update the WOLCT website to include pages, downloads, and information sheets on plant and wildlife, milling, historic villages and communities, historic environment (inc prehistoric), geology, etc art projects (6 Times, Colinton Tunnel etc.	WOLCT, local interest group	Website update complete 2021
To promote the Water of Leith as an educational and amenity resource for angling.	E18 - Publicise the fishing on the Water of Leith through social media, leaflet distribution, articles, notices etc.	Fishery Officers, CEC NH, WOLCT	On going
	E19 - Explore ideas which encourage young people to take up fishing. Work with CEC Community Education to deliver short courses on how to fish. Support WOLCT 'family fundays' by providing fishing demonstrations / instruction (R32).	Fishery Officers, CEC C&F, WOLCT	1 project p.a.
To implement consistent branding on all materials linked to the Water of Leith Walkway.	E20 - Implement actions in R20, 21, and 22 to ensure the "brown waterwheel logo" brand is continuous along the walkway and all place making and interpretation projects utilise the logo.	CEC NH,	As required
	E21 - Pursue opportunities for suitable and sustainable 'branded' merchandise available at the Water of Leith Visitor Centre – such as Walkway Water Bottles, T shirts, maps etc .	WOLCT	Pilot merchandise year 1

Heritage Action Plan

Aim: To identify, safeguard and promote features of archaeological, historical and cultural importance.

Objectives for Heritage:

- To understand and manage the location, condition and value of archaeological and cultural heritage resources along the Water of Leith.
- Support the protection, conservation and restoration of the Historic Environment associated with of the Water of Leith through planning and policy development frameworks.
- To promote active management of cultural heritage features.
- Further the preservation and management of the designed landscape and historic environment within the Dean Valley.
- To raise awareness and knowledge of, and public support for, the rich cultural heritage associated with the Water of Leith.

A Green – Ongoing actions and/or statutory responsibility likely to continue through the plan

B Blue – Year 1 and 2

C Yellow – Years 3 to 5

D Purple – Years 5 +

* = subject to funding, resources and/or partnership agreement

Objective	Action	Partner	Target / Milestone
To understand and manage the location, condition and value of archaeological and cultural heritage resources along the Water of Leith.	H1 - Conduct an basic audit of archaeological and cultural heritage resources associated with the river channel, including weirs, and seek resources to assess their importance and condition.	CEC AS, WOLCT, EWHT, Historic Scotland	Walk over survey complete by 2021.
	H2 - Review identified 'Selected Features' and 'Scheduled Monument' from the previous management plan, listed on www.canmore.org.uk and the National Record of The Historic Environment Scotland and update as to their status and risk.	CEC AS, WOLCT, EWHT, Historic Scotland	Review the list and update by 2021
	H3 - Identify structures and cultural heritage features that are in poor state of repair / are at risk e.g. from erosion, self-sown trees etc. Following on from the audit and review H1 and H2.	CEC AS, EWHT, WOLCT, CEC Bridges & Structures, CEC Forestry	Produce a schedule showing risk for each feature. Produce a work programme for addressing aspects of high risk.
	H4* - Assess each weir within the context of the 'catchment remodelling', heritage value and ecological gain and devise a programme of work to improve the ecological potential of the river within the context of a cost benefit analysis - W23, B15.	SEPA, WOLCT, CEC AS, FRT	Assessment complete by 2023

Support the protection, conservation and restoration of the Historic Environment associated with of the Water of Leith through planning and policy development frameworks.	H5 - Monitor all development which impact on the historic environment and heritage features associated with the river and ensure compliance with current policy and those in City Plan 2030 and Edinburgh Design Guidance.	CEC AS, EWHT, WOLCT	Ongoing
	H6 - Review all City Plan 2030 proposals which are associated with the river and its historic environment.	CEC AS, CEC Place Management Planning, WOLCT, EWHT	Complete by 2022
	H7 - Participate in the development and implementation of the management plan for the Edinburgh World Heritage Site 2022 onwards.	CEC AS, CEC Place Management Planning, WOLCT, EWHT	Complete by 2023
	H9 - Ensure the Central Leith Waterfront development proposals enhance the historic environment of the basin area.	CEC Place Management Planning, Forth Ports, FOWLB	Complete by XX
To promote active management of cultural heritage features.	H8 - Ensure that heritage features associated with the docks and basin areas of Leith e.g. bollards, mooring rings, cobbles, are protected and maintained.	FOWLB, CEC Road Services, Local owners and stakeholders	On going
	H10* - Ensure the Historic Bridges of the river are maintained and public access is upheld, with the Victoria Bridge and Teuchters Landing taking priority.	CEC Place Management Planning, Forth Ports, FOWLB, WOLCT	Ongoing
	H11* - Support restoration programmes for notable buildings e.g. grottos in Craiglockhart and Colinton Dell and St George's Well.	CEC AS, CEC HS, WOLCT, DVRL	Review the findings of: <ul style="list-style-type: none"> • The 2018 Grotto condition survey • DVLR Feasibility Study Phase 2 for St Georges Well And seek funding to restore
Further the preservation and management of the designed landscape and historic environment within the Dean Valley.	H12 - Support the development of a Steering Group whose aim is to produce a Dean Valley Conservation management and maintenance plan.	Dean Valley Regeneration Ltd (DVRL), CEC Parks and Greenspaces, CEC AS WOLCT	Steering group established within 2020

	H13 - Introduce a vegetation management programme to safeguard cultural features within the Dean Valley.	CEC Parks and Greenspaces, CEC Forestry, DVRL, WOLCT	Review the finding of the Tree Surveys within DVLR Feasibility Studies and implement appropriate actions
	H14 - Implement a prioritised programme of restoration and/or repairs to structures, walls and railing in the Dean Valley and seek funding accordingly.	CEC various departments including Parks & Greenspaces, Bridges and Structures, Roads, Planning, DVRL	Review the finding of the DVLR Feasibility Studies and seek funding to implement appropriate actions
	H15* - Draw up a priorities list of actions to upgrade the path network based on the findings DVRL Phase 1 study and seek funding for the urgent improvements and/or project as a whole (R6*).	CEC Parks & Greenspaces, DVRL, WOLCT	Review study and produce an action plan by 2021
	H16* - Seek funding to further all aspect of the management of the Dean Valley – with a focus on Lindsays Mill structure and ‘garden’ area, St Georges Well and urgent repairs and renovation works, signage and interpretation.	DVRL, CEC Parks & Greenspaces, WOLCT	Action 2020/21
	H17* - Where appropriate link actions to ‘in channel’ physical condition improvements and promote the use of greenbank methods.	DVRL, CEC Parks & Greenspaces, WOLCT, SEPA	Action as appropriate within timeframe of W23 and W24
To raise awareness and knowledge of, and public support for, the rich cultural heritage associated with the Water of Leith.	H18 - To include information about heritage, landscape and geological features in interpretive material for the river and informative communications over all media (talks, website, social media, exhibitions, apps, videos, podcasts, blogs, vlogs etc.	WOLCT, CEC AS, CEC HS	1 project p.a.
	H19 - Continue to include details of the cultural heritage of the river in guided walks.	WOLCT	Targets set annually in WoLCT plan
	H20 - Continue to include details of the cultural heritage of the river in education programmes.	WOLCT	Targets set annually in WoLCT plan
	H21* - Undertake a community archaeology project when opportunities and funding arises.	CEC AS	1 project during the plan

	H22 - Improve public access to historic buildings in public ownership including Customs House and St Bernard's Well.	SHBT, Dean Village Association	Hold 3 open days annually and 4 Well Weekends
	H23* - Support the development of Customs House and ensure the heritage of the river is included in exhibitions and/or interpretation.	SHBT, WOLCT, CEC AS	Meet with partners by 2021
	H24*- Explore opportunities for highlighting the unique heritage of communities along the river, focusing on Leith and Currie.	WOLCT, Local Heritage Groups	Leith History Talk / Walk completed by 2022, ideas for Currie in 2022
	H25* Include information about the heritage of the river in the Water of Leith Visitor Centre upgrading works and produce an interactive heritage display or digital media.	WOLCT	Project complete by spring 2021

Landscape and Geodiversity Action Plan

Aim: To safeguard and enhance the landscape character and visual amenity of the setting of the Water of Leith and to promote awareness and understanding of the important geological, natural and designed features.

Objectives for Landscape and Geodiversity are:

- To define the landscape character of the Water of Leith as a single entity understanding its capacity to accommodate development.
- Ensure the integrity and preservation of the Special Landscape Areas (SLA), Local Geodiversity Sites (LGS), Conservation Areas, Gardens and Designed Landscapes and Greenbelt within the river corridor.
- To promote awareness and understanding of the landscape and geological history and features present along the Water of Leith Valley.

A Green – Ongoing actions and/or statutory responsibility likely to continue through the plan

B Blue – Year 1 and 2

C Yellow – Years 3 to 5

D Purple – Years 5 +

* = subject to funding, resources and/or partnership agreement

Objective	Action	Partner	Target / Milestone
To define the landscape character of the Water of Leith as a single entity understanding its capacity to accommodate development.	L1 - Review undesignated areas of the Water of Leith and consider what level of protection could be afforded to maintain the integrity of the river as a whole - Slateford to Roseburn and Warriston to Bonnington.	CEC Place Management Planning, WOLCT, CEC HS,	Review complete by 2020 and proposals considered in City Plan 2030
	L2 - Consider all draft proposal for development, policies and design guidance in the City Plan 2030 which will impact on the river corridor and comment accordingly (P2).	Action Group, WOLCT, CEC HS, Place Directorate Planning CEC	In accordance with the City Plan schedule
	L3 - consider the impact in the landscape of any projects proposed for the Upper Catchment.	Action Group, WOLCT, CEC HS, Place Directorate Planning CEC	Ongoing
Ensure the integrity and preservation of the Special Landscape Areas, Local Geodiversity Sites, Conservation Areas, Gardens and Designed Landscapes and Greenbelt within the river corridor.	L4 - Monitor all developments which impact on the designated areas associated with the river and ensure compliance with current policy and those in City Plan 2030, Edinburgh Design Guidance, Scottish Planning Policies (SPP) and National Planning Framework 4.	CEC Place Management Planning WOLCT, CEC HS and AS,	Ongoing
	L5 - Monitor pressures on all designated areas on and near to the river and review enhancement potential should funding opportunities arise.	CEC Place Management Planning WOLCT, CEC HS and AS, EGLT	Ongoing

	L6* - Further all actions within the 'Heritage' topic which work to preserve and manage the designed landscape and historic environment within the Dean Valley (H12-17).	DVRL, CEC Parks & Greenspaces, WOLCT	See Heritage section
	L7 - To progress surveys of gardens and designed landscapes along the Water of Leith which make an important contribution to the local historic environment and landscape character.	CEC Place Management Planning, HES,	Malleny Park and Warriston Cemetery considered for designation by 2024
	L8 - Monitor condition of Local Geodiversity Sites using GeoConservation UK site monitoring form to collate and record site visits. Record issues with access, vandalism, vegetation and notify concerns to CEC, WOLCT and landowners.	EdGeoSoc, WOLCT	Review 1 site p.a.
To promote awareness and understanding of the landscape and geological history and features present along the Water of Leith Valley.	L9 - Continue to make the Edinburgh Geological Society leaflets available at the Water of Leith Visitor Centre and to download from the website https://www.edinburghgeolsoc.org/geological-site/water-of-leith-colinton-dell/ https://www.edinburghgeolsoc.org/geological-site/water-of-leith-stockbridge/	EdGeoSoc, WOLCT	Ongoing
	L10 - Celebrate and promote the two LGS and two SLA's on the Water of Leith and the contribution they make to the rivers overall landscape and character, include information on guided walks and in interpretive material for the river and informative communications over all media (website, social media, apps, videos, podcasts, blogs, vlogs etc).	WOLCT, EdGeoSoc,	Ongoing

Planning, Development & Resilience to Climate Change Action Plan

Aim: To create a planning and policy framework that will safeguard the special qualities of the Water of Leith including its integrity, tranquillity, amenity, historical, landscape and natural heritage value, while ensuring the river is resilient to the impact of climate change and supports Edinburgh’s vision for carbon reduction.

Objectives for planning, development and resilience are:

- To support and implement current policies and develop new policies and initiatives that will safeguard the special qualities of the Water of Leith.
- Work with key stakeholders to achieve management plan objectives and sustainable development.
- Engage with land managers across the wider catchment to encourage sensitive land management and land-use to maximise water attenuation, carbon sequestration and address the problems of both urban diffuse pollution and rural diffuse pollution.
- Assess all actions in the management plan considering both the potential impact of climate change and how the river can support carbon reduction.

A Green – Ongoing actions and/or statutory responsibility likely to continue through the plan

B Blue – Year 1 and 2

C Yellow – Years 3 to 5

D Purple – Years 5 +

* = subject to funding, resources and/or partnership agreement

Objective	Action	Partner	Target / Milestone
To support and implement current policies and develop new policies and initiatives that will safeguard the special qualities of the Water of Leith.	P1 - Monitor the implementation of relevant policies in existing Edinburgh Local Development (to be followed by City Plan 2030). Monitoring should focus on how policies have been applied to decisions, and how these have been implemented on the ground.	CEC Place Management Planning , WOLCT	Ongoing
	P2 - Consider all proposal for development, policies and design guidance in the City Plan 2030 which will impact on the river corridor and comment accordingly.	Action Group CEC Place Directorate Planning,	Summer 2020
	P3 - Support wider policy initiatives that promote and safeguard the Water of Leith as an important landscape, amenity, historical and natural heritage asset (e.g. Central Scotland Green Network, PHRP Management Plan, Water Framework Directive etc).	Action Group CEC Place Management Planning	Ongoing
	P4 - Influence City wide policy to strengthen habitat networks and connectivity for species using the LBS network, Living Landscapes sites, Parks and greenspaces (B5).	Action Group CEC Place Management Planning	Consult on City Plan 2030 in 2021
Work with key stakeholders to achieve management plan objectives and sustainable	P5 - The Action Group continues to meet twice a year to consider all management plan objectives and respond to development or land use issues and opportunities.	Action Group	Ongoing

development.	P6 - Develop Project or Local Stakeholder Groups (out with the Action Group) to consider specific management issues and/or actions in local areas (i.e. Dean Valley Steering Group, Leith Waterfront Partnership, Riparian Resilience Group) E6.	Action Group and other landowners and stakeholders	Ongoing
	P7 - Implement actions in the Partnership Agreement on litter and debris accumulations at the Victoria Bridge Boom and basin corners in the Water of Leith and consider extending the remit of the group to consider other local issues such as INNS, siltation and bridges (W29).	WOLCT, CEC Place Waste, Forth Ports, Water of Leith 2000, FOWL B	See agreement
Engage with land managers across the wider catchment to encourage sensitive land management and land-use to maximise water attenuation, carbon sequestration and address the problems of both urban diffuse pollution and rural diffuse pollution.	P8* - Explore opportunities in the upper catchment to minimise flood risk and maximise water resources through the creation of floodplain habitat and the attenuation of water in the wider landscape (W7*).	WOLCT, PHRP, Private Landowners	Pilot project 2022
	P9 - Recommend and promote landscape management and land-use planning strategies to achieve conservation, restoration or reduce carbon loss and increase the amount of carbon stored in vegetation and soils (i.e. Peatland Action, Renewable Energy Development and Scottish Rural Development Programme) .	SNH, CEC Place Management Planning, WOLCT	Ongoing
	P10 - Explore opportunities for woodland creation within the catchment to support carbon storage (B7. B8).	WOLCT, PHRP, CEC Parks and Greenspaces, Private Landowners	2023
Assess all actions in the management plan considering both the potential impact of climate change and how the river can support carbon reduction.	P11 - Apply the key principles of <ul style="list-style-type: none"> locking up carbon creating a healthy ecosystem helping nature adapt Scot Gov Salmon Strategy to all suitable actions in the Management Plan.	Action Group	Ongoing
	P12 - Support WOLCT Carbon and Waste reduction priorities within its Business Plan.	WOLCT	Ongoing
	P13 - Consider ways to reduce pressures from climate change on the river and its wildlife, and build resilience by: <ul style="list-style-type: none"> Removal of invasive non-native species Implementation of natural solutions 	Action Group	Ongoing

	<p>to reduce urban sprawl (i.e. Tree planting, green buffer zones and infrastructure)</p> <ul style="list-style-type: none"> • Leveraging more habitat availability and connectivity • Tackling issues of over grazing and pollution 		
	P14 - Support the city wide need to increase sustainable travel routes through improvement to the Walkway and recreation actions R24-26.	Active Travel, CEC HS, Sustrans	Ongoing
	P15 - Monitor key indicators of climate change to build a picture of the impact on the river and present options of how this could be mitigated.	Action Group	Decide on indicators and a programme of monitoring by 2024

5. Implementation and Monitoring

This plan is to be implemented over the next ten years (2020-2030) by the Water of Leith Action Group Members, with assistance from other partners and agencies as detailed in the action plans. Responsibility for individual actions within the plan has been assigned to specific agencies, but it is anticipated that many of the actions will require collaborative working.

Monitoring success against each individual action will be the responsibility of the named lead organisations. Progress will be reported annually, either at one of the meetings of the Water of Leith Action Group, or in a wider stakeholder meeting.

A master list of progress against each action will be maintained by the Water of Leith Conservation Trust.

6. Appendix

Appendix A. TO BE UPDATED

Organisations consulted during preparation of the plan