The Edinburgh Nature Network

Marine and Aquatic Opportunities

St. Bernards Well besides the Water of Leith, near Stockbridge

There are 41 incredible opportunities to improve aquatic and marine habitats in Edinburgh that were identified through the ENN, whether relating to the Firth of Forth or inland rivers and burns.

These opportunities include:

- Restoring and protecting key coastal habitats
- Enhancing both salt- and fresh- water quality
- River, canal and burn restoration practices
- A focus on protecting key marine species

Using the location, action description, and species in the accompanying table, we hope you can find an opportunity that is right for the aims of your organisation.

Species Spotlight

These are just some of the incredible, local species covered in the opportunities in this area. Please check the table below or the ENN story map to get more details on the actions connected to each species.

Harbour Seals

Snakelocks Anemone

Salmon

Stalked Jellyfish

Red-throated Diver

Edinburgh Nature Network is a long-term strategic approach to manage, restore and enhance the urban landscape of Edinburgh, highlighting opportunities to take action across the city.

Get Involved

If your organisation has an ongoing or completed project relating to one of these actions, please log it in our survey.

Get in touch with us at thrivinggreenspaces@edinburgh.gov.uk

EDINBURGH'S thriving green spaces

Scottish Wildlife Trust

EDINBVRGH THE CITY OF EDINBURGH COUNCIL

ENN Action Number	Area	Action	Category	Beneficiary Species
EN042	Braid Hills	**Enhance water quality at Blackford Pond**. The pond provides habitat for wildlife and is globally important for algal research but has poor water quality. Adding areas of wetland upstream of the pond will filter water run off before it reaches the pond. Whilst Midmar allotments provide priority habitat, any pesticide or herbicide use will affect water quality in the pond. Elm logs should be used to prevent the embankment from eroding.	Enhance	
RE020	Braid Hills	**Restore water voles *(Arvicola amphibius*) to Braid Burn**. Water voles were historically present on Braid Burn but are no longer found in Edinburgh. Drivers of their local extinction are likely to be presence of American mink *(Neovison vison*) and habitat loss.	Restore	Water Voles
EN041	Burdiehouse	**Enhance water quality within Burdiehouse Burn by starting an Anglers' Riverfly Monitoring Initiative (ARMI)**. Monitoring watercourse health will ensure long-term quality and provide early warnings when remedial action is required.	Enhance	
EN038	Central	**Enhance Union Canal to create better habitat connectivity for pollinators and other wildlife**. Adding green walls and biomatrix rafts to create diverse floating ecosystems will provide more habitat and ecosystem services for people and wildlife.	Enhance	Pollinators
EN049	Colinton, Wester Hailes and Bonaly	**Enhance Union Canal for pollinators**. There is high demand for insect pollination services along the Union Canal corridor. As well as planting wildflower meadows alongside the canal, adding biomatrix rafts to provide diverse floating ecosystems with nectar-rich flowering plants will provide more habitat for pollinators and increase ecosystem service benefits for people.	Enhance	Pollinators

RE025	Colinton, Wester Hailes and Bonaly	**Restore fish passage at Water of Leith**. Mossy Weir blocks fish passage along Water of Leith. A coordinated catchment wide approach will restore connectivity for fish along this river.	Restore	General fish species
RE021	Corstorphine	**Restore the streams at Corstorphine Hill to mitigate flooding and issues with surface water**. The addition of nature-based solutions including wetlands will also help with this.	Restore	
CR009	Cramond	**Create sea defences that benefit wildlife**. The Cramond foreshore is predicted to be underwater by 2050. Coastal defences need to be improved to mitigate this. Existing coastal defences are mainly hard defences. Future coastal defences should be naturalised, e.g. planting marram grasses (*Ammophila arenaria)* to stabilise the remaining coastline or a similar approach to the coastal park proposed at Granton. Where hard engineering defences are required, 'bioblocks' or other artificial reef structures should be used to provide habitat for marine life.	Create	
EN011	Cramond	**Enhance seagrass habitat**. Beds including dwarf seagrass (*Zostera noltii*) provide benefits including sequestering carbon and providing natural barriers to coastal storm damage. They provide habitat for marine life including snakelocks anemone (*Anemonia viridis)* and stalked jellyfish (*Calvadosia campanulata)*, and act as nurseries for fish species sold commercially like Atlantic cod (*Gadus morhua)* and Atlantic herring (*Clupea harengus*).	Enhance	Anemones Jellyfish Cod Herring
EN013	Cramond	**Enhance the marine environment by reducing pollution**. Raising awareness about marine pollution through interpretive signage will help people understand how to use the foreshore area for recreation whilst reducing their environmental impact.	Enhance	

RE011	Cramond	**Restore coastal habitats and dune systems**. Existing erosion control bays were put in place by City of Edinburgh Council Natural Heritage department: five $1m^2$ bays were installed in 2018. They protect the area from trampling to restore degraded habitat. These should be monitored and extended if successful. Invasive non-native species (INNS), including Japanese rose *(Rosa rugosa),* dominates the low dune grasslands. Suckering ash and sycamore are being removed by the Natural Heritage department. Targeted removal of INNS is vital to restore native habitats.	Restore	
RE007	Dalmahoy and Balerno	**Restore the Murrayburn**. There are opportunities to naturalise the Murrayburn, which will improve water quality both at the site of naturalisation and further downstream. Invasive non-native species (INNS), including giant hogweed (*Heracleum mantegazzianum)*, are present along the burn. Removing these will benefit native plant species and wildlife.	Restore	Native plant species
RE008	Dalmahoy and Balerno	**Restore the Water of Leith**. There are opportunities to enhance and widen the Water of Leith River buffer, linked to agri-environment schemes. Invasive non-native species (INNS), including giant hogweed (*Heracleum mantegazzianum),* are present along the burn. Removing these will benefit native plant species and wildlife.	Restore	Native plant species
RE010	Dalmahoy and Balerno	**Restore beavers (*Castor fiber)* to the Water of Leith**. Beavers are native to the UK but were hunted to extinction in the 16th century. They are known as ecosystem engineers for their ability to create new wetlands, restore native woodland and improve conditions for a wide range of wildlife including dragonflies, otters and fish. Supporting their return to Edinburgh via the Water of Leith will restore many of the habitats and ecosystem functions that were lost in recent years.	Restore	Beavers Dragonflies Otters Fish

EN059	Firth of Forth	**Enhance water quality within the Firth of Forth**. Poor water quality is caused by marine pollution, including sewage, oil and fuel from boat traffic, plastics and discarded fishing equipment. Although widely used by people for recreation, many of the coastal waters along Edinburgh do not have bathing water status and it can be dangerous to human health (and wildlife) to go into the water at times. The entire coastline of Edinburgh should be safe for swimming.	Enhance	
PR044	Firth of Forth	**Protect existing locally, nationally and internationally important marine species**. The Firth of Forth provides habitat for a range of species including red-throated divers *(Gavia stellata),* bottlenose dolphins (*Tursiops truncatus*), sea sponges and anemones. Even though these waters are protected by multiple designations, there have already been local extinctions of wildlife here (e.g. roseate terns), and human disturbance, invasive non-native species and pollution pose a high risk to those still present. Biological monitoring will help determine which species are at risk of local extinction so they can be afforded greater protection.	Protect	Red-throated divers Bottlenose dolphins Sea sponges Anemones
RE030	Firth of Forth	**Restore native species, including seagrass *(Zostera sp.),* oysters *(Ostrea edulis)* and mussels *(Mytilus edulis),* to Firth of Forth**. There are records of seagrass *(Zostera sp.)* along the coastline from Hopetoun to Blackness, west of Cramond and along Wardie Bay, but overall numbers have greatly diminished. Seagrass meadows provide a range of benefits including sequestering carbon and a natural barrier to coastal storm damage. They provide habitat for marine life including snakelocks anemones *(Anemonia viridis)* and stalked jellyfish (*Calvadosia campanulata*), as well as acting as nurseries for species fished commercially like Atlantic cod *(Gadus morhua)* and Atlantic herring *(Clupea harengus*). Oysters are no longer found in Firth of Forth and mussels are heavily exploited. Oyster reefs mitigate coastal flooding and mussels filter out micro-plastics, which will improve water quality within Firth of Forth.	Restore	Seagrass Oysters Mussels Snakelocks anemone
RE031	Firth of Forth	**Restore native habitats by removing invasive non-native species (INNS).** INNS are transported here as the seaway is heavily used by commercial shipping companies, recreational boat use and cruise ships. Common marine INNS in Scotland include wireweed (*Sargassum muticum*), green sea-fingers *(Codium fragile subsp. tomentosoides)* and Japanese skeleton shrimp (*Caprella mutica).* Marine biosecurity measures are required to prevent these species from establishing and causing a decline in biodiversity.	Restore	Native sea species

EN018	Granton and Wardie	**Enhance the rocky reef habitats along the coast**. Where hard engineering is required for sea defences, 'bioblocks' or equivalent should be used to complement and enhance the rocky shore ecology.	Enhance	
EN019	Granton and Wardie	**Enhance water quality in Wardie Bay**. There are water quality issues along the coast. Wardie Bay Beach Watch are campaigning to get Wardie Bay approved for bathing water status and water quality monitoring. Improving water quality and gaining bathing water status will encourage more wild swimmers and bring more health and wellbeing benefits to those using the bay.	Enhance	
PR010	Granton and Wardie	**Protect the pontoons for harbour seals (*Phoca vitulina)* that were restored by Forth Ports**. Harbour seal numbers have declined by 40% since the 1990s, due to competition with grey seals and human disturbance at their haul out sites. The increased use of Wardie Bay for recreation, including sea kayaking and paddle-boarding, has increased disturbance.	Protect	Harbour seals
RE012	Granton and Wardie	**Restore native habitats by removing Invasive non-native species (INNS).** Biosecurity measures are needed to eradicate INNS, both on land and from the marine environment due to shipping traffic.	Restore	
CO023	Gyle, Hermiston and Sighthill	**Connect the Gogar Burn to Loch Ross to improve habitat for wildlife and allow passage along the waterway**. The Gogar Burn is currently culverted under Loch Ross.	Connect	
PR022	Holyrood and Duddingston	**Protect Duddingston Loch and Bawsinch Scottish Wildlife Trust reserve as it has a range of priority habitats** including every Scottish native tree species excluding the very rare Arran service-tree, (*Sorbus pseudofennica)*, and is important for wildlife including otters, (*Lutra lutra)*, and several bat species. There is evidence of otters moving between Duddingston Loch and Figgate Burn Park so this habitat connectivity should be protected.	Protect	Tree species Otters Bats
RE014	Holyrood and Duddingston	**Restore native habitats by removing invasive non-native species (INNS) from Figgate Burn**. Figgate Burn provides important habitat for otters *(Lutra lutra)* and other wildlife inhabiting and commuting through the area. A combined approach to remove invasive species with neighbouring landowners is needed.	Restore	Otters

EN030	Inverleith and Stockbridge	**Enhance habitats along Water of Leith**. The river corridor is artificial with concreted banksides. Addition of native species planting through biomatrix rafts or equivalent will bring more benefits for wildlife and people.	Enhance	
RE015	Inverleith and Stockbridge	**Restore fish passage along Water of Leith**. The weir at Dean Village is blocking fish passage along Water of Leith. A catchment wide approach is needed to restore connectivity for fish along this river.	Restore	Fish
CR007	Leith	**Create sea defences that benefit wildlife**. The Leith coastline is predicted to be underwater by 2050. Coastal defences need to be improved to mitigate this. Existing coastal defences are mainly hard defences. Future coastal defences should be naturalised, e.g. planting marram grasses (*Ammophila arenaria)* to stabilise the remaining coastline or a similar approach to the coastal park proposed at Granton. Where hard engineering defences are required, 'bioblocks' or other artificial reef structures should be used to provide habitat for marine life.	Create	
EN006	Leith	**Enhance Leith Docks**. Leith is disconnected from the coast and the docks lack habitat for wildlife. Creating floating habitats/biomatrix rafts for nesting birds in Victoria Quay and improving access to the coast for people will be beneficial. There is a derelict site at Marine Esplanade that can be improved to provide connectivity to the coast.	Enhance	Birds
RE005	Leith	**Restore terns to Leith Docks**. The tern rafts at Imperial Docks Special Protection Area supported the largest colony of common tern *(Sterna hirundo)* with 995 pairs in 2017, however there was complete colony failure in 2018 and 2019. Failure is thought to be due to a combination of human disturbance, gull predation and invasive American mink. These should be addressed to allow terns to return.	Restore	Common terns

RE006	Leith	**Restore fish passage from the sea through the Water of Leith**. Fish cannot currently swim up the Water of Leith from the Port of Leith at the Docks as there are gates. Enabling fish passage would create habitat connectivity for many fish species. A catchment wide approach will be needed to ensure full connectivity of the Water of Leith as there is another barrier for fish at Miller Row (upstream from Dean Village). Collaboration with Forth Ports, SEPA, Water of Leith Conservation Trust and the Friends of Water of Leith Basin will be important here.	Restore	General fish species
CR016	Portobello	**Create sea defences that benefit wildlife**. The Portobello coastline is predicted to be underwater by 2050. Coastal defences need to be improved to mitigate this. Coastal defences should be naturalised, e.g. planting marram grasses, (*Ammophila arenaria)* to stabilise the remaining coastline. Where natural sea defences are not possible and hard engineering is required, 'bioblocks' or other artificial reef structures should be used to provide habitat for marine life.	Create	
PR015	Portobello	**Protect Figgate Burn**. It provides habitat for wildlife including otter *(Lutra lutra)* and several bat species including Daubenton's bat *(Myotis daubentonii),* a water habitat specialist. It provides access for Atlantic salmon *(Salmo salar),* sea trout (*Salmo trutta*) and eels (*Anguilla anguilla).*	Protect	Otters Bats Salmon Sea trout Eels
PR016	Portobello	**Protect Brunstane Burn**. It provides access for Atlantic salmon (*Salmo salar*), sea trout *(Salmo trutta)* and eels *(Anguilla anguilla).*	Protect	Salmon Sea trout Eels
PR017	Portobello	**Protect Joppa Rocks as it is important for both marine life and geodiversity**. Water quality at the adjacent Fisherrow Sands should be improved through collaboration with East Lothian Council.	Protect	

PR013	South Queensferry and Dalmeny	**Protect Atlantic salmon (*Salmo salar)* and sea trout (*Salmo trutta)* migration routes**. Dalmeny estate has an historically important route, and it should be protected to ensure migration routes remain open.	Protect	Salmon Sea trout
RE013	South Queensferry and Dalmeny	**Restore roseate terns *(Sterna dougallii)* to Port Edgar**. A tern raft was installed at Port Edgar Marina that was successful with common terns *(Sterna hirundo),* but more work is needed to ensure the return of roseate tern. In 2019, NatureScot constructed 'tern terraces' on the Isle of May that resulted in breeding success for roseate terns. A similar approach could be taken here.	Restore	Roseate tern
EN057	Stenhouse and Saughton	**Enhance fish habitat within the Water of Leith**. There is very poor fish habitat in Roseburn. Improving in-channel water quality and biodiversity, and allowing fish passage throughout the Water of Leith, will support wildlife through a coordinated catchment-wide approach.	Enhance	
RE027	Stenhouse and Saughton	**Restore Murray Burn**. Murray Burn has poor water quality that also impacts Water of Leith, which it flows into at Saughton. Daylighting and naturalising the burn will clean the water and mitigate flooding.	Restore	
RE028	Stenhouse and Saughton	**Restore Stank Burn**. Stank Burn has poor water quality that also impacts Water of Leith, which it flows into at Murrayfield. Daylighting and naturalising the burn will clean the water and mitigate flooding.	Restore	

RE029	Stenhouse and Saughton	**Restore Water of Leith**. Water of Leith is heavily modified around Coltbridge. Restoring, decanalising and naturalising it will provide habitat for wildlife, water purification and flood regulation.	Restore	