

# Be inspired: Conserving Habitats in an Evolving Climate

## Managing our natural heritage with increasing climate pressures

“Securing the long-term future of Easter Craiglockhart Hill Local Nature Reserve by conserving and enhancing both the natural and the designed landscapes.” – *Easter Craiglockhart Hill Management Plan*

This case study was created as part of the work of Our Heritage, Our Future which looks at the impacts that climate change is having on our natural, built and cultural heritage; showcasing the fantastic work our Climate and Nature Friendly Communities Network groups are doing to protect heritage and mitigate climatic impacts.



*Volunteers after a Sunday session planting native wildflowers; by Friends of Easter Craiglockhart Hill*

The Friends of Easter Craiglockhart Hill (FECH) are a nature and conservation focused community group looking after Easter Craiglockhart Hill local nature reserve based in Edinburgh. FECH was established in 1998, with Easter Craiglockhart Hill designated as a local nature reserve in 2004. The group were the first organised ‘friends’ group in Edinburgh. FECH joined the It’s Your Neighbourhood community in 2023.

The group look after a wide range of habitats: a large ornamental pond which was historically a boating pond but now a haven for a variety of waterfowl, a marshland floodplain, semi-natural woodland and wildflower rich meadows.

### What are the issues experienced because of climate change?

The marshland habitat is fed by the pond water outflow pipe when the pond is at high-water level. With climate change resulting in rising and prolonged warm temperatures, the marshland is vulnerable and susceptible to drying out, risking losing native plant and animal species which reside in this habitat.

Higher rainfall causes footpaths in the local nature reserve to widen. Easter Craiglockhart Hill has high foot traffic due to its location near Edinburgh city centre and its popularity amongst walkers and dog owners. Increasingly wetter winters creates more mud on paths and people tend to avoid the mud by going on drier sections which causes footpaths to widen as vegetation gets damaged from footfall.

The predominant habitat on Easter Craiglockhart Hill is semi-natural mixed woodland. With climate change comes the threat of increased pests and diseases, especially ones which are

uncommon to Britain. Ash dieback is the most frequent disease noted on the hill, eradicating around three to four mature ash trees annually. Pest and disease numbers may continue to increase in Scotland and on the hill due to the increasingly optimal conditions there are for the spread of diseases and increased pest populations, creating ecological pressures on the woodland on Easter Craiglockhart Hill.



*Left to right: Small Copper, Common Blue, Comma and Small Tortoiseshell; by Friends of Easter Craiglockhart Hill*

The Friends of Easter Craiglockhart Hill have noticed a boost in numbers of butterflies inhabiting the hill. In previous years, there was a distinct lack of butterfly populations, but in 2024, butterfly populations are flourishing; even ones that wouldn't be expected to be thriving in Scotland. It is suspected that butterfly species have expanded their distributions from northern England to now include Scotland: they are moving northwards. This suspected movement is called a range shift; when species move from previously known boundaries to new boundaries, often due to climatic changes in their original distribution. This explosion in butterfly population has been fantastic for biodiversity on the hill.

### **How have The Friends of Easter Craiglockhart Hill managed these issues?**

The group run weekly volunteer sessions, doing a variety of tasks to boost biodiversity and conservation. They plant native trees and plants, put bird and bat boxes up, remove invasive species and harvest native seeds from wildflowers on the hill for further planting. Because the local nature reserve has a high number of users, creating climate resilience in the nature reserve whilst allowing it to provide the ecosystem services for users proves quite difficult.



*Volunteers after shoring up banks to stop eroded soil moving onto paths; by Friends of Easter Craiglockhart Hill*



*A volunteer digging a pool beside the stream that runs through marshland; by Friends of Easter Craiglockhart Hill*

To increase water retention in the marshland over the hotter summer months, the group, alongside other helpers, have created meandering channels in the marshland. To further boost the biodiversity in this habitat, some bull rushes and willowherb species were removed to make way for more flowering plants like yellow flag iris to establish and to support the insect population. This activity has been carried out for the past two years, and the results have been positive; in the first year a kingfisher was spotted immediately after the work was completed, and in this second year, more insects like damselflies have been noticed.

With pests and diseases on the hill falling under council responsibility, there is limited protection that groups like the Friends of Easter Craiglockhart Hill can provide. However, maintaining diversity and mixed ages of tree species is beneficial in slowing the spread of diseases, so FECH plant native trees regularly in the colder months to continue to repopulate the woodland with species affected by disease.

Footpaths are another aspect of the nature reserve which fall under council responsibility to maintain. However, FECH have marked the path boundaries more clearly using logs and dead hedges to guide people to stay on the path, and to act as a barrier to soil eroding onto paths.

### **What are the next steps?**

The group plan to carry out butterfly surveys in different locations in the nature reserve. They also plan to identify some macroinvertebrates in the marshland and nearby freshwater stream to determine water quality and identify further work that could be carried out to improve biodiversity in this habitat.

### **What resources have the Friends of Easter Craiglockhart Hill found helpful in protecting the nature reserve in the face of climate change?**

Easter Craiglockhart Hill have a management plan created by the City of Edinburgh Council. The group use this management plan to shape ideas and plans on how to further protect and enhance the biodiversity on the hill. This plan also helps the group know and plan what to focus on next.

If you would like to volunteer within a local nature reserve, please check who the landowner is and get in contact with them. Many nature reserves are looked after by large organisations who may run regular volunteering sessions you can get involved in.

If you would like to learn about It's Your Neighbourhood and how to take part, please visit: [www.keepsotlandbeautiful.org/our-communities-network/its-your-neighbourhood/](http://www.keepsotlandbeautiful.org/our-communities-network/its-your-neighbourhood/)

If you would like to learn about Our Heritage, Our Future, please visit: [www.keepsotlandbeautiful.org/our-heritage-our-future/](http://www.keepsotlandbeautiful.org/our-heritage-our-future/)

These images are owned and kindly supplied by the Friends of Easter Craiglockhart Hill.



*Volunteers planting trees;  
by Friends of Easter  
Craiglockhart Hill*