

ESK VALLEY CATCHMENT ACTION PLAN PROPOSAL

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1. What are the issues?

Esk valley and adjacent coast are important nature, residential, business and recreation areas. There are nature hotspots from source to sea. However, the river basin is not well managed with overgrazing and lack of natural vegetation cover in the upper reaches. The river is not natural any longer due to reservoirs for water supply, weirs for power for past industrial activity, and canalisation to entrain the river.

The work of the Esk River Improvement Group has rightly focussed to date on action to resolve pollution and flooding. In a world of twin biodiversity and climate change crises taking a forward looking approach to the management of the Lothian Esk catchment as a whole would be appropriate. Many experts in Scotland and around the world are arguing for and implementing Nature Based Solutions. This approach has been successfully adopted in The Borders for example on the Eddleston Water. Adopting it on for the Esk catchment would enable the terms of the 2009 Flood Risk Management (Scotland) Act to be achieved, chime with the Scottish Government commitment and those of its key agencies, SEPA and Nature Scot, to nature based solutions.

I hope that the public authorities - SEPA, Nature Scot and the two local councils, East Lothian and Midlothian - will work productively together to bring about this transformative change in the whole Esk catchment. It will improve amenity and landscape, it will reduce water flow into the river channel, it will improve the value of the land and will help to reduce, although not eliminate, the flood risk downstream for example in Musselburgh.

2. What could be done?

My emphasis is on nature based solutions as now being advocated and used around the world. Some obvious actions that could be taken are listed as a basis for preliminary discussion. Taken together and with presumably other relevant measures would help to reduce flood risk downstream and result in improved biodiversity, provide climate change adaptation and mitigation measures, and improve the landscape.

The two rivers are short and 'flashy' for a range of reasons: overgrazing in the uplands in The Moorfoot and Pentlands Hills, artificial structures channelling and increasing the speed of flow, cut off from its natural floodplains. And incised into the surrounding land for a high proportion of their courses.

1. **Slow the flow of water in the river** is the most important as it will bring multiple benefits to the whole system. A number of measures are suggested: blocking drains in the uplands which were put in place with grant aid to allow grazing land to be improved; reducing or stopping grazing through public benefit agriculture scheme post Brexit proposed by the Scottish Government; using permeable surfaces in all new housing developments as part of planning and building consents; hand planting of native trees on permanent grassland, and along riparian margins to capture water and carbon and produce nutrients to improve water quality. Formal consideration should be given to re-introducing the European Beaver as a natural water engineer which would also improve biodiversity and increase carbon sequestration. That would be preferable also to killing beavers that have caused damage to agricultural land in the Tay catchment.

2. **Reduce erosion of river banks** by riparian planting of native trees. This is a means of reducing the deposition of sediment in the lower reaches of the rivers and so raising the river bed and making it more prone to flooding out of its natural channel.
3. **Store water** by opening up natural flood plains and making ponds . Agree compensatory storage in all of the reservoirs on both rivers in deals with Scottish Water.
4. **Let the river behave naturally** by removing all artificial barriers which are no longer needed, and which mean that the river cannot fulfil the EU Water Framework Directive ‘good ecological quality’ now adopted in Scottish legislation.
5. **Protect all soil** in the catchment from loss downstream and to enable it to store more carbon and reduce the sediment load in the river channels, through the existing Codes of Good Agriculture Practice and the Principles of the Statement of Rights and Responsibilities for the land approved by the Scottish Parliament.

3. What are the next steps?

Leadership rests with SEPA and the two local councils, with the support of Nature Scot, to develop a whole catchment action plan.

Careful negotiations with owners and occupiers of land will be needed to taker the work forward.

Resources are potentially available through the recently announced Nature Restoration Scheme, as well as the agri-environmental elements of the existing agriculture support schemes and through grants from Forest Scotland.

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