| REF. | ACTIONS | PARTNERS (lead partners in bold) |
|---|---|---|
| 37.1 | Ensure future developments in the Elrick Burn catchment incorporate SuDS in order to ensure surface water drainage does not impact on water quality. | **AC** / **Developers** / SEPA |
| 37.2 | Seek to improve the quality of surface water run-off by retrospective incorporation of SuDS where sites become available. | **AC** / SEPA / SW / **Trade Premises Proprietors** |
| 37.3 | Inspect industrial estate premises to check for pollution problems and advise on best practice for prevention of pollution. | **SEPA** / SW |
| 37.4 | Monitor Elrick Burn to 1) assess water quality, 2) assess any improvements in water quality downstream of the SuDS wetland constructed through the 3-DeeVision project and 3) determine if there are any remaining causes of water degradation. | **SEPA** |
| 35.5 | Assess impact from diffuse sources where this is identified as a primary pressure affecting the achievement of WFD requirements. | **SEPA** / DDSFB / MI |
| 37.6 | Investigate the potential for improvements to habitat quality in the Elrick burn. | **AC** / **SEPA** |
| 37.7 | Engage with the local community in maintaining and improving water and habitat quality of the burn. | **AC** / **DCP** / Householders / SEPA |

*Acronyms are listed in the centre of this Action Card*



# elrick burn 37 SUB CATCHMENTS

OBJECTIVE 37. Improve the water and habitat quality of the Elrick Burn.

## BACKGROUND

The Elrick Burn is a small tributary that drains Westhill, a suburban area to the west of Aberdeen. 'Westhills', originally a relatively small village, has developed rapidly and as a result the burn has been heavily modified from its natural state. Much of the Elrick burn is now culverted beneath housing estates, from which it drains surface water run-off. The culverted section opens out directly downstream of Westhill Industrial Estate, where it receives discharges from a further two surface water outfalls that drain run-off from the industrial estate and the Westhill business park. It then flows south to join with the Brodiach and Culter Burns before discharging into the River Dee at Peterculter.

Under the Scottish River Classification Scheme the Elrick Burn has fluctuated between class C (poor) and class D (seriously polluted). The Elrick Burn is currently considered to be 'at risk' of failing to achieve the Water Framework Directive quality target of 'good' ecological status by the first deadline of 2015. Long term ecological monitoring of the burn indicates the presence of only pollution-tolerant species. It is the only tributary of such poor status to discharge into the River Dee.

The Local Nature Reserve of Arnhall Moss lies within the Elrick Burn catchment on the edge of the expanding settlements of Westhill and Elrick. As one of the few remaining raised bogs in lowland Aberdeenshire the reserve was designated in 1991. Changes in land use and improved drainage have contributed to a decline in the size of the moss. Birch trees have also invaded the moss, reducing its water reserves. The woodland flora includes wood sorrel and chickweed wintergreen, while common woodland and wetland birds such as blackbird, wren, great tit, blue tit, coal tit, mallard and moorhen are abundant. Various mammals such as pipistrelle bats, roe deer, foxes and stoats, either live on or use the site.

## ISSUES

The Elrick Burn is affected by a number of pressures typical of an urban environment.

- Surface water run-off from roofs, roads and yards in the residential and industrial areas of the catchment are sources of diffuse pollution.
- A number of wrong connections allow wastewater from sinks, toilets and household appliances to enter surface water drains which in turn discharge into the burn.
- Householders sometimes dispose of waste into the surface water drains (that are meant to carry rainwater from developments to prevent flooding) without realising that they are polluting the Elrick Burn. Collectively these actions undoubtedly contribute to the poor water quality in the burn.
- The culverting of the burn makes pollution sources difficult to locate and limits the natural purification displayed by open watercourses.
- In the past, the watercourse has been polluted by industrial wash-water and chemicals from nearby land contaminated with timber treatment products, although in this respect the burn is gradually recovering.

## EXISTING / RECENT INITIATIVES

- The chemistry and biology of the Elrick Burn are monitored by the Scottish Environment Protection agency (SEPA).
- Working with local developers, the 3-Dee Vision project funded the provision of a wetland treatment facility adjacent to the Elrick Burn. It is hoped that this system will improve the quality of the burn downstream.
  - During wet weather, when the water level in the burn rises this wetland will receive and treat, a portion of the flow known as the 'first flush'. The 'first flush' often contains a high concentration

## WHO IS INVOLVED?

Aberdeenshire Council

Dee Catchment Partnership

Dee District Salmon Fishery Board

Developers

Householders

The Macaulay Institute

Scottish Environment Protection Agency

Scottish Water

Trade Premises Proprietors



Further copies can be downloaded at www.theriverdee.org. For further information contact the Dee Catchment Officer
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deecatchment partnership

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of contaminants washed into the burn from previously dry surfaces and drains.

- The wetland will also receive and treat surface water drainage from a new business park development to the west of the burn, acting as the final stage in the Sustainable Drainage Systems (SuDS) serving that development.

## ACTIONS REQUIRED

- Any future development in the catchment should be required to provide SuDS in order to ensure surface water drainage does not impact on water quality.
- Water quality could be further improved by the retrospective incorporation of SuDS. However this would be dependant on the development opportunities and the availability of useable land within the industrial/commercial areas of the catchment.
- The Elrick Burn should continue to be monitored to assess any beneficial effect of the wetland treatment system and determine the remaining causes of water degradation.
- There is a need to raise awareness of the issues with the local community and appropriate authorities.

## LEGISLATION

*See Action Pack Annex for information sources*

- Sewerage (Scotland) Act,1968
- Town and Country Planning (Scotland) Act, 1997
- Water Framework Directive (Directive 2000/60/EC), 2000
- Water Environment and Water Services (Scotland) Act, 2003
- Building (Scotland) Regulations, 2004
- Water Environment (Controlled Activities) (Scotland) Regulations, 2005

## GUIDELINES AND INFORMATION

*See Action Pack Annex for information sources*

- Scottish Building Standards Agency
- Scottish Building Standards Domestic and Non-Domestic Technical Handbooks, May 2005
- Drainage Assessment - A Guide For Scotland (SEPA)
- The DOs and DONTs Guide for Planning and Designing SuDS (SEPA)
- SuDS: Setting the Scene in Scotland (SEPA)
- Planning Advice Note (PAN) 61: Planning and Sustainable Urban Drainage Systems (Scottish Government)
- SEPA Pollution Prevention Guidelines
- SuDS Advice note: Brownfield Sites (SEPA)
- Sustainable Urban Drainage Systems design manual for Scotland and Northern Ireland (C521) (CIRIA)
- Watercourses in the Community (SEPA HAbitat Enhancement Initiative)
- 3-Dee Vision project website www.3deevision.org



*The bed of the Elrick Burn has an orange appearance which, although unsightly, is due to the presence of naturally occurring iron ochre.*

37 SUB CATCHMENTS

## RELATED ACTION CARDS

5. Surface water drainage

6. Public sewerage/ drainage systems

36. Loch of Skene catchment

**AC** Aberdeenshire Council **DCP** Dee Catchment Partnership **DDSFB** Dee District Salmon Fishery Board **SEPA** Scottish Environment Protection Agency **SW** Scottish Water

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