REF.	ACTION	PARTNERS (lead partners in bold)
34.1	**Make catchment-wide improvements to water quality and habitat based on the 3-Dee Vision approach.**	**SEPA** / SNH / AC / Landowners / Land managers / SW
34.2	**Assess and address impacts from diffuse source pollution (e.g. from farms, septic tanks, road drainage) where this is identified as a primary pressure affecting the achievement of WFD requirements.**	**SEPA** / DDSFB / MI
34.3	**Co-ordinate applications for grants to support positive action by land managers.**	SGRPID / SNH / **FWAG** / SAC / **NFUS** / FCS / Landowners
34.4	**Implement and promote best practice e.g. nutrient budgeting, off-stream watering, buffer strips.**	Farmers / Landowners / AC / NFUS / FWAG / SAC
34.5	**Develop and promote demonstration projects (ongoing).**	AC / SNH / SEPA / MI / MT / SW / Landowners / Landmanagers
34.6	**Monitor Tarland Burn to identify remaining causes of water quality degradation and show any improvement after action is taken.**	**MI / SEPA**
34.7	**Communicate progress to the local community.**	**MI / AC** / SEPA / DCP / SNH / SW / DDSFB / Community Councils
34.7.1	Continue to promote works in the catchment through appropriate websites (Dee CMP, TCI, 3DV, 3DV partner websites) as well as non-internet communications.	**MI** / DCP / AC / SNH / SEPA / SW / DDSFB / Community Councils
34.7.2	Undertake community evaluation and feedback.	**MI / AC**

Acronyms are listed in the centre of this Action Card

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tarland burn 34 SUB CATCHMENTS

OBJECTIVE 34. Improve water and habitat quality in the Tarland Burn catchment

BACKGROUND

The catchment of the Tarland Burn is centered on the Howe of Cromar which lies 45km west of Aberdeen. The Tarland Burn, which drains approximately 70km^2 of land, has its headwaters above the village of Tarland and enters the Dee at the village of Aboyne, approximately halfway down the Dee catchment.

The Tarland catchment has high environmental value. The Tarland Burn and three of its tributaries, namely the Burn of Blackmill, Burn of Glaaick, and the Stoneyford Burn, form part of the River Dee Special Area of Conservation (SAC) which has been designated due to its internationally important populations of otter, Atlantic salmon and freshwater pearl mussel. The area also supports a diverse range of plants and other animal species including ospreys, the common lizard, adders, and several species of bat.

Within the catchment there are a range of land use types. On the upper slopes heather moorland gives way to plantation forestry which in turn meets the upper fields of the farms in which beef cattle and sheep are grazed, interspersed between fields of improved grass. The major settlements are the villages of Tarland and Aboyne,

The Tarland Burn is the most westerly tributary of the River Dee to be affected by intensive land management. This, in combination with an expanding human population, results in a number of significant pressures on water quality and habitat which affect the Tarland burn, as well as having an impact on the River Dee further downstream. The principal pressures are diffuse source pollution from agricultural runoff, wastewater from sewage treatment and from septic tanks, and morphological alterations such as channelisation, realignment and reinforcement. These pressures can lead to flooding, loss of habitat diversity and poor water quality in terms of nutrient and sediment content and microbial contaminants.

Consequently, the Tarland Burn has been identified as being 'at significant risk' of failing to meet the Water Framework Directive (WFD) quality target of Good Ecological Status by 2015.

A number of measures are being implemented to reduce these pressures and improve the environment of the Tarland catchment. Ongoing work in the Tarland catchment to improve water quality through the use of buffer strips and small wetland areas contributes directly towards improving water quality, instream and bankside habitats. Electro-fishing results have shown significant increases in the numbers of trout and salmon parr downstream of areas where work has been done.

The Tarland Catchment work, which is ongoing, aims to bring scientists, regulators, agencies and the local community together to understand the relationship between land management and the health of the Tarlnad Burnand how it can be improved using simple pragmatic measures. There is a need to extend this approach in order to achive further improvements to the catchment's water resources.



Tarland Burn (3-Dee Vision)

WHO IS INVOLVED?

- Aberdeenshire Council
- Community Councils
- Dee District Salmon Fishery Board
- Dee Catchment Partnership
- Forestry Commission Scotland
- Farming & Wildlife Advisory Group
- Landowners
- Land managers
- The MacRobert Trust
- The Macaulay Institute
- National Farmers' Union Scotland
- Scottish Agricultural College
- Scottish Environment Protection Agency
- Scottish Government Rural Payments & Inspections Directorate
- Scottish Natural Heritage
- Scottish Water

Further copies can be downloaded at www.theriverdee.org. For further information contact the Dee Catchment Officer
c/o The Macaulay Institute, Craigiebuckler, Aberdeen AB15 8QH Telephone: 01224 498200 email: info@theriverdee.org

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ISSUES

- Diffuse pollution in the Tarland catchment largely consists of nutrients, suspended solid material and faecal contamination. The sources of these range from septic tanks to runoff from fields and roads.
- Improved land drainage and the canalisation of the Tarland Burn have compromised the catchments ability to absorb rainfall. As a result, river levels can rise rapidly during extreme wet weather resulting in flooding, in both Tarland and Aboyne, as well as contributing to peak flows downstream.
- Intensive land use can lead to elevated levels of silt and nutrients in surface water run-off.
- Intensive management to the burn's edge results in the loss of habitat and can reduce both aquatic and bankside biodiversity.
- Consequently, the poorer water quality and loss of habitat means that sections of the Tarland Burn and its tributaries are less able to support the diverse ecosystems typical of watercourses in the region.

EXISTING / RECENT INITIATIVES

- Tarland was one of several villages to receive a new Waste Water Treatment Plant (WWTP) during a recent programme of investment across Deeside by Scottish Water. This has improved the quality of the effluent discharging into the Tarland Burn from the village significantly.
- The Tarland Catchment Initiative (TCI) started as a small local project designed to make environmental improvements to streams and improve management that had any negative impact on water quality or habitat. The second aim was to assess the efficiency and benefits of making these changes. The work has been led by The Macaulay Institute in close association with The MacRobert Trust.
- As part of a wider European project, partners in a project called 3-Dee Vision (3DV) worked with the people of Tarland to improve their awareness of a range of issues relating to local water quality and to extend environmental improvements started under the Tarland Catchment Initiative.
- Specifically, the TCI and 3DV have:
  - Installed a wetland to further treat water from the sewage works, to improve water quality and provide important habitat for wader birds.
  - Monitored the nature of diffuse pollution, how it might be reduced and changes in ecology.
  - Installed buffer strips to reduce diffuse pollution runoff from fields, reduce soil erosion and faecal contamination associated with cattle using streams as waterings. The buffer strips also provide additional bankside habit diversity.
  - Established small wetlands to provide a variety of habitat, improve water quality and contribute to reducing uncontrolled flooding.
  - Trialled different types of watering for cattle.
  - Worked with community, farmers and school children to raise awareness of diffuse pollution issues.
- The North East Area Advisory Group (NEAAG) will address diffuse pollution issues in areas of the Dee catchment identified as being 'at risk' of failing to meet Good Ecological Status. Classed as a '1a' waterbody the Tarland Burn is a priority for action.
- Relevant national initiatives include:
  - Scottish Rural Development Programme (SRDP) and existing agri-environment schemes
  - Prevention of Environmental Pollution From Agricultural Activity (PEPFAA) Code
  - 4 Point Plan

ACTIONS REQUIRED

- Maintain and develop the works already started and adopt these approaches, where appropriate, elsewhere in the catchment.
- Assess sources of diffuce pollution.
- Promote and coordinate grant applications to support positive action by land managers.
- Implement and promote best practice.
- Develop and promote demonstration projects.
- continue to monitor water quality in the Tarland Burn.
- Communicate progress to the local community and in the wider Dee catchment.

LEGISLATION

See Action Pack Annex for information sources

- The Conservation (Natural Habitats and Species) Regulations 19994
- The Common Agricultural Policy Schemes (Cross-Compliance) (Scotland) Amendment Regulations 2007 - Cross Compliance (Statutory Management Requirements and Good Agricultural Environmental Condition)
- Nature Conservation (Scotland) Act 2004



Buffer strip in the Tarland catchment (S. Langan)

- Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003
- Silage, Slurry and Agricultural Fuel Oil (Scotland) Regulations 2003
- Water Environment and Water Services (Scotland) Act 2003
- Water Environment (Controlled Activities) (Scotland) Regulations 2005
- Wildlife and Countryside Act 1981
- EC Habitats Directive (Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora)

GUIDELINES AND INFORMATION

See Action Pack Annex for information sources

- 3-Dee Vision Project website has a comprehensive list of links to further information
- Tarland Catchment Initiative: www.macaulay.ac.uk/tarland
- 3-Dee Vision Rainfall Questionnaire for Farmers
- Code of practice for the Management of Agricultural and Horticultural Waste
- Code of practice for the safe use of plant protection products in Scotland.
- Conservation of Atlantic salmon LIFE project
- Diffuse Pollution Initiative (SEPA)
- Farm Soils Plan
- Farm Waste Management Plans
- Farming and Wildlife Advisory Group (FWAG)
- Forests and Water Guidelines
- Linking Environment and Farming (LEAF)
- Prevention of Environmental Pollution from Agricultural Activities (PEPFAA Code) 2005
- PEPFAA DOs and DON'Ts guide
- SEPA Best Management Practices (handbook available on website)
- SGRPID Sheep Dipping Code of Practice for Scottish Farmers, Crofters and Contractors – Groundwater Regulations 1998
- Targeted Inputs for a Better Rural Environment (TIBRE)
- The 4 Point Plan
- The Voluntary Initiative



Improving spawning habitat for Atlantic salmon in the Tarland Burn (DDSFB)

34 SUB CATCHMENTS

RELATED ACTION CARDS

15. Effects of land management on river flow
16. Flood alleviation
20. Lowland wet-lands
21. Upland wetlands

AC Aberdeenshire Council **DDSFB** Dee District Salmon Fishery Board **DCP** Dee Catchment Partnership **FWAG** Farming & Wildlife Advisory Group **FCS** Forestry Commission Scotland **FWAG** Farming & Wildlife Advisory Group **FCS** Forestry Commission Scotland **MT** The MacRobert Trust **NFUS** National Farmers' Union Scotland **SAC** Scottish Agricultural College **SEPA** Scottish Environment Protection Agency **SGRPID** Scottish Government Rural Payments & Inspections Directorate **SNH** Scottish Natural Heritage **SW** Scottish Water

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