REF.	ACTIONS	PARTNERS (lead partners in bold)
11.1	**Complete a drainage area study of Aberdeen City to identify sewerage investment requirements including sites requiring the installation of appropriate sewerage screening.**	**SW** / SEPA
11.2	**Identify other causes of water quality downgrade**	**SEPA** / **SW** / ACC / Trade Premises Proprietors
11.3	**Devise and implement plans to improve achieve good ecological potential in the Auchinyell Den Gilcomston and West Tullos Burns.**	**SEPA** / SW / ACC
11.4	**Identify where surface water drainage water quality could be improved by retrospective incorporation of Sustainable Urban Drainage Systems (SUDS) and seek to include the schemes in Quality and Standards.**	**SEPA** / Trade Premises Proprietors / SW / ACC
11.5	**Inspect industrial estate premises to check for pollution problems and advise on best practice for prevention of pollution.**	**SEPA** / **SW**
11.6	**Identify opportunities for channel improvements to open sections such as at Westburn Park and the Denburn at Kingsgate.**	**SEPA** / **ACC**
11.7	**Monitor watercourses to demonstrate continued quality improvement and to determine if there are any remaining causes of water degradation**	**SEPA**
11.8	**Communicate progress to the local communities and engage them in maintaining the quality of the watercourses.**	SEPA / **ACC** / Local community / Community Councils / SW

Acronyms are listed in the centre of this Action Card

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aberdeen city's watercourses

11 WATER QUALITY

OBJECTIVE 11. Improve water quality in Aberdeen City's heavily modified watercourses

BACKGROUND

In past years Aberdeen's burns were treated as little more than sewers. Despite modern developments having a more sympathetic approach to preserving watercourses in urban areas the water quality in the watercourses of Aberdeen City and its suburbs is poor mainly due to inputs of surface water runoff. Pollution incidents often arise from the contamination of surface water systems serving industrial estates. Occasionally there are inputs of untreated domestic sewage due to misconnected drains. The urban streams within the city tend to be the worst affected watercourses within the catchment.

Nevertheless some reaches of Aberdeen's urban watercourses are of reasonable quality and are home to an extensive range of wildlife. For example dippers breed every year on the Denburn where there are also occasional sightings of kingfishers. There is a good range of submerged and emergent vegetation along the Denburn as well as in the burn that flows into Walker Dam from Hazelhead Park.

The Water Framework Directive requires us to achieve good ecological potential in Scotland's waterbodies by 2015. A number of burns in Aberdeen are thought to be at high risk of failing to achieve good status within this timescale. These are the **Auchinyell Burn** the **Den Burn** its tributary the **Gilcomston Burn** and the **West Tullos Burn**.

Aberdeen's watercourses are culverted beneath the city for much of their length. Accordingly they are likely to be designated as Heavily Modified in which case the Directive requires us to allow them to reach their ecological potential. In other words there is an acceptance that they can't be returned to their natural state before the city was built over them but neither can we neglect them.

ISSUES

- The Scottish Environment Protection Agency (SEPA) classification scheme measures and records water quality and the Water Framework Directive characterisation process identifies the pressures impacting upon our waterbodies.
- The Auchinyell Burn which flows into the Dee on the north bank just downstream of Bridge of Dee has poor water quality because of high levels of ammonia. The identified pressures preventing good ecological potential from being achieved are the culvert itself and the sewerage system which has overflows into it.
- The Den Burn flows into the inner quay of Aberdeen Harbour. Its quality is moderate and there are aesthetic problems due to the presence of sewage solids. The pressures causing these quality problems are urban diffuse pollution and sewage overflows.
- The West Tullos Burn flows into the Dee on the south bank opposite the Duthie Park. The burn has poor water quality and the main pressure causing this is thought to be the West Tullos Industrial Estate.

EXISTING / RECENT INITIATIVES

- Scottish Water is undertaking a Drainage Area Study of the City of Aberdeen. The process involves sewerage modelling to determine the location and extent of pollution due to sewer overflows and development of measures to reduce pollution.
- Aberdeen City Council is promoting the use of Sustainable Drainage Systems (SuDS) for new developments in order to ensure surface water drainage does not impact on water quality. The approach is hierarchical beginning with good housekeeping the appropriate storage and disposal of pollutants and can extend to large scale water treatment features such as ponds and wetlands. Piped drains and culverts are avoided where possible and existing watercourses are maintained or restored to provide valuable wildlife habitat and visually attractive amenity areas.
- There are numerous campaigns aimed at

WHO IS INVOLVED?

Aberdeen Harbour Board

Aberdeen City Council

Community Councils

Dee District Salmon Fishery board

Local community

Scottish Environment Protection Agency

Scottish Natural Heritage

Scottish Water

Trade Premises Proprietors

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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promoting proper storage and disposal of oils and chemicals.

- North East Local Biodiversity Action Plan.
- The Aberdeen Woodlands In and Around Towns initiative includes riparian woodlands.

ACTIONS REQUIRED

- Retro-fit SuDS to existing urban surface water drainage systems.
- Influence Structure Local and Unitary Development plans – promote consideration of these issues by Local Planning Authorities while determining planning applications
- Arrange educational events and publicise demonstration sites.

LEGISLATION

See Action Pack Annex for information sources

- Water Framework Directive
- Water Environment and Water Services (Scotland) Act 2003
- Water Environment (Controlled Activities) (Scotland) Regulations 2005
- Sewerage (Scotland) Act 1968 (as amended)
- Town and Country Planning (Scotland) Act 1997
- Building (Scotland) Regulations 2004
- Urban Wastewater Treatment (Scotland) Regulations 1994 (as amended)

GUIDELINES AND INFORMATION

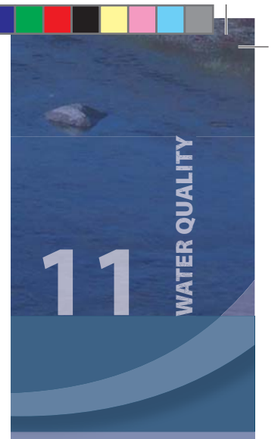
See Action Pack Annex for information sources

- Sustainable Urban Drainage Systems design manual for Scotland and Northern Ireland
- SUDS Advice note brownfield sites
- Watercourses in the Community
- Planning Advice Note 61: planning and sustainable urban drainage systems (PAN 61)
- Scottish Building Standards Agency
- Domestic and Non-Domestic Handbooks May 2005
- Scottish Oil Care Campaign

BENEFITS TO PROTECTED SPECIES

The following specially protected species will benefit from the Actions:

- Palmate newt *Triturus helveticus*
- Atlantic salmon *Salmo salar*
- Sea lamprey *Petromyzon marinus*
- Daubenton's bat *Myotis daubentonii*
- Otter *Lutra lutra*



RELATED ACTION CARDS

5. Surface water drainage

7. Public sewerage / drainage systems

25. Urban watercourses