

CATCHMENT POLLUTION REDUCTION PROGRAMME UNDER DIRECTIVE 78/659/EEC ON THE QUALITY OF FRESH WATERS NEEDING PROTECTION OR IMPROVEMENT IN ORDER TO SUPPORT FISH LIFE

Programme to achieve Guideline standards under Article 5 of the Directive

ADD, SHIRA & EACHAIG CATCHMENTS

Monitoring Years: 2002 - 2005

1. CATCHMENT DETAILS

The Add, Shira and Eachaig 333km² catchments collectively cover an area of 333km² within Argyll and all waters within these catchments are designated under the Directive. The Shira sits within the Loch Fyne Coastal catchment, where no other waters are designated as Freshwater Fish waters. Table 1 shows details of the sampling points covered by this programme.

Table 1 Details of sampling points

SOEnvD Ref.	Sampling Point NGR	SEPA Location Code	Watercourse	Site Name	SEPA Catchment No.	SEPA River No.	Fish Class
721	NS15368309	121808	River Eachaig	Ardbeg	102	10	Salmonid
723	NN12021201	121816	River Shira	u/s Dubh Loch	103	18	Salmonid
724	NR83919353	121825	River Add	Dunadd	106	10	Salmonid

2. CATCHMENT DESCRIPTION

The Add catchment sits above the Kintyre Peninsular just north of Lochgilphead. There are no main towns in the catchment as such, although there are a number of moderately sized settlements. Coniferous plantations feature heavily in the upper catchment whereas much land is given over to improved pasture for grazing in the lower catchment. Multiple abstractions are made from the River Add, transferring water via tunnels to Loch Glashan in the neighbouring Loch Fyne coastal catchment, for use in hydroelectric power generation.

Further north sits the Shira catchment at the head of Loch Fyne, directly to the west of the River Fyne catchment. This catchment includes the Glen Shira Special Area of Conservation, which is designated for its western acidic oak woodland. The Shira rises above Lochan Shira which drains the western slopes of Beinne Bhuidhe before flowing south westerly into the small Dubh Loch and into Loch Fyne north of Inveraray. Land use in the catchment is largely given over to forestry plantations, with improved pasture along the valley floor in the lower half of the catchment. The Lochan Shira is dammed and several other abstractions are made across the catchment for hydroelectric power generation.

The Eachaig catchment sits between Lochs Fyne and Long. The headwaters of the Eachaig rise at the River Cur which flows through steep sided coniferous plantations and improved pasture to Loch Eck. The River Eachaig flows from the loch in a southerly direction before meeting the River Massan and discharging into Holy Loch north of Dunoon. There are no major settlements in the catchment and the main land uses are forestry and hill farming.

Figure 1 below shows the main watercourses of the catchments and their quality in 2005, which is excellent or good across the three catchments. (The Shira catchments sits within the large Loch Fyne Coastal catchment, as shown here, of which only the waters of the Shira catchment are designated under the Directive.) Freshwater fish sampling points are also denoted with their SOEnvD Reference number.

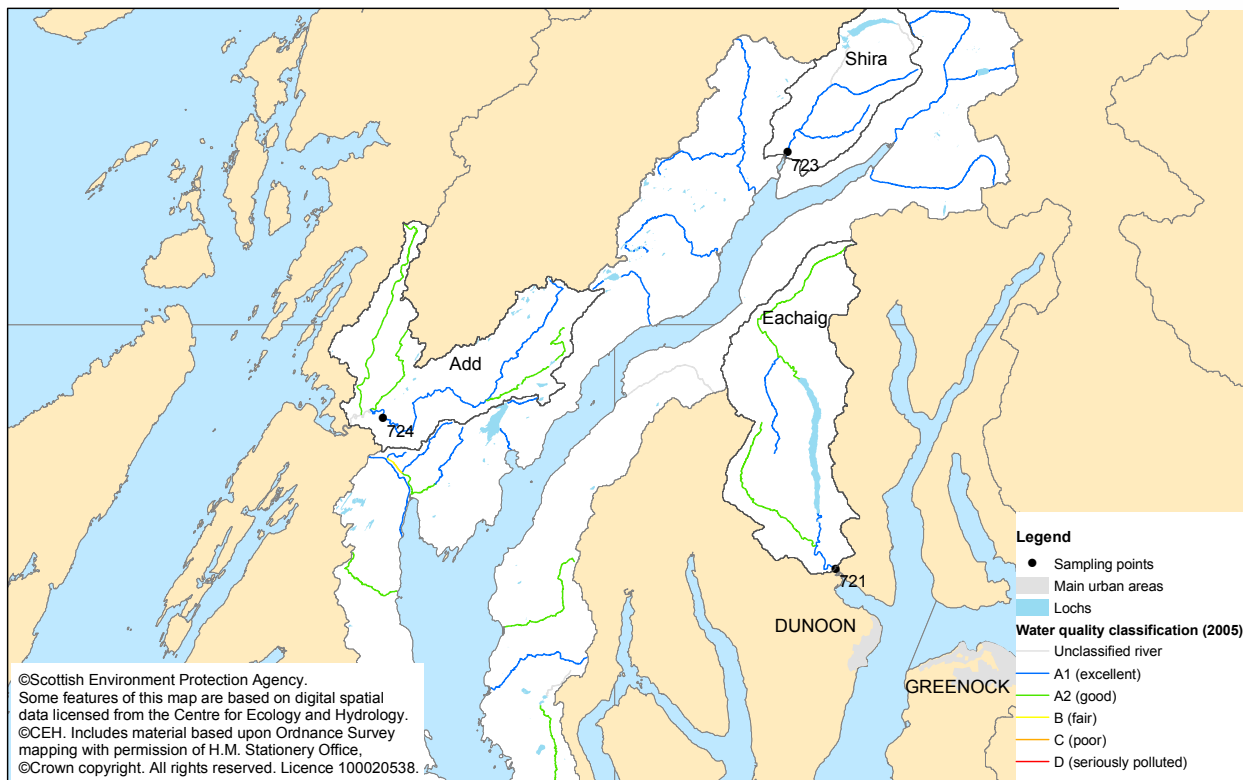


Figure 1 Add, Shira & Eachaig catchments

3. COMPLIANCE

There are three monitoring sites across the three catchments, all of which complied fully with the imperative standards for the reporting period of 2002-2005. None of the sites continuously adhered to the stricter guideline values throughout the period, although none of the exceedances were thought to be significant. Details of non-compliance with guideline standards are given in Table 2.

Table 2 Sites not respecting guideline values 2002-2005

SOEnvD Ref.	Site Name	Watercourse	Failing Parameter(s)	Year Failed
721	Ardbeg	River Eachaig	Nitrites Total ammonium	2002, 2005 2003-2004
723	u/s Loch Dubh	River Shira	Nitrites Total ammonium	2002-2005 2004
724	Dunadd	River Add	Nitrites Total ammonium	2003-2005 2003-2005

As can be seen from Table 2, the parameters failing to achieve the guideline standards within the catchments are total ammonium and nitrites. All of the total ammonium failures are due to a single isolated exceedance during that year, rather than continued elevated levels, and none of these exceedances are significantly above the guideline standard. These single exceedances triggered failures as the catchments were previously sampled less frequently but are now sampled 12 times per year.

All three catchments exceeded the nitrites guideline standard during reporting period. However, it is recognised that this standard is extremely difficult to adhere to and levels were in fact always at or very close to the limit of detection at the laboratory where samples from these catchments are analysed. Detectable concentrations of nitrites were in fact only measured on three occasions (in the Add Catchment) throughout the entire reporting period.

4. CAUSATIVE FACTORS

Monitoring in the three catchments showed that all but the nitrites guideline standards were adhered to throughout the majority of the reporting period. The very occasional total ammonium exceedances experienced are in no way indicative of elevated ammonium levels and median concentrations were in fact well within guideline standards in all three catchments. In addition, the nitrite concentrations were consistently at the limit of detection. It is therefore considered that there are no factors of any significance impacting on the water quality in these catchments that would affect the ability to comply with the FWF Directive guideline standards.

5. RECENT IMPROVEMENT ACTIONS

The most recent improvements in this area of the country have been directed at improving sewage treatment facilities serving the local communities. However since any significant centres of population, and the associated discharges, tend to be concentrated near the coast, the improvements will have no influence on the already good quality freshwaters.

Significant areas of the catchments are afforested and these have the potential to impact upon water quality. Forestry best practice is promoted by the Forestry Commission and through the Forest and Water Guidelines, which were recently updated. All new tree planting should be carried out in accordance with the national Forest and Water Guidelines, which will ensure that future forests in the area will have minimal impact on the watercourses that flow through them. These guidelines ensure that rivers are not re-engineered in any way, or subject to excessive shading, to the detriment of their natural ecosystems.

Although none of the catchments are intensively farmed, areas of improved pasture are scattered across some of the lower areas and measures are already in place to address diffuse pollution that might arise from livestock farming/crofting. Best practice guidance exists since 2002 via the Scottish Executive's 'Prevention of Environmental Pollution from Agricultural Activity' (PEPFAA code) and the 'Four Point Plan' that outlines how to reduce dirty water around farms, improve nutrient use, assess the risks related to slurry and manure use and storage and manage water margins. The CAP Reform package, which started in 2005, decouples subsidies and production by requiring compliance with Good Agricultural and Environmental Conditions (GAEC) in order for farmers to receive the Single Farm Payment. This applies to crofters as well as farmers so is also relevant in these more remote catchments. These policies should help to guard against diffuse agricultural pollution and help prevent any potential deterioration in water quality.

6. PLANNED IMPROVEMENT ACTIONS

As water quality in the Add, Shira and Eachaig catchments largely adheres to guideline standards, there are no proposals for specific actions at present. SEPA will however continue to monitor the catchments and ensure any indications of deterioration in water quality are investigated and addressed.

The WEWS Act 2003, passed to enable implementation of the provisions of the EU Water Framework Directive, required SEPA to begin to regulate and control all abstractions from April 2006. Abstractions over a set threshold can now be managed to ensure river flows sustain aquatic ecosystems whilst allowing continued use for essential human purposes. This is important in catchments, where low flows during dry summers can exacerbate temperature and dissolved oxygen problems, with a knock-on effect on pH and non-ionised ammonia and can be particularly important in catchments where significant volumes of water are diverted for hydro-power

generation. This will have relevance in the Add and Shira catchments, where water is diverted for this purpose.

The Water Framework Directive controls for new engineering works should also minimise any further degradation of habitat quality. Significant new in-stream works, channel and bed modifications have been regulated from April 2006, and this will help prevent further loss or damage to physical habitats and their associated species. However, whereas the abstraction controls are retrospective, and apply to abstractions already in place, the engineering controls do not apply to pre-existing structures.

Although diffuse pollution is not a major issue in these catchments, some crofting does take place and good land management is therefore also relevant in these catchments. Previously, SEPA has worked with farming interests and the Scottish Executive to produce and promote 'Codes of Good Practice' (such as the PEPFAA code, and 'Four Point Plan') to minimise diffuse pollution. Implementation of the WEWS Act by the Scottish Executive implies that, in addition to CAP Reform and controls under the Water Environment (Controlled Activities) Regulations 2005 (CAR), farmers will have to abide by new "General Binding Rules" designed to reduce diffuse pollution arising from legitimate farming activity. These rules are based on well-established voluntary advice and best practice, and include activities such as management of fertiliser, pesticides, livestock, sheep dipping, cultivation of land and discharges to surface waters. The consultation period for the proposed rules closed in March 2007 and it is hoped that these additional GBRs will shortly be laid before Scottish Parliament. Further controls are expected to be developed by 2008, alongside Land Management Contracts which will provide government incentives to promote good practice. As a whole, these new regulations should help to guard against diffuse pollution and the risk of any deterioration in water quality throughout the catchments.

The Water Framework Directive also requires the production of River Basin Management Plans (RBMP) by December 2009. These will bring together water and land management using an integrated catchment approach, working closely with stakeholders, the public and other organisations. Programmes of measures will be defined to reduce the impact of identified pressures and to ensure environmental objectives are met in the required timescales. The RBMP Area Advisory Groups for Argyll and the Clyde are currently considering how measures will be prioritised for the catchments in this area. The planned improvement actions outlined above will be incorporated into these programmes of measures, and this should lead to further water quality improvements in the area in general and continued compliance with FWF standards.

7. SUMMARY OF ACTIONS

Action	Deadline
Forest and Water Guidelines implementation commences.	2003
CAP Reform regulations commence (compliance with Good Agricultural and Environmental Conditions).	January 2005
Regulation of abstractions and engineering works under the WFD begins.	April 2006
i) Develop SEPA internal Action Plan proposals where necessary to address problem areas that are highlighted from data analysis. ii) Undertake required Action Plans.	i) November 2007 ii) April 2008
Regulation of diffuse pollution under WFD begins.	anticipated by 2008
Production of the first River Basin Management Plans.	December 2009