Water body information sheet for water body 6839 in Tay

General details

Water body name:	River Earn (Loch Earn to Water of Ruchill confluence)
Water body Identifier code:	6839
Length:	10.91 km
Water body category:	River
River basin district:	Scotland
Area advisory group:	Tay
Catchment:	River Earn
Associated protected areas:	River Earn - FRESHWATER FISH (EXISTING) LOCH_LOMOND_TROSSACHS - NATIONAL PARK
Associated groundwater:	Earn Valley
Responsible body:	SEPA Perth
Heavily modified:	Yes
Artificial:	No
Typology:	Mid-altitude Medium Siliceous
National Grid Reference:	NN 74056 22975
Latitude:	56.38222
Longitude:	-4.04125

Current status of this water body

Classification results are updated annually, as part of SEPA's commitment to monitor and assess the condition of the environment.

Once the classification is agreed, as part of river basin management planning, the pressures and measures for every water body are reviewed to ensure that they reflect this improved understanding of the environment. Objectives are reviewed as part of the six yearly planning cycle and any proposed changes to objectives will be presented in the draft river basin plans http://sepa.org.uk/water/river_basin_planning.aspx.

This worksheet was produced using the most up to date classification results but the measures, pressures and objectives shown may not yet align to these classification results. Please contact rbmp@sepa.org.uk if you require further information on this water body.

We have classified this water body as having an overall status of Moderate ecological potential with Medium confidence in 2012 with overall ecological status of Poor and overall chemical status of Pass.

It is important to note that the five classification ecological potential classes for Heavily Modified Water Bodies (HMWBs) and Artificial Water Bodies (AWBs) combine the level of mitigation measures for water levels and flow and physical habitat with measurements of the biological and chemical water quality. For example, a HMWB could have all the mitigation measures in place to allow it to reach good ecological potential e.g. a fish pass installed on a dam required for hydropower generation, but if water quality is poor due to elevated phosphorus levels, its overall ecological potential assessment could be moderate, poor or bad depending on the severity of the impact.

The overall classification of status is made up of many different tiers of classification data. A complete set of classification data for 2012 is shown at the end of this document.

Targets for the future status of this water body

We have set environmental objectives for this water body over future river basin planning cycles in order that sustainable improvements to its status can be made over time, or alternatively that no deterioration in status occurs, unless caused by a new activity providing significant specified benefits to society or the wider environment.

For this water body we have set the overall environmental objectives for the first, second and third River Basin Management Planning (RBMP) cycles as:

Year	2012	?	?	?
Status	Moderate ecological potential	?	?	?
Year	2012	2015	2021	2027
Status	Moderate ecological potential	Pass	Pass	Pass

Pressures and measures on this water body

We have established an ongoing programme of monitoring in order to identify pressures on our water bodies.

The pressures listed below contribute to this water body's failure to meet good ecological status or potential. River basin planning allows us to plan improvements for particular parameters over time. We have collaborated with others to identify measures which will act to protect or improve our water environment in order that all water bodies reach good status over successive RBMP cycles.

The following table shows our collated information on the pressures on this water body, their causes and the measures which could be introduced to mitigate their effects. We have also indicated the current funding status of the measure; with projected measures being potentially funded and agreed measures having funding in place. Finally, we have included information on the potential or actual owner of the measure, the date it will be effective and information on the justification for extending the deadlines or for setting an alternative objective, where appropriate.

Pressure	**As a Result of**	**Assessment Parameter**	**Objective**	**Reasons for Failure**
	Measure	**Funding**	**Owner**	**Effective date**
Alien Species		North American signal crayfish - Pacifastacus leniusculus	Moderate by 2015	Practical constraints of a technical nature prevent implementation of the measure by an earlier deadline
Abstraction	Production of renewable electricity (NB nuclear and pumped hydro are not renewable forms of electricity generation)	Change from natural flow conditions	Good by 2015	

Pressure	As a Result of	Assessment Parameter	Objective	Reasons for Failure
	Measure	**Funding**	**Owner**	**Effective date**
	Control pattern/ timing of abstraction (Hands off flow/ utilisation of storage (new/existing)	Agreed	Scottish and Southern Energy	31/12/2007
Abstraction	Production of renewable electricity (NB nuclear and pumped hydro are not renewable forms of electricity generation)	Change from natural flow conditions	Good by 2015	
	Control pattern/ timing of abstraction (Hands off flow/ utilisation of storage (new/existing)	Agreed	Scottish and Southern Energy	31/12/2007
Abstraction	Production of renewable electricity (NB nuclear and pumped hydro are not renewable forms of electricity generation)	Change from natural flow conditions	Good by 2015	
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Pressure	As a Result of	Assessment Parameter	Objective	Reasons for Failure
	Measure	**Funding**	**Owner**	**Effective date**
	Control pattern/ timing of abstraction (Hands off flow/ utilisation of storage (new/existing)	Agreed	Scottish and Southern Energy	31/12/2007
Flow Regulation	Production of renewable electricity (NB nuclear and pumped hydro are not renewable forms of electricity generation) Impounding - weir / dam	Compensation flows	Good by 2015	
	Provide appropriate baseline flow regime downstream of impoundment	Agreed	Scottish and Southern Energy	31/12/2007
Morphological Alterations	Production of renewable electricity (NB nuclear and pumped hydro are not renewable forms of electricity generation) Impounding - weir / dam	Fish passage	Not yet set	
	Removal of barriers or provision of mechanisms to enable fish migration	Agreed	Scottish and Southern Energy	31/12/2007
Alien Species		North American signal crayfish - Pacifastacus leniusculus	Moderate by 2015	Practical constraints of a technical nature prevent implementation of the measure by an earlier deadline

Footnote – These results show current classification but the measures, pressures and objectives shown may not yet align to these classification results. Please contact rbmp@sepa.org.uk if you require further information on this water body.

Future work

Additional work to identify pressures and to develop and implement measures to mitigate their impacts will continue over subsequent river basin cycles.

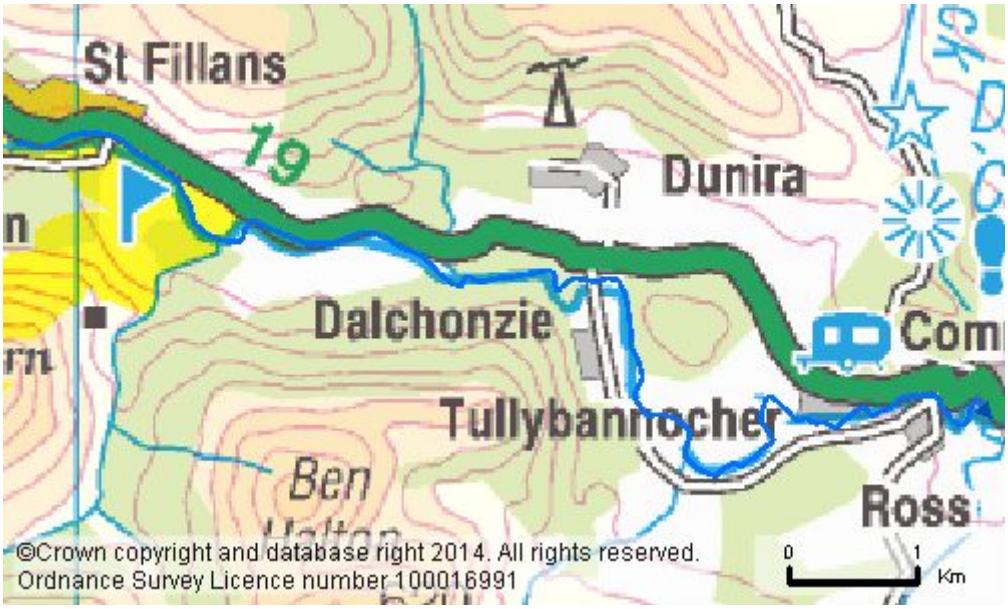
Complete classification for this water body in 2012

Parameter	Status	Confidence of Class
OVERALL STATUS	MODERATE ECOLOGICAL POTENTIAL	MEDIUM
Pre-HMWB status	Poor	Medium
Overall chemistry	Pass	Low
Priority substances	Pass	Low
Cadmium	Pass	Low
Lead	Pass	Low
Nickel	Pass	Low
Overall ecology	Poor	Medium
Physico-Chem	High	High
Temperature	High	High
Soluble reactive phosphorus	High	High
pH	High	High
Dissolved Oxygen	High	High
Biological elements	Moderate	High
Phytobenthos	High	High
Macrophytes	Good	High
Benthic invertebrates	High	High
Macro-invertebrates (acid)	High	Low
Macro-invertebrates (RiCT)	High	High
Macro-invertebrates (ASPT)	High	High
Macro-invertebrates (NTAXA)	High	High
Alien species	Moderate	High
Fish	High	Medium
Fish ecology	High	Medium
Fish barrier	High	Medium
Specific pollutants	Pass	High

Parameter	Status	Confidence of Class
Arsenic	Pass	Low
Iron	Pass	Low
Copper	Pass	Low
Zinc	Pass	Low
Ammonium	Pass	High
Chromium	Pass	Low
Hydromorphology	Poor	Medium
Morphology	Good	Medium
Hydrology	Poor	Medium
Hydrology (impoundment)	Poor	Medium
Hydrology (abstraction)	Moderate	Medium
Regulatory BOD	High	High
Regulatory ammonium	High	High
Water quality	Good	High
Morphological pressures	Good	Medium

Location of this water body

You can find the geographical location of this water body by searching on water body ID in the interactive maps at www.sepa.org.uk/water/river_basin_planning.aspx



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