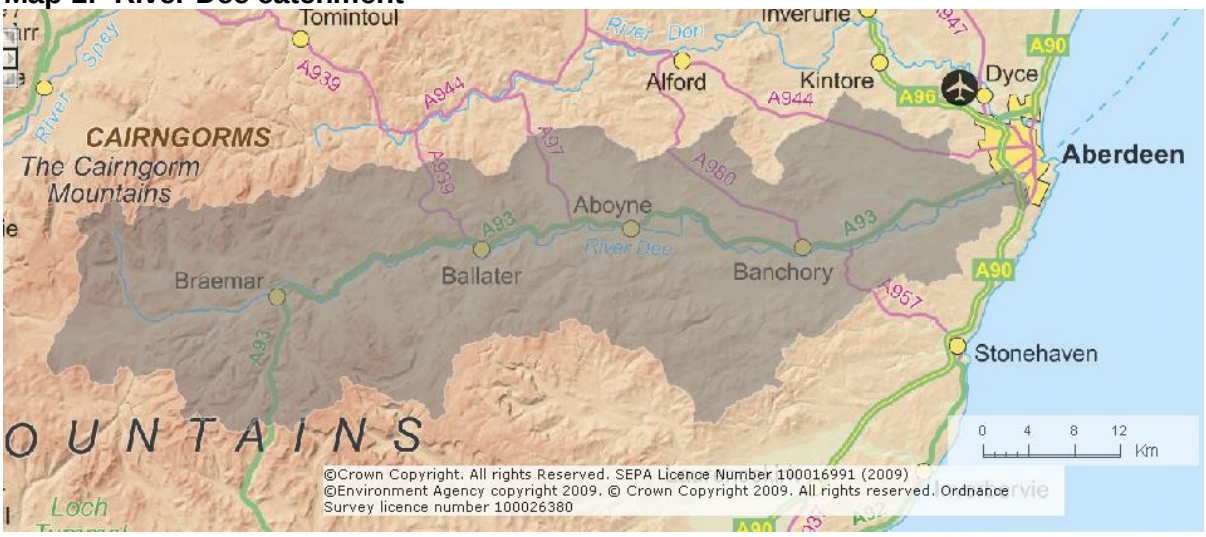
River Basin Management Planning

River Dee catchment summary

1 Introduction

The River Dee catchment (shown on Map 1) rises in the Cairngorm Mountains west of Braemar and enters the North Sea at Aberdeen harbour. The catchment includes major tributaries such as the Lui, Gairn, Muick, Tanar and Feugh and the lochs Loch Muick, Lochs of Davan and Kinord, and the Loch of Skene. The River Dee is designated as a Special Area of Conservation (SAC) for Atlantic salmon, freshwater pearl mussel and otter.

Map 1: River Dee catchment



The western catchment is an upland semi-natural area, where land use is focused on recreation, sporting estates, fishing and tourism. In contrast, the eastern catchment closer to Aberdeen is dominated by arable farming.

Further information on the River Dee catchment can be found on SEPA's interactive map at www.sepa.org.uk/water/river_basin_planning.aspx

2 Classification summary of the catchment

SEPA monitors the water environment on an ongoing basis and uses the resulting data to produce annual classifications. The summarised results for 2008 show that the catchment contains:

- 2 water bodies at high ecological status - Crathie Burn and Ey Burn
- 22 water bodies at good ecological status.
- 18 water bodies at moderate ecological status, 13 water bodies at poor ecological status and one waterbody at bad ecological status. Table 1 gives further details of these water bodies.

The Dee flows into a Heavily Modified Water Body (Aberdeen Harbour), which is at Good Ecological Potential. The groundwater bodies underlying the catchment are classified as being at good status.

3 Details of pressures in the catchment

The main reasons for downgrading of water bodies in the Dee catchment are **diffuse pollution** and **changes to beds and banks** because of rural land use. In addition, a number of water bodies are affected by point source pollution from sewage treatment, and abstraction for drinking water supply. These pressures are discussed in more detail below for surface waters, groundwater and protected areas, and are summarised in Table 1.

Point source pollution
Point source pollution relating to sewage disposal affects the Loch of Skene, Brodiach / Ord Burns, Kinnernie Burn, Beltie Burn and River Dee (between Ballater and Banchory). These pressures are attributed to Scottish Water activities and the delivery of measures to address these is therefore linked to future Scottish Water investment programmes.

Priority catchment work (diffuse pollution, water resources and bed / bank changes)
The Dee is a priority catchment during 2010-2014, and targeted measures and awareness raising are planned for water bodies within the catchment. Twelve burns and two lochs have diffuse agricultural or forestry pollution pressures expected to be addressed by 2015, through a combination of work with landowners and forestry management plans. In addition, eight burns have changes to beds and banks related to agriculture (mostly straightening), and it is hoped that the priority catchment work may help to improve the condition of some beds and banks.

Other diffuse pollution
Leuchar Burn is affected by diffuse nutrient inputs from septic tanks, and investigative work is planned on how to reduce this pressure. Four water bodies in the upper Dee catchment are downgraded due to low pH, thought to be linked to geology and possibly acid scavenging by coniferous plantations. Because of the local geology and slow recovery times, these water bodies are not expected to achieve good status by 2027.

Other morphological pressures
Fifteen rivers and two lochs are classified at less than good status because of barriers to fish passage. Barrier removal work by the River Dee Trust should result in good status regarding fish passage on the Burn of Curran. The removal of other barriers through restoration projects is anticipated expected to result in good status for fish passage on other water bodies by 2015, and additional work on beds and banks planned by the River Dee Trust should secure further improvements.

Other water resource pressures
Four river water bodies are at moderate status due to drinking water abstractions. Some improvements have been delivered or are ongoing under Scottish Water measures directed at the Invercannie / Mannofield Water Resource Zone, and we anticipate improvements in ecological status during this RBMP cycle.

Heavily Modified Water bodies
The Dee Estuary has been designated as a heavily modified water body due to the morphological changes associated with the harbour. It has been classified as at Good Ecological Potential, meaning that no further improvements can be made without having a significant impact on its use as a harbour.

Protected Areas

Bathing Waters

By 2015, all bathing waters are required to achieve sufficient status under the revised Bathing Water Directive. Aberdeen Ballroom has been subject to failures of the existing mandatory standards during periods of wet weather, contributed to by sewer outflows across the city and run-off from agricultural land. It is hoped that a planned Drainage Area Study will provide information regarding spill frequency and the adequacy of the existing sewerage infrastructure. Based on recent results, Aberdeen Ballroom would achieve poor status under the new Bathing Water standards.

Freshwater Fish

The Dee Freshwater Fish area is compliant with imperative standards.

Special Areas of Conservation/ Special Protection Areas

The Dee Special Area of Conservation has been identified by Scottish Natural Heritage (SNH) as being in unfavourable condition in relation to freshwater pearl mussel populations. No single causal factor has been identified but drinking water abstraction, diffuse pollution and alterations to beds and banks may all contribute. SNH has set a target to achieve favourable status by 2027.

4 Partnership working

The action plan for the Dee will rely on landowners to deliver improvements, with support and advice from SEPA's diffuse pollution programme, and the north east area advisory group.

Work to tackle diffuse pollution will need a strong partnership approach, and the area advisory group will play a critical role in raising awareness of the diffuse pollution initiative, helping to establish links with landowners and reviewing the effectiveness of measures to tackle diffuse pollution.

Beyond 2015, actions will focus on projected work to tackle sewage pollution and improve morphological conditions, a continued focus on fish barrier removal and ongoing management of forestry and abstraction. In addition, there will be a need to maintain good status for all water bodies, and to identify and address new and emerging pressures.

The Dee Catchment Management Plan (available at www.theriverdee.org/read-the-dee-cmp.asp) sets out clear actions to secure improvements in the catchment, and already has excellent partnership working systems in place.

The River Dee Trust works closely with landowners and has secured improvements in riparian habitat management and fish barrier removal / mitigation. Their Fishery Management Plan, and a biosecurity plan for the River Dee, can be viewed at www.riverdee.org.uk.

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Table 1 – Summary of pressures and objectives for water bodies at less than good status in the River Dee catchment

Water body	Current status	Pressures	Actions	Target
Beltie Burn	Moderate	Diffuse source pollution Point source pollution Alterations to beds/banks	Reduce diffuse source inputs (land managers, SNH) Reduce point pollution (Scottish Water) Improve modified habitats (land managers)	Good by 2027
Bo Burn	Moderate	Diffuse source pollution Alteration to beds/banks	Reduce diffuse source inputs (land managers) Improve modified habitats (land managers)	Good by 2015
Burn of Cattie	Moderate	Alteration to beds/banks	Improve modified habitats (land managers)	Good by 2027
Burn of Corrichie	Moderate	Diffuse source pollution Alteration to beds/banks	Reduce diffuse source inputs (land managers) Improve modified habitats (land managers)	Good by 2015
Brodiach Burn / Ord Burn	Poor	Diffuse source pollution Alteration to beds/banks Point source pollution	Reduce diffuse source inputs (land managers) Improve modified habitats (land managers) Reduce point pollution (Scottish Water)	Good by 2015
Crynoch Burn	Moderate	Diffuse source pollution Alteration to beds/banks	Reduce diffuse source inputs (Forestry Commission Scotland) Improve modified habitats (land managers)	Good by 2021
Culter Burn	Poor	Diffuse source pollution Alteration to beds/banks	Reduce diffuse source inputs (land managers) Improve modified habitats (land managers)	Good by 2015
Davan Burn	Moderate	Diffuse source pollution	Reduce diffuse source inputs (land managers)	Good by 2015
Dess Burn / Lumphanan Burn	Poor	Alteration to beds/banks	Improve modified habitats (land managers)	Good by 2021
Dess Burn (upper stretch)	Bad	Alteration to beds/banks	Improve modified habitats (land managers)	Good by 2021
Geldie Burn	Moderate	Diffuse source pollution - acidification	Natural recovery process over long period	Moderate by 2027
Gormack Burn	Poor	Diffuse source pollution Alteration to beds/banks	Reduce diffuse source inputs (land managers, Forestry Commission Scotland) Improve modified habitats (land managers)	Good by 2015

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Water body	Current status	Pressures	Actions	Target
Kinnernie Burn	Poor	Diffuse source pollution Alteration to beds/banks Point source pollution	Reduce diffuse source inputs (land managers) Improve modified habitats (land managers, operators) Reduce point pollution (Scottish Water)	Good by 2021
Leuchar Burn	Poor	Diffuse source pollution Alteration to beds/banks	Reduce diffuse source inputs (land managers, Scottish Water) Improve modified habitats (land managers)	Good by 2027
Loch Kinord	Poor	Diffuse source pollution Alteration to beds/banks	Reduce diffuse source inputs (Forestry Commission Scotland) Improve modified habitats (land managers)	Moderate by 2027
Loch of Skene	Poor	Diffuse source pollution Alteration to beds/banks Point source pollution	Reduce diffuse source inputs (land managers) Remove / mitigate fish barrier (operator) Reduce point pollution (Scottish Water)	Moderate by 2027
Logie Burn / Loch Davan	Poor	Diffuse source pollution Alteration to beds/banks	Reduce diffuse source inputs (land managers, Forestry Commission Scotland) Remove / mitigate fish barrier (land managers)	Good by 2027
River Dee (allater-Banchory)	Moderate	Alteration to beds/banks Point source pollution	Remove / mitigate fish barrier (land managers) Reduce point pollution (Scottish Water)	Good by 2027
River Dee (Banchory - Peterculter)	Moderate	Abstraction Alteration to beds/banks	Control abstraction (Scottish Water) Remove / mitigate fish barrier (land managers)	Good by 2027
River Dee (Braemar-Ballater)	Poor	Alteration to beds/banks	Remove / mitigate fish barriers (Aberdeenshire Council, Diageo)	Good by 2027
River Dee (Peterculter-tidal)	Poor	Abstraction Alteration to beds/banks	Control abstraction (Scottish Water) Improve modified habitats (land managers)	Good by 2027
River Dee (source-White Bridge)	Moderate	Diffuse source pollution - acidification	Natural recovery process over long period	Moderate by 2027
River Dee (White Bridge-Braemar)	Moderate	Diffuse source pollution - acidification	Natural recovery process over long period	Moderate by 2027
River Gairn (upper catchment)	Moderate	Alteration to beds/banks	Remove / mitigate fish barrier (land managers)	Good by 2015
River Muick (Allt an Dubh Loch)	Moderate	Diffuse source pollution - acidification	Natural recovery process over long period	Moderate by 2027

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Water body	Current status	Pressures	Actions	Target
River Muick (Spittal of Glen Muick to Dee)	Poor	Alteration to beds/banks	Remove / mitigate fish barrier (land managers)	Good by 2027
Water of Dye (lower catchment)	Moderate	Abstraction	Control abstraction (Scottish Water)	Good by 2015
Water of Dye (upper catchment)	Moderate	Abstraction Flow regulation (water supply)	Control abstraction, improve regulated flows (Scottish Water)	Good by 2015
Water of Feugh (Burn of Curran)	Poor	Alteration to beds/banks	Remove / mitigate fish barrier (land managers)	Good by 2015
Water of Feugh - Burn of Greendams	Moderate	Alteration to beds/banks	Improve riparian zone (Forestry Commission Scotland)	Good by 2027
Water of Tanar	Moderate	Alteration to beds/banks	Remove / mitigate fish barrier (land managers)	Good by 2027
Tarland Burn	Moderate	Diffuse source pollution Alteration to beds/banks	Reduce diffuse inputs (farmers, Aberdeenshire Council) Improve modified habitat (landowners)	Good by 2015