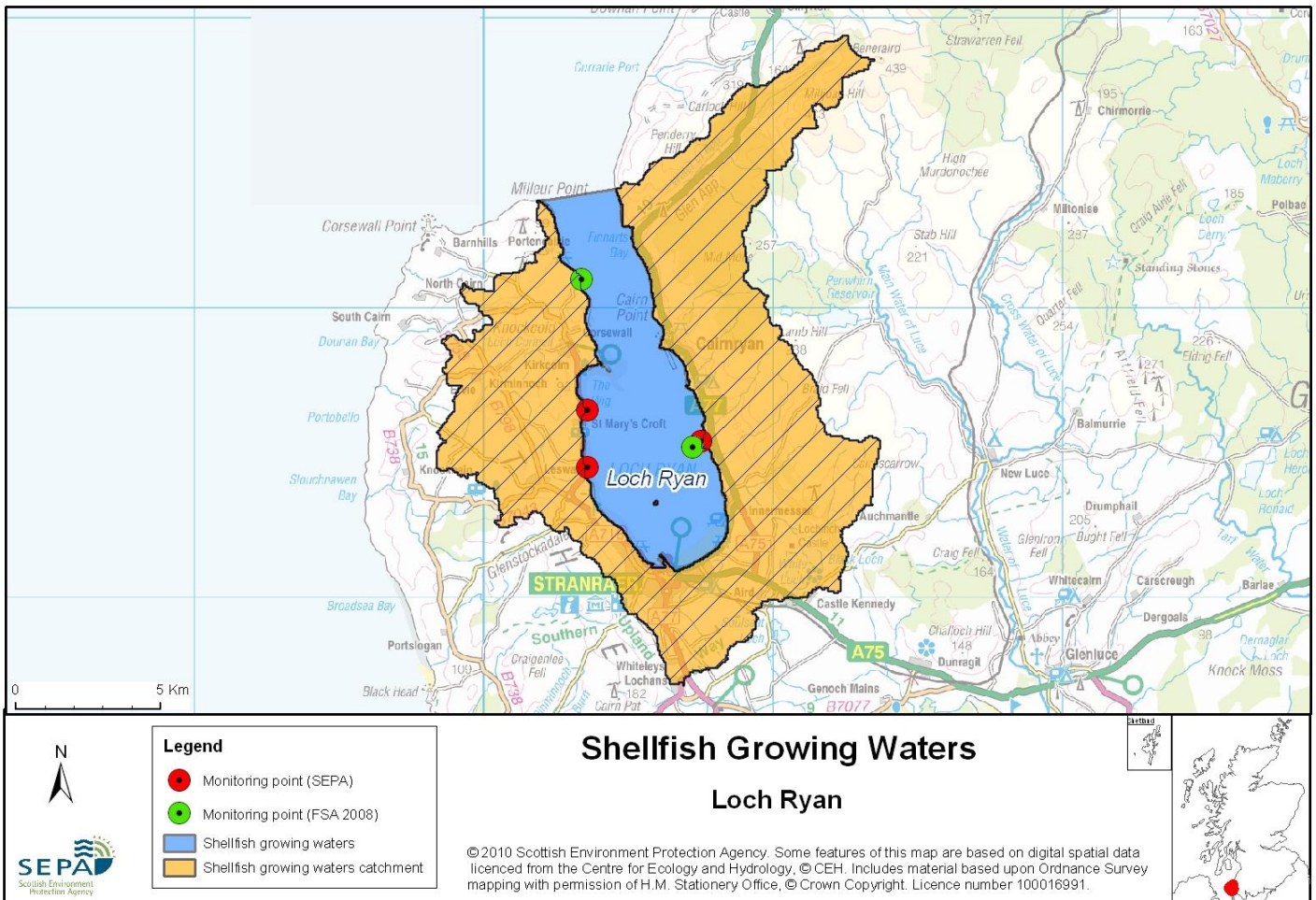


6 Loch Ryan



Name	Loch Ryan
Report Reference Number	6
WFD Code	UKS799236
Local Information	An area comprising the waters of Loch Ryan lying south of a line from NX0181973675 (Milleur Point) to NX0454074091 (Finnarts Point) and extending to MHWS.
Designated Area (km ²)	41.46
Year of Designation	1998
Sampling Points	Loch Ryan at Leffnoll Point - NX 07512 65398 Loch Ryan at Glenside Slipway - NX 03589 66463 Loch Ryan at Soleburn Mussel Site - NX 03600 64500
Commencement of Monitoring	1999

6.1 Commercial Shellfish Interests

The majority of the Loch Ryan Shellfish Water is also designated as a Shellfish Harvesting site by the Food Standards Agency. Loch Ryan has a commercial interest in harvesting native oysters (*Ostetrea edulis*) and Razor Shells (*Ensis Spp.*) and as such the FSA has given the following classifications:

Loch Ryan (Native Oysters)
2011 = A - April
 B - May to December
2012 = A - January to March

Loch Ryan North (Razors)
2011 = A - April to December
2012 = A - January to March

Category A sites are of the highest standard and means that shellfish can go directly for human consumption however category B requires that shellfish must be depurated, heat-treated or re-laid prior to human consumption.

FSA have not yet carried out a sanitary survey for this area.

For more information on Food Standards Agency Classification please visit:
<http://www.food.gov.uk/scotland/safetyhygienescot/shellmonitorscot/shellclassesscot/>

6.2 Bathymetric Information

Loch Ryan has a total length of 13.4 km and comprises a single basin. Maximum water depth reaches 16 m, and it flushes rapidly in day. The catchment area is 197 km².

Fresh/tidal flow ratio, which reflects the degree of possible influence of fresh water on the overall salinity, is very low (0.1) indicating the very small influence that run off has on this water body. The north facing aspect provides protection from prevailing south westerly winds. There are no morphological pressures on the area.

6.3 Conservation Designations

RAMSAR – [Loch of Inch and Torrs Warren](#)

Loch of Inch is located southeast of the shellfish water and was designated 02/02/99 Designated for Internationally important non-breeding bird species (Greenland white-fronted goose (*Anser albifrons flavirostris*) and habitat (sand dune system at Torrs Warren)

Special Protected Areas (SPA) – [Glen App and Galloway Moors](#)

Designated 07/03/03 for species - hen harrier (*Circus cyaneus*)

This is also a **Water Dependent SPA** and a **Groundwater Dependent SPA**

Special Protected Areas (SPA) – [Loch of Inch and Torrs Warren](#)

Designated 02/02/99 for internationally important non-breeding bird species
Greenland white-fronted goose (*Anser albifrons flavirostris*) and Hen harrier (*Circus cyaneus*)

Sites of Special Scientific Interest (SSSI) – [Corsewall Point to Milleur Point](#)

Designated 11/03/1994 for geology.

Sites of Special Scientific Interest (SSSI) – [Glen App and Galloway Moors](#)

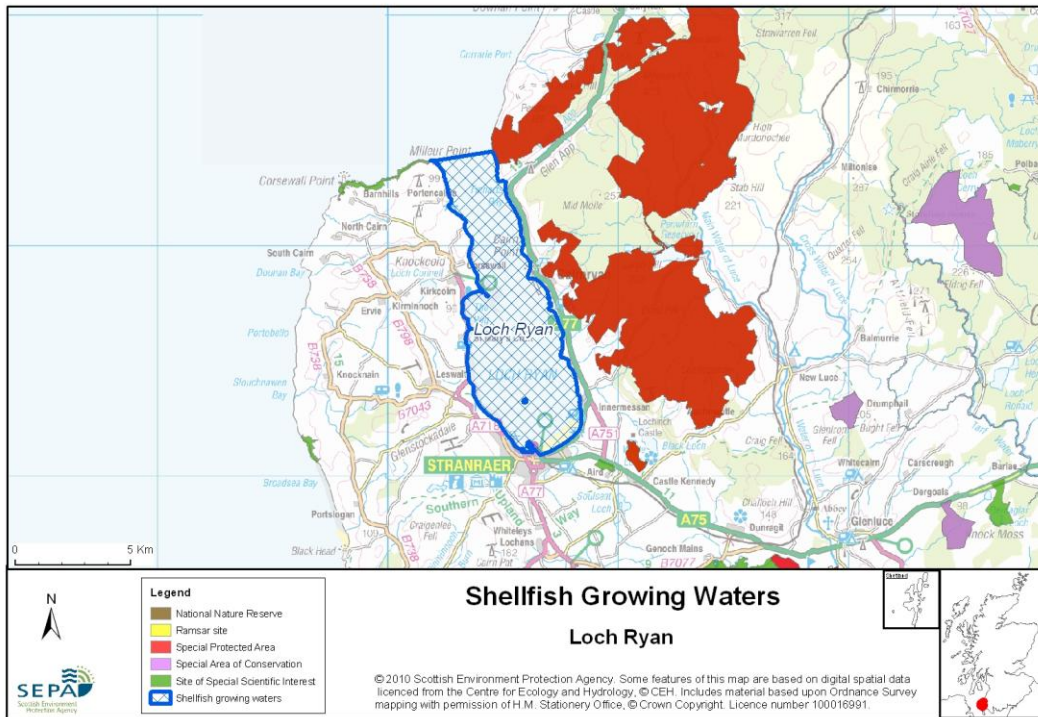
Designated 27/09/2001 for species – Hen Harrier (*Circus cyaneus*)

Sites of Special Scientific Interest (SSSI) – [Auchrochar Wetlands](#)

Designated 14/10/1988 for habitat (Fen, Marsh and swamp – wetland) and species (Sedge Warbler - *Acrocephalus schoenobaenus*)

Sites of Special Scientific Interest (SSSI) – [White Loch - Lochinch](#)

Designated 03/05/1983 for eutrophic loch and species (Greylag goose – *Anser anser*)



6.4 Topography and Land Use – Potential Diffuse Pollution Sources

Loch Ryan lies on the west Galloway coast and is the most southerly of all the Scottish sea lochs. The land to the west, south and east of Loch Ryan is fertile and used for grazing and intensive arable farming. Large areas of the hillside to the east of Loch Ryan are grazed by sheep and beef cattle with afforestation on the hilltops and extensive areas of peat/bog land.

Intermittent agricultural pollution has affected streams entering the loch particularly from the more fertile western side (Sole Burn). Small scale illegal tipping on the

foreshore of the loch periodically leads to public complaints, but does not impact water quality.

Diffuse pollution from agricultural sources is normally the result of cumulative inputs of pollutants from numerous different sources on farms within the catchments draining to the shellfish water. Consequently, tackling diffuse agricultural pollution requires concerted action across catchments. SEPA will ensure this by working with farmers to raise awareness about the requirement for preventing and reducing pollution and to help them identify appropriate actions for doing so.

To help coordinate our work to encourage and ensure action SEPA have created a new [Diffuse Pollution Management Advisory Group](#) (DPMAG), which is a partnership of a range of relevant authorities, land manager representatives and voluntary organisations. The Scottish Government has also brought together nine public bodies to form Scotland's Environmental and Rural Services (SEARS). This partnership will contribute to implementing plans for tackling diffuse pollution by providing coordinated education and advice to rural land managers.

Additional targeted efforts will be made to improve management of diffuse pollution within catchments identified as 'priority' catchments. These are catchment where the scale of the pollution reduction needed will require planned and targeted actions to be identified and discussed with farmers concerned. In these areas assistance will be given in identifying pollution hotspots and one-to-one advice on following the agricultural codes of good practice which in themselves lead to compliance with these regulations. Action in priority catchments will be phased.

The Loch Ryan catchment is part of the Galloway Coastal priority catchment. Work in this catchment is due to be completed by 2015.

The town of Stranraer is located at the very south of Loch Ryan. There are also a number of smaller settlements situated around the Loch. These include Leswalt, Kirkcolm and Cairnryan.

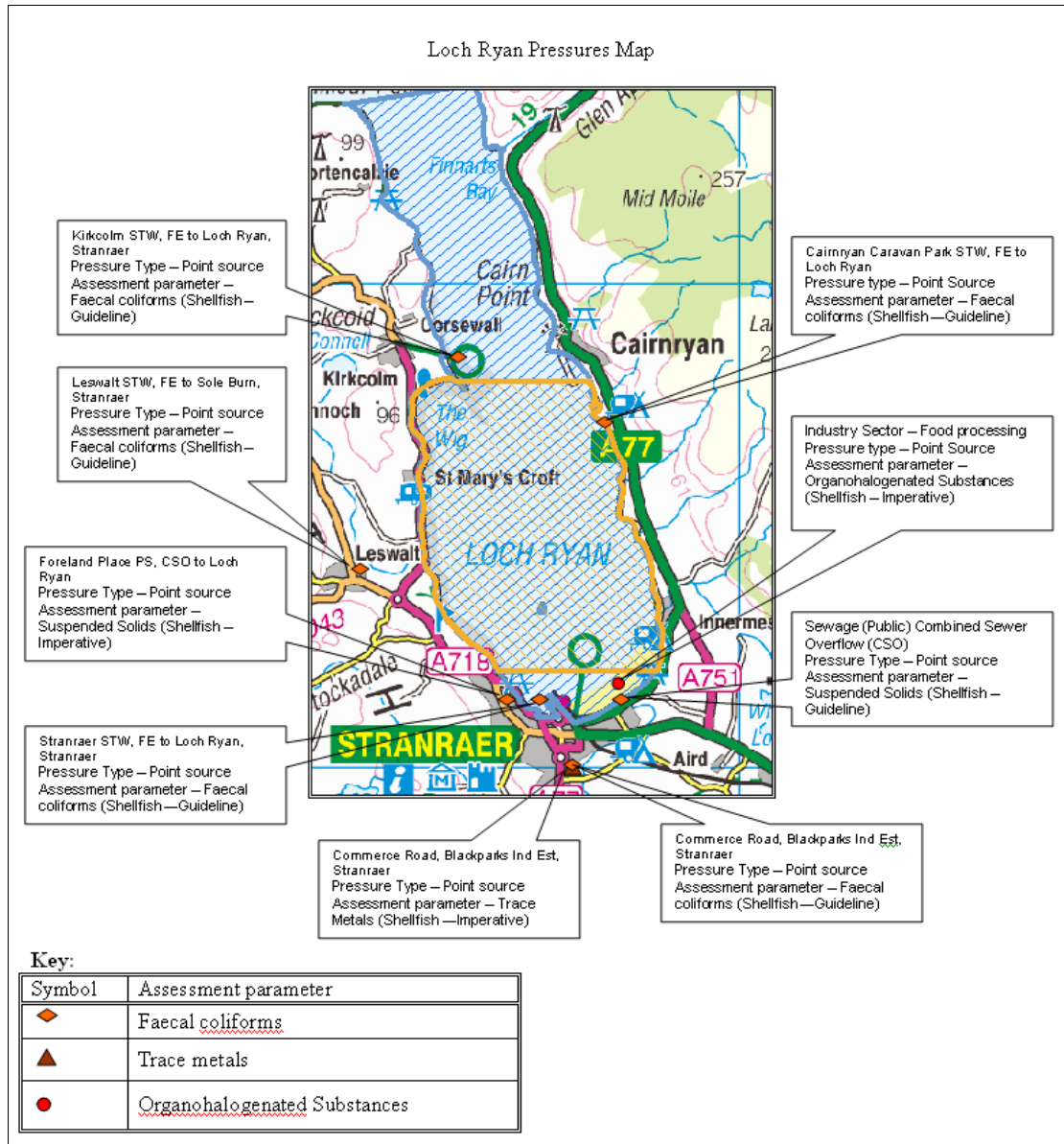
Regular ferries sail in and out of the loch berthing both at Stranraer and Cairnryan. A ship breaking yard operated in the loch near Cairnryan up until mid 1980's which may account for the traces of TBT which have been detected, particularly in sediments. However recent SEPA studies have shown significant decreases in TBT levels.

It should also be noted that Loch Ryan has abundant population of bird species which may contribute to the diffuse pollution that in turn could contribute towards the failure of faecal coliforms guideline standards.

6.5 Point Source Discharge

Type	Name	Consent No.	Treatment	NGR	PE	Additional information
Scottish Water Asset	Stranraer Settlement Tank	CAR/L/1003619	Primary settlement	NX 05800 61400	11000	Improvements as part of Q&SII1, 2013
	Cairnryan Settlement Tank	CAR/L/1003622	Primary settlement	NX 07000 67900	500	Improvements as part of Q&SIII, 2011
	Kirkcolm STW	CAR/L/1003617	Primary settlement	NX 039 688	500	Improvements as part of Q&SIII, 2013
	Leswalt STW	CAR/L/1003618	Secondary treatment	NX 02151 64324	500	Improvements as part of Q&SIII, 2013
Other	Cairnryan Caravan Park ST	CAR/L/1003357	Primary treatment	NX 07067 67398	800	Ongoing monitoring
	3 caravan sites		Primary treatment			Primary treated discharges with short outfalls to loch Ryan have been replaced with secondary treatment and soakaway systems 2004 to 2006
Industrial	Name	Consent No.	Treatment	NGR	Additional information	
	Caledonia n Cheese	CAR/L/1003629		NX 075617	Potential Enforcement Action	

- There are no marine cage fish farms within the designated shellfish water



6.6 Compliance Monitoring Regime

Year	Monitoring Regime
2005 -	<ul style="list-style-type: none"> Quarterly for temperature (T), salinity (Sal), dissolved oxygen (DO) at Loch Ryan, Soleburn (NGR NX03600 64500) Biannually for metals in water at Loch Ryan, Leffnoll Point (NGR NX 07479 65300) and Glenside Slipway (NGR NX 03589 66463) Annually for metals and organohalogens in mussels at Loch Ryan, Soleburn (NGR NX03600 64500) Quarterly for faecal coliforms in mussels at Loch Ryan, Soleburn (NGR NX03600 64500)
Additional	<ul style="list-style-type: none"> TBT in waters

This monitoring regime of the designated area was not fully implemented until the second half of 2005.

6.7 Compliance History

UKS799236 - Loch Ryan				
	Compliance history for Waters and Biota, excluding faecal coliforms data			Compliance history for faecal coliforms
Year	Overall Result	Imperative	Guideline	Guideline
1999	Pass	Pass	Pass	Fail
2000	Pass	Pass	Fail ¹	Fail
2001	Pass	Pass	Pass	Fail
2002	Pass	Pass	Pass	Fail
2003	Pass	Pass	Pass	Fail
2004	Pass	Pass	Pass	Fail
2005	Pass	Pass	Pass	Fail
2006	Pass	Pass	Pass	Fail
2007	Fail	Fail ²	Pass	Fail
2008	Pass	Pass	Pass	Pass
2009	Pass	Pass	Pass	Fail
2010	Pass	Pass	Pass	Pass

¹Failure relates to the Shellfish Water's guideline values for chromium and nickel in mussels taken at Sole Burn in 2000. This failure applied to one of two replicates, the other of which passed for all Guideline and Imperative values. It has not failed again for chromium or nickel since.

²Failure relates to the Shellfish Water's imperative values for copper in water taken at Leffnoll Point in 2007. This breach of the mandatory standard has resulted in an overall fail at this site for 2007.

The waters have consistently failed to comply with the Guideline standard for faecal coliforms from 1999 to 2009, with the pass in 2008 and 2010 the only exceptions.

6.8 Future Monitoring

Biannual sampling is continuing for metals and organochlorines in waters at Leffnoll Point and Glenside Slipway along with monthly sampling for T, Sal, DO and pH. Annual sampling of mussels for organohalogenes and metals will continue at Soleburn and in addition, collection of mussels for TBT and PAH analysis began in 2004 as part of a SEPA Environmental Improvement Action Plan.

In the event of any chemistry parameters failing to meet EQS, the site will be

revisited and re-sampled for the failed parameter. Samplers are asked to identify any evidence of visible harm to the shellfish population at the site.

The Loch Ryan shellfish water will be monitored quarterly for faecal coliforms in mussels.

6.9 Improvement Actions

The new drinking water treatment works (WTW) at Auchneel that was commissioned in 2002 is now complete and the discharge quality has drastically improved. Previously the main issue was aluminium in flocculent and the subsequent impact on marine life. Compared to the old works that gave intermittent problems, this site is complying well with stringent consent conditions imposed by SEPA.

The current sewerage network and sewage treatment works serving Stranraer is hydraulically overloaded. Under QS3 and as a result of a prosecution case brought by SEPA in March 2010, Scottish Water will commence with the Loch Ryan WwTW improvement scheme with work starting summer 2010 and completion planned for summer 2013.

Caledonian Cheese Company Ltd current operate under PPC/A/1003173. The permit contained a deadline for a new effluent treatment plant 31 July 2010. Given this deadline has passed, SEPA is considering taking enforcement action

There are 3 surface water outfalls serving Commerce Road Industrial Estate on Q&S3 programme for a retrofit suds scheme. Programme is 2010 to 2012 for completion

WFD Objectives

Under the Water Framework Directive, the target objectives expect this shellfish water to Pass by 2015 (the first River Basin Management Cycle) for Imperative and Guideline Shellfish Growing Water Standards, with low confidence.

Objective	First Cycle 2015	Confidence	Second Cycle 2021	Confidence	Third Cycle 2027	Confidence
Imperative Shellfish Growing Waters Standard	Pass by 2015	Low	Pass by 2021	Low	Pass by 2027	Low
Guideline Shellfish Growing Waters Standard	Pass by 2015	Low	Pass by 2021	Low	Pass by 2027	Low

6.10 Summary of Actions

Action	Deadline
Identify and Reduce Diffuse Source Inputs	2014
Retrofit Suds Scheme (Q&S III)	2010-2012