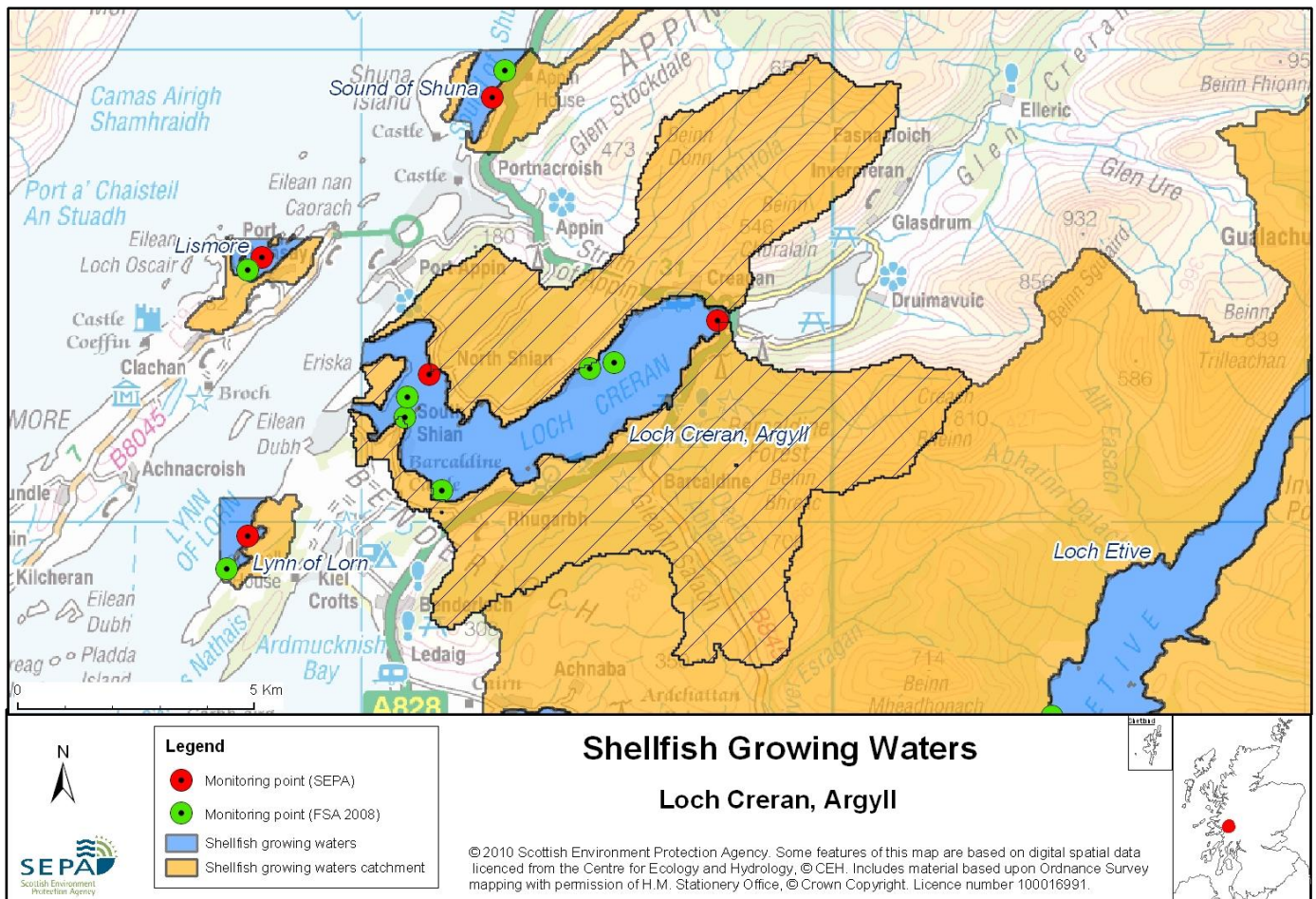


32 Loch Creran, Argyll



Name	Loch Creran, Argyll
Report Reference Number	32
WFD Code	UKS7992332
Local Information	An area bounded by lines drawn between the points NM9004843805 and NM8999943288, between the points NM8979842388 and NM8981742536, and between the points NM9780044385 and NM9780044244, extending to MHWS.
Designated Area (km²)	12.98
Year of Designation	2000
Sampling Points	Loch Creran at North Shian Mussel Site - NM 91446 43117 Loch Creran at South Creagan - NM 97559 44268
Commencement of Monitoring	2000

Loch Creran, Argyll – UKS7992332

Last Edited – 01/06/11

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32.1 Commercial Shellfish Interests

Loch Creran has three Shellfish Harvesting Areas, designated by the Food Standards Agency (FSA).

Loch Creran Upper has two sites (East – Barrington and Inner Creran) classified for the production of Pacific oysters (*Crassostrea gigas*) and Common mussels (*Mytilus edulis*) as below.

Loch Creran Upper: East – Barrington (Pacific oysters)
2011 = B - April to December
2012 = B - January to March

Loch Creran Upper: Inner Creran (Common mussels)
2011 = A - April to June, November to December
B - July to October
2012 = A - January to March

Loch Creran: Rubha Mor has two sites (Loch Creran Ferlochan and Rubha Mor) classified for the production of Pacific oysters.

Loch Creran: Rubha Mor: All sites (Pacific oysters)
2011 = A - April to May, December
B - June to November
2012 = A - January to March

Loch Creran: Shian: has two sites (Shian Fisheries and Loch Creran) classified for the production of Pacific oysters and Common mussels as below.

Loch Creran: Shian: Shian Fisheries (Pacific oysters)
2011 = B - April to December
2012 = A - January to February
B - March

Loch Creran: Shian: Loch Creran (Common mussels)
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 completed a sanitary survey for Loch Creran

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

32.2 Bathymetric Information

Loch Creran has a total length of ~13km, and four sills divide the loch into four water areas or basins. Two sills are located near the entrance of the loch, the third sill is situated east of Dalrannoch and the fourth is at Creagan. Maximum water depths in the basins are from 27-49 m, the second basin being the deepest. On average, the loch takes three days to flush but each basin will have its own local flushing characteristics. Loch Creran has a catchment area of 164 km². Fresh/tidal flow ratio, which reflects the degree of possible influence of fresh water on the overall salinity is moderately high (0.4) for the size of this loch. There are no morphological pressures on the loch.

32.3 Conservation Designations

Loch Creran is situated close to other designated Shellfish Waters and FSA Shellfish Harvesting Areas.

To the north there is a Shellfish Harvesting Area located in Loch Laich and above this is the Sound of Shuna Shellfish Water ([UKS7992397](#))

Southeast is Loch Etive designated Shellfish Waters ([UKS7992312](#)). There are two FSA Shellfish Harvesting Areas within Loch Etive.

To the west/southwest is Lynn of Lorn Shellfish Waters ([UKS7992391](#)), a small section of which is designated as a FSA Shellfish Harvesting Area. Also to the East in Lynn of Lorn is another FSA Shellfish Harvesting Area.

To the northwest is Lismore designated Shellfish Water ([UKS7992360](#)), which is situated in a larger area designated by FSA as a Shellfish harvesting Area.

National Nature Reserve (NNR) – [Glasdrum Wood](#)

Designated 17/03/1977

Special Protected Area (SPA) – [Glen Etive and Glen Fyne](#)

Designated 28/10/2010 for internationally important aggregations of breeding birds - Golden eagle (*Aquila chrysaetos*)

Special Area of Conservation (SAC) – [Loch Creran](#)

Designated 17/03/2005 for Marine inshore sublittoral rock (reefs)

This is also a **Water Dependent SAC**

Special Area of Conservation (SAC) – [Eileanan agus Sgeiran Lios mor](#)

Designated 17/03/2005 for internationally important species - Common seal (*Phoca vitulina*)

This is also a **Water Dependent SAC**

Special Area of Conservation (SAC) – [Glen Creran Woods](#)

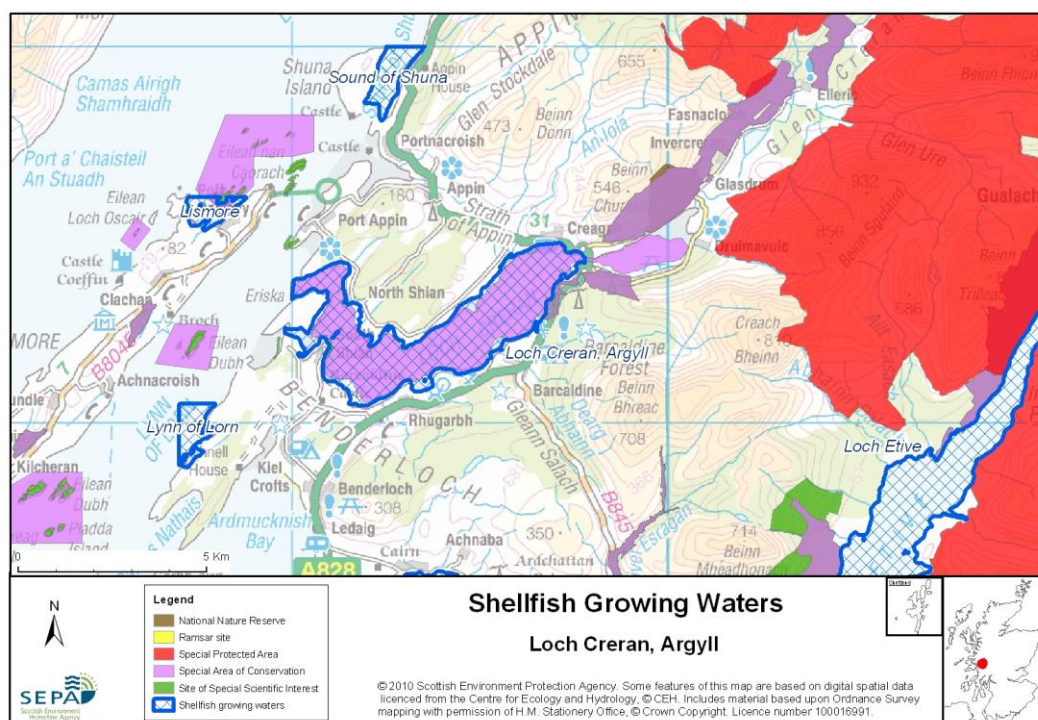
Designated 17/03/2005 for internationally important species (Otter (*Lutra lutra*)) and habitat (Mixed woodland on base-rich soils associated with rocky slopes, Western acidic oak woodland)

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

Sites of Special Scientific Interest (SSSI) – [Lynn of Lorn Small Islands](#)
Designated 30/12/1986

Sites of Special Scientific Interest (SSSI) – [South Shian and Balure](#)
Designated 28/02/1990 for Quaternary geology and geomorphology of Scotland

Sites of Special Scientific Interest (SSSI) – [Glen Creran Woods](#)
Designated 16/05/2003 for Bryophyte assemblage, Butterflies (Chequered skipper (*Carterocephalus palaemon*), Pearl-bordered fritillary (*Boloria euphrosyne*)), Lichen assemblage, Upland oak woodland



32.4 Topography and Land Use – Potential Diffuse Pollution Sources

The predominant land use is coniferous forestry but there is some extensive livestock agriculture on the north and far western shores. The main freshwater inflow is the River Creran, draining both forest and moorland. Loch Creran is remote from centres of population and is popular with visitors, particularly in the summer months.

The most likely reason for guideline faecal coliform failures (see 32.7 Compliance History below) is diffuse source pollution from either Livestock farming and/or sewage disposal. If this shellfish water continues to fail it may be necessary to carry out bacterial source tracking studies to verify the origin of the diffuse pollution.

32.5 Point Source Discharge

Type	Name	Treatment	Consent No.	NGR	PE	Additional Information
Other	Individual Septic Tanks	Septic Tank	-	Numerous	<50	Consents may be reviewed to require appropriate treatment by 2006
Industrial	Scottish Sea Farms Ltd, South Shian	fish processing factory	WPC/W/20495*	-	-	No microbiological loading
	Scottish Sea Farms Ltd	-	CD11846	-	-	
	Marine Resource Centre smolt production unit	-	CD13277	-	-	
Category	Name	Consent No.	NGR	Biomass (t)	Additional Information	
Fish Farm	Creran A	CAR/L/1000843	NM 9307 4182	1500	-	
	Creran B	CAR/L/1003492	NM 9380 4220	1500	-	

* No CAR authorisation at present

32.6 Compliance Monitoring Regime

This monitoring regime of the designated area was implemented in July 2005.

Year	Monitoring Regime
2005 -	Quarterly for Sal, DO, pH, temperature, visible oil Quarterly sampling for faecal coliforms in mussels Annual sampling for metals and organohalogens Twice yearly for metals in water

32.7 Compliance History

UKS7992332 - Loch Creran, Argyll				
	Compliance history for Waters and Biota, excluding faecal coliforms data			Compliance history for faecal coliforms
Year	Overall Result	Imperative	Guideline	Guideline
2000	Pass	Pass	Fail	Fail
2001	Fail	Fail ^{1,2,3}	Fail ⁴	Pass
2002	Pass	Pass	Pass	Pass
2003	Pass	Pass	Pass	Fail
2004	Pass	Pass	Pass	Pass
2005	Pass	Pass	Pass	Fail
2006	Pass	Pass	Pass	Fail
2007	Pass	Pass	Pass	Fail
2008	Pass	Pass	Pass	Fail
2009	Pass	Pass	Pass	Fail
2010	Pass	Pass	Pass	Fail

^{1,2,3}Failures relate to results for pH at South Creagan (6.9) and North Shian (6.8, 6.6) in June and November of 2001, which fall outside the Imperative standard range of 7-9. These results, may have been due to heavy rainfall or increased fresh water inputs at the site at the time.

⁴ Failure relates to a single result of 79 % for dissolved oxygen taken at South Creagan in Sept 2001 which fails the Guideline standard of >80 % but passes for the Imperative standard of >70%.

The waters have mainly failed to comply with the Guideline standard for faecal coliforms, with passes in 2001, 2002 and 2004 only. The waters failed to achieve Guideline standard again from 2005-2010.

32.8 Future Monitoring

Biannual sampling is continuing for metals and organochlorines in waters along with monthly sampling for T, Sal, DO and pH at South Creagan and North Shian. Mussels will be sampled annually for organohalogenes and metals at North Shian. This site will also be monitored quarterly for faecal coliforms in mussels and in addition, collection of mussels for TBT and PAH analysis will begin in 2004 as part of a SEPA Environmental Improvement Plan (previously called Action Plans). The reduced sampling provisions of Article 7(2) of the directive will be applied if and when this is appropriate.

In the event of any sample failing to meet any chemical parameter 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.

32.9 Improvement Actions

There are currently no improvement actions planned for this area.

WFD Objectives

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

The Guideline Shellfish Growing Water Standards are not predicted to pass until 2021 (second River Basin Management Plan Cycle). This is due to past failures of the Guideline faecal coliform standards. Target objectives may be revised after the first River Basin Management Plan Cycle.

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

32.10 Summary of Actions

Action	Deadline
SEPA will investigate any environmental complaint that may have an impact on water quality and will ensure appropriate corrective or remedial action is implemented	N/A