


Bathing water profile:

Balmedie

<p>Bathing water: Balmedie</p>	
<p>EC bathing water ID number: UKS761605</p>	
<p>Location of bathing water: UK/Scotland/Aberdeenshire (Map1)</p>	
<p>Year of designation: 1999</p>	
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<p>Bathing water description</p>	
<p>Balmedie, on the east coast of Aberdeenshire, about 12 km north of Aberdeen City, has a popular and extensive sandy beach. Balmedie Country Park is adjacent to the beach and the bathing water is centred round the main access routes to the beach from the country park. Kite surfing and other water sports are popular at the beach. It was designated as a bathing water in 1999.</p> <p>During high and low tides the approximate distance to the water's edge can vary from 0 to 200 metres. The sandy beach slopes gently towards the water. For local tide information see: http://easytide.ukho.gov.uk/EasyTide</p> <p>Our monitoring point for taking water quality samples is located at the mid-point of the designated area (Grid Ref NJ 98050 18330) as shown on Map 1.</p>	
<p>Monitoring water quality</p>	
<p>Please visit our website¹ for details of the current EU water quality classification and recent results for this bathing water.</p> <p>During the bathing season (1 June to 15 September), designated bathing waters are monitored by SEPA for faecal indicators (bacteria) and classified according to the levels of these indicators in the water. The European standards used to classify bathing waters arise from recommendations made by the World</p>	

¹ <http://apps.sepa.org.uk/bathingwaters/SamplingResults.aspx>

Health Organisation and are linked to human health. More information on bathing water monitoring, health and classification can be found on our [website](#)².

Risks to water quality

In general, most natural waters will be affected to some extent during and following rainfall as pollutant loads may be increased due to run-off from agricultural or urban land in the catchment. In addition, at some locations waste water discharges from combined sewer overflows, which then drain into the bathing water and can reduce water quality.

Faecal pollutants can come from human sewage, farming activities and livestock (e.g. cattle, sheep), industrial processes, surface water urban drainage, domestic animals (e.g. dogs) and wildlife (e.g. birds) and can enter bathing waters via:

- direct discharges into the marine environment at, or in the vicinity of, the beach;
- the freshwater network draining into a bathing water, which can be prone to elevated bacterial levels as a result of diffuse pollution and/or point source inputs upstream.

The potential relevant pollution sources at, or near, this bathing water are highlighted on Map 1. There are no direct discharges to the bathing water.

Horse riding and dog walking takes place at Balmedie beach. Birds also congregate on the beach. Faecal pollutants from birds, horses and dogs could potentially affect the bathing water quality, but the risk is thought to be minimal.

The principal risks and source of wet weather driven short term pollution at this bathing water arise from surface water urban drainage and agricultural run-off. These events are expected to last one or two days, depending on the duration of the rainfall, and may result in elevated bacteria levels compared to dry conditions.

Our regulatory and scientific assessment indicates that potential sources of short-term faecal indicator pollution at this bathing water can at times originate from human or animal sources.

Cyanobacteria (blue-green algae)

Marine waters are not at risk of excessive production of cyanobacteria.

Algae

Current information suggests that this bathing water is not at risk of excessive production of macroalgae or phytoplankton.

Jellyfish

There is a possibility of increased numbers of jellyfish in the water during the summer months. This is a naturally occurring phenomenon. Although there are a few stinging species common to the UK, most are harmless. The Marine Conservation Society advises to 'look but don't touch'.













Daily water quality forecasts

Balmedie bathing water is not part of SEPA's signage network. Daily water quality predictions are not currently required for this bathing water.

² <http://apps.sepa.org.uk/bathingwaters/SamplingResults.aspx>

Map 1: Balmedie bathing water



 <p>SEPA Scottish Environment Protection Agency</p>	<p>N</p>  <p>0 200 400 800 m</p> 	
<p>© 2010 Scottish Environment Protection Agency. This map is reproduced from Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office ©Crown Copyright . Any unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. SEPA lic. no. 100016991 (2010). Some features of this map are based on digital spatial data licensed from the Centre for Ecology and Hydrology, © CEH.</p>	<ul style="list-style-type: none">  Designated bathing water  Bathing water sampling point  Bathing water sampling transect  Sewage effluent discharge  Combined sewer overflow  Sewage pumping station  Sewage treatment works  Water courses 	

Map 2: Catchment draining into Balmedie bathing water



Catchment description

The catchment draining into Balmedie bathing water extends to 23 km². The area varies in topography from gently rolling hills (maximum elevation 130 metres) in the west to the low-lying plains (average elevation 10 metres) along the coast. Average summer rainfall for the region is 267 mm compared to 331 mm across Scotland as a whole.

The main rivers within the bathing water catchment are the Eigie Burn and Potterton Burn. The Eigie Burn discharges to the sea approximately 1 km from the southern end of the designated bathing water whilst the Potterton Burn discharges to the bathing water at the southern end of the designated area.

The area is predominantly rural (93%) with agriculture the major land use. Of the rural area, 41% is arable agriculture and 47% grassland. Land use in the catchments of the Potterton and Eigie Burns is predominately arable farming with some small holdings supporting livestock in the upper catchments. Approximately 3% of the bathing water catchment is urban with urbanisation found in the lower Eigie catchment in Balmedie village, the main population centre in the area. Population density outside of the Balmedie village is generally low and concentrated in the villages of Potterton and Belhelvie (Map 2).

Detailed studies of the bacterial loads from water courses which feed to the Balmedie bathing water have been undertaken as part of a SEPA action plan in order to establish their potential impact on the bathing beach. Results showed elevated bacterial concentrations coming from the Eigie Burn and its tributary. It is believed that septic tanks are likely to be the main factor contaminating the burn. The Potterton Burn was also found to have elevated bacterial levels, which are thought to be from a mix of septic tanks and agricultural run-off, although levels were not as high as those in the Eigie Burn. However, as the Potterton Burn is a larger water course it will provide a greater volumetric loading of bacteria into the sea than the Eigie Burn. Both these burns could therefore potentially have an impact on the bathing water quality.

There is one protected area within the bathing water catchment which is a Site of Special Scientific Interest (Map 2). The designation is not expected to impact on water quality at Balmedie bathing water. For further information on the protected area in this catchment see Scottish Natural Heritage's [information service website](#)³.

Balmedie bathing water also lies in a designated Nitrate Vulnerable Zone.

Measures to improve bathing water quality

High quality bathing waters are important so that people can enjoy Scotland's environment safely. They are also important for Scotland's tourism industry.

Recent years have seen considerable improvements in Scotland's bathing water quality, not least due to substantial investment in the sewerage system. SEPA and our partners are fully committed to continuing to improve bathing water quality.

Improving diffuse pollution from agricultural sources

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

To help co-ordinate our work to encourage and ensure action, SEPA participate in the [Diffuse Pollution Management Advisory Group](#)⁴ (DPMAG), which is a partnership 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](#)⁵ (SEARS). This partnership will contribute to implementing plans for tackling diffuse pollution by providing co-ordinated 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 catchments where the scale of the pollution reduction needed

³ www.snh.org.uk/snhi

⁴ <http://www.sepa.org.uk/environment/water/river-basin-management-planning/who-is-involved-with-rbmp/dpmag/>

⁵ www.sears.scotland.gov.uk

will require planned and targeted actions to be identified and discussed with farmers concerned. Assistance will be given in these areas to identify pollution hotspots, and one-to-one advice will be provided on following the agricultural codes of good practice, which in themselves lead to compliance with these regulations. Action in priority catchments will be phased.

Farm audits and follow up inspections of premises located in the Balmedie bathing water catchment were carried out in 2003 and 2004. Pollution from agricultural run-off is thought to occur in the Eigie and Potterton Burns although this is not considered to have a significant effect on bathing water quality at Balmedie.

The Balmedie bathing water catchment is within the Buchan Coastal priority catchment. Proactive one-to-one farm visits were undertaken in the catchment during 2014. These visits looked to identify diffuse pollution sources and pathways by which potential pollutants could reach the water environment and impact on bath waters. All actual and potential polluting sources identified were discussed with the land manager and mitigation measures agreed with them to reduce the likelihood of diffuse pollution arising from their activities and reduce the risk of bacterial pollution on water quality in the future.

The Potterton Burn and Eigie Burn sit within the Moray, Aberdeenshire, Banff and Buchan Nitrate Vulnerable Zone and as such will already have measures in place to reduce and prevent further nitrate contamination. For further information visit the [Scottish Government's website](#)⁶.

Improving pollution from sewage and other discharges

Most waste water collection and treatment services in Scotland are provided by Scottish Water. It has invested substantially in waste water collection and treatment provision over recent years to protect public health and the environment. Public investments in the sewerage network and in treatment works will continue to be co-ordinated through the national investment and planning process for Scottish Water, known as 'Quality and Standards'.

Improvements to the sewerage system in recent years have led to a significant reduction in the level of faecal indicators in the Balmedie bathing water under normal conditions. The Balmedie sewage treatment works was replaced in 2004 and now provides secondary treatment for local sewage including from the nearby village of Newburgh. Treated effluent from the works is discharged via a long sea outfall approximately 1 km offshore from SEPA's bathing water sampling point. Sewage from the neighbouring communities of Potterton and Belhelvie, which previously discharged to the Potterton Burn, now also discharges via the long sea outfall. The combined sewer overflow from the Balmedie works also discharges via the long sea outfall. The long sea outfall is a potential risk (albeit not significant) to bathing water quality. Modelling work has been carried out to assess the impact of the long sea outfall on water quality at the bathing water and may need to be reviewed in light of the tighter standards of the revised Bathing Water Directive.

There are many septic tank discharges from private dwellings to the Potterton and Eigie burns. We have assessed the risk to the water environment from the cumulative impacts of these discharges, which are thought to pose a potential risk to bathing water quality. We are unlikely to grant consents for any further septic tank discharges to the lower reaches of the Eigie Burn when connection to the public sewer is an option.

Improving pollution from diffuse urban sources

Urban diffuse source pollution comes from rainwater falling onto urban areas (roads, pavements, yards and roofs) becoming contaminated with pollutants on those areas, washing into surface water drains and discharging from those drains to the water environment.

Tackling this type of pollution requires substantial changes in the way urban areas are drained, and efforts to reduce the quantity of pollutants deposited on urban surfaces. Since the mid 1990s, Sustainable Urban Drainage Systems (SUDS) have increasingly been used to drain new developments. They are designed to avoid pollution of the water environment and include permeable surfaces that allow infiltration of rainwater into the ground, slowing the rate at which it drains to the water environment and trapping and breaking down pollutants. Artificial ponds or wetlands provide a final stage of treatment. Local authorities, Scottish Water and SEPA are working together to co-ordinate efforts to tackle pollution from diffuse urban sources, incorporating SUDS into local plans and encouraging partner organisations to retrofit SUDS where possible.

⁶ www.scotland.gov.uk/Topics/farmingrural/Agriculture/Environment/NVZintro

The Eigie Burn, which discharges directly into the Balmedie bathing water, is known to be affected by surface water run-off from the urban area through which it flows. Although the risk is not thought to be significant, it is a potential risk to bathing water quality.

Responding to pollution incidents

Although rare, pollution incidents affecting bathing water quality can happen. Pollution incidents tend to be unpredictable, for example a slurry spill or sewage network failure, and can result in elevated levels of faecal indicators.

To report a possible pollution incident please use our 24 hour pollution hotline (0800 807060). In response we will investigate the incident and contact other relevant organisations. That may include Scottish Ministers, Scottish Water, the local authority and the relevant health board. Where necessary measures will be put in place to resolve the problem.

Whenever our routine sampling of bathing waters identifies elevated levels of faecal indicators there is an immediate response to check all relevant potential sources and major discharges in the immediate catchment, as well as our hydrometric information to determine whether the levels may be due to high river flows. Follow-up microbiology sampling is also undertaken of the bathing water and local water courses.

If beach users or bathers are considered to be at risk the local authority will warn the public by erecting signs at the bathing water. Information will also be available on our [website](#)⁷.

Other pollutants at the beach may include plastics, litter and tar deposits. Beach users are encouraged to use the bins provided or to take litter home. Beach cleaning and litter clean-up is maintained for this bathing water by Aberdeenshire Council.

Contact details and sources of more information

SEPA Aberdeen Office

Inverdee House
Baxter Street
Torry
Aberdeen
AB11 9QA
01224 266600
www.sepa.org.uk

Aberdeenshire Council

Woodhill House
Westburn Road
Aberdeen
Aberdeenshire
AB16 5GB
08456 081207
www.aberdeenshire.gov.uk

Pollution Hotline

0800 80 70 60
24 hours per day, seven days per week

Keep Scotland Beautiful

01786 471333
beach@ksbscotland.org.uk
www.keepsotlandbeautiful.org

Scottish Government

Victoria Quay
Edinburgh
EH6 6QQ
0131 244 0396
egcat@scotland.gsi.gov.uk
www.scotland.gov.uk/Topics/Environment/Water/15561/bathingwaters

Further information about the condition of our water environment and the actions needed to deliver improvement can be found in:

- the Scotland river basin management plan
<http://www.sepa.org.uk/environment/water/river-basin-management-planning/>
- the north-east Scotland area management plan
<http://www.sepa.org.uk/environment/water/river-basin-management-planning/who-is-involved-with-rbmp/area-advisory-groups/north-east/>

⁷ <http://apps.sepa.org.uk/bathingwaters/Predictions.aspx>

Good Beach Guide: www.goodbeachguide.co.uk

Blue Flag and Seaside Awards: www.keepsotlandbeautiful.org/coastal

Version Control		
Version number:	Date:	Next review due:
1.0	September 2010	
1.1	March 2014	
1.2	April 2015	