Bathing water profile:

Portobello (Central)

Bathing water:
Portobello (Central)

EC bathing water ID number:
UKS7616044

Location of bathing water:
UK/Scotland/City of Edinburgh Council (Map1)

Year of designation: 1999

Bathing water description

The Portobello (Central) bathing water is situated at the small town of Portobello, on the outskirts of Edinburgh. The designated area is approximately 1.4 km long. The beach comprises a long stretch of sand and an associated promenade. The area is popular with dog walkers and families and there is an abundance of restaurants and cafés along the front. It was designated as a bathing water in 1999. A second designated bathing water, Portobello (West), is located just to the north west of Portobello (Central) (Map 1).

During high and low tides the approximate distance to the water's edge can vary from 20–310 metres. The sandy beach slopes gently towards the water. For local tide information see: http://easytide.ukho.gov.uk/EasyTide/

Our monitoring point for taking water quality samples is located toward the centre of the designated area (Grid Ref NT 31296 73847) as shown on Map 1.

Monitoring water quality

Please visit our website[1] for details of the current EU water quality classification and recent results for this bathing water.

[1] http://apps.sepa.org.uk/bathingwaters/

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 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.

The principal risks and source of wet weather driven short term pollution at this bathing water arise from combined sewer overflows and treated sewage effluent. These events are expected to last 1–2 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 sources.

Bathing is not advisable during or following (one or two days after) rainfall. Bathing or swimming after storms, floods or heavy rainfall should be avoided as the risk of illness following short term water pollution is increased.

Cyanobacteria (blue-green algae)

Marine waters are not at risk of cyanobacteria overproduction.

Algae

Current information suggests that this bathing water is not at risk of excessive growth of macroalgae (seaweed) 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’.

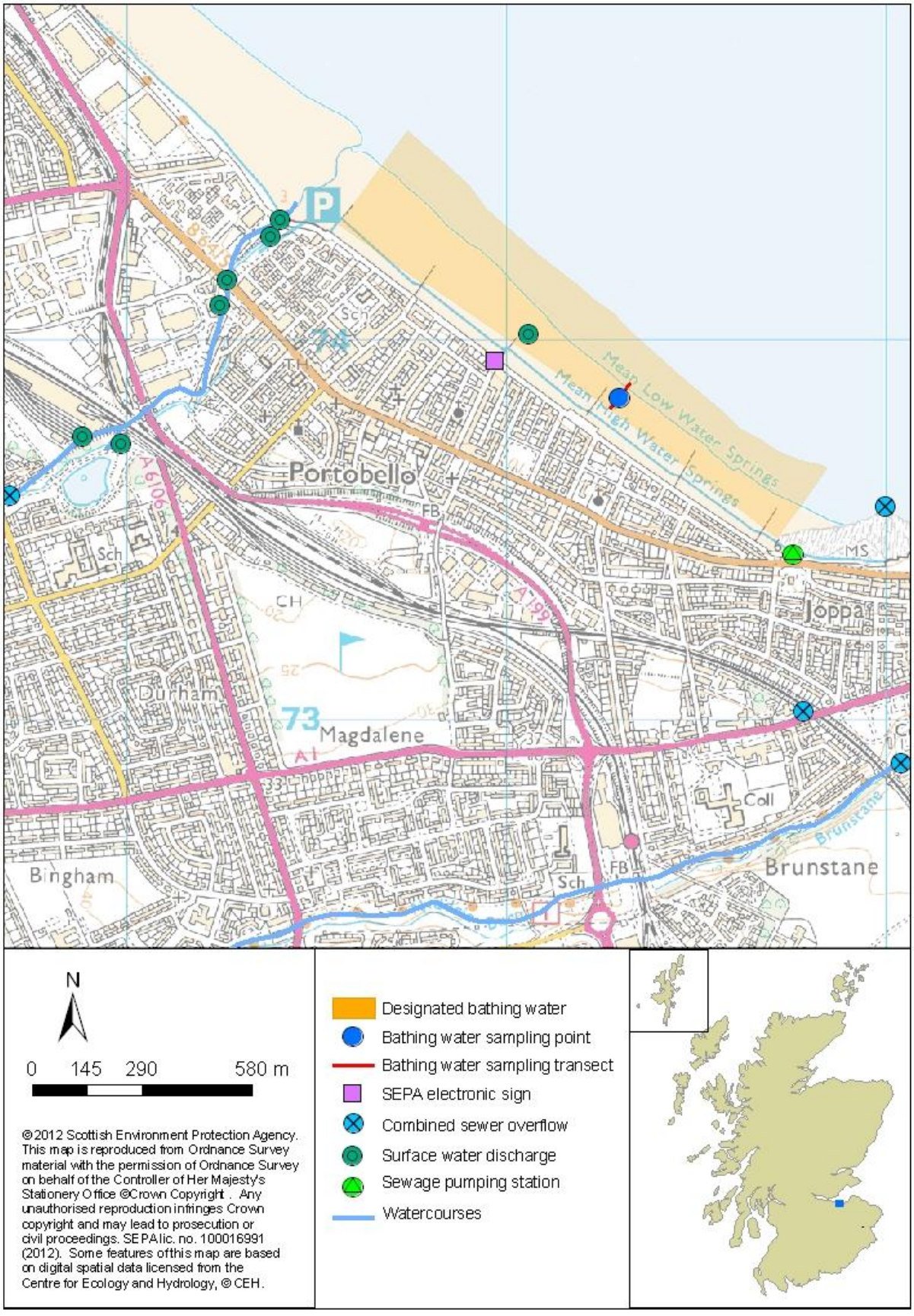
Daily water quality forecasts

Portobello (Central) bathing water is part of our daily water quality prediction and signage network.

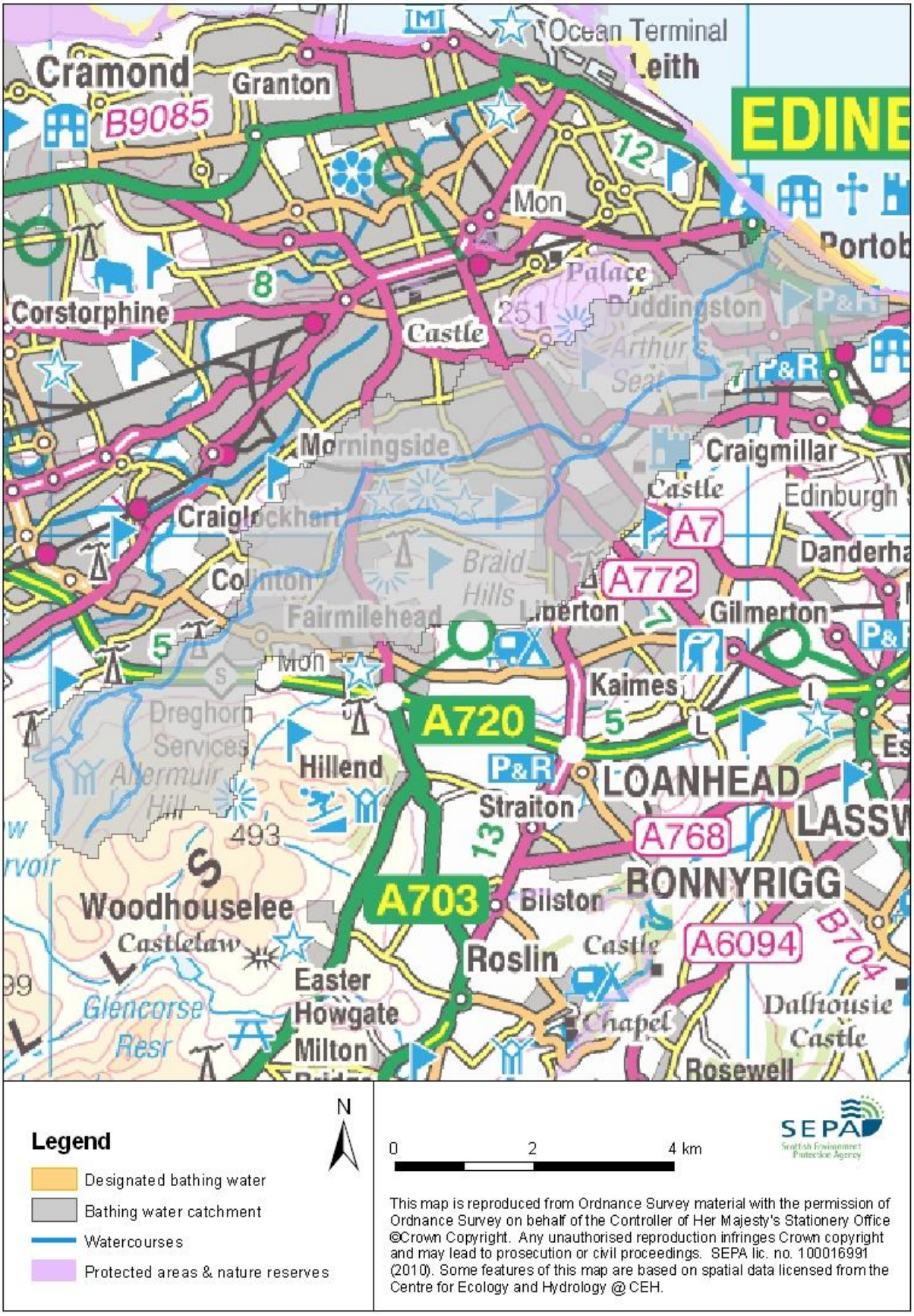
Throughout the bathing season we display daily water quality predictions on the electronic message sign (Map 1). These water quality predictions are also available on our website[3] or via the Beachline phone number (08452 30 30 98).

[2] http://apps.sepa.org.uk/bathingwaters/SamplingResults.aspx
[3] http://apps.sepa.org.uk/bathingwaters/Predictions.aspx

Map 1: Portobello (Central) bathing water



Map 2: Catchment draining into Portobello (Central) bathing water



Catchment description

The catchment draining into the Portobello (Central) bathing water extends to 32 km^2. Land use in area is the split between urban (49%) and rural (49%) uses, with the remaining land being predominantly coastal. The main urban areas within the catchment are the town of Portobello and the south of Edinburgh City.

Average summer rainfall for the region is 296 mm compared to 331 mm across Scotland as a whole.

The main river within the bathing water catchment is the Braid Burn (also known locally as the Figgate Burn) which flows into the sea between the Portobello (West) and Portobello (Central) bathing waters.

We recently used new DNA tracing techniques which help us to identify whether sources of faecal pollution are human or animal. In 2008, this method was used at Portobello Central and at sites in the river catchment to target further investigations and identify appropriate courses of corrective action. Results indicate that human sources are likely to be contributing, at times, to affect bathing water quality.

There are several protected areas either within or in the vicinity of the bathing water and its catchment including the Firth of Forth, which is designated as a Site of Special Scientific Interest, a Special Protection Area and Ramsar site due to the internationally important bird populations it supports (Map 2). For more information on these protected areas see Scottish Natural Heritage's information service website[4].

The Lothian and Borders area was designated as a surface water Nitrate Vulnerable Zone in 2002.

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[5] (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[6] (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 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. Agriculture is not considered to have a significant impact on this bathing water.

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

[4] www.snh.org.uk/snhi
[5] http://www.sepa.org.uk/environment/water/river-basin-management-planning/who-is-involved-with-rbmp/dpmag/
[6] www.sears.scotland.gov.uk

continue to be co-ordinated through the national investment and planning process for Scottish Water, known as 'Quality and Standards'.

Seafield sewage treatment works was upgraded in 2000 to provide tertiary treatment and ultraviolet disinfection of the effluent during bathing season. Improvements were also made to Joppa pumping station in 2007 by installing greater capacity pumps to reduce the frequency of discharges.

A joint SEPA and Scottish Water working group was set up to determine the impact of storm overflows and other inputs to the Braid/Figgate Burn with a view to reducing these sources. A programme of combined sewer overflow upgrading has been carried out to reduce the frequency of discharges. The Duddingston Road combined sewer overflow was improved in 2003, and more recently the Mountcastle Drive combined sewer overflow was upgraded. Several other sources of faecal contamination to the burn have been identified and removed. This has resulted in improved sanitary quality in the Braid/Figgate Burn and an improvement in bathing water quality.

Scottish Water has recently undertaken a study of Portobello (Central) bathing water to determine if asset improvements are required to meet the revised Bathing Waters Directive standards. The study has concluded that improvements to Scottish Water assets are not required but that asset enhancement made to improve bathing water quality at Portobello (West) is likely to further improve performance at Portobello Central.

The Coal Authority has also been examining ways to reduce the minewater flow in the area. A preparatory borehole was sunk into the abandoned mineworkings during 2008 and pump tests are due to be carried out to establish whether it is possible to reduce this flow.

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.

Diffuse urban pollution is not considered to affect this bathing water.

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].

[7] http://apps.sepa.org.uk/bathingwaters/Predictions.aspx

Other pollutants at the beach may include plastics and litter. 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 City of Edinburgh Council.

Contact details and sources of more information

SEPA Edinburgh office
Clearwater House
Heriot Watt Research Park
Avenue North
Riccarton
Edinburgh
EH14 4AP
0131 449 7296
www.sepa.org.uk

City of Edinburgh Council
City Chambers
High Street
Edinburgh
EH1 1YJ
0131 200 2300
www.edinburgh.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.keepscotlandbeautiful.org

Scottish Government
Victoria Quay
Edinburgh
EH6 6QQ
0131 244 0396
eqcat@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 Forth area management plan http://www.sepa.org.uk/environment/water/river-basin-management-planning/who-is-involved-with-rbmp/area-advisory-groups/forth/

The Marine Conservation Society's Good Beach Guide: www.goodbeachguide.co.uk

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

Version Control

Version number:	Date:	Next review due:
1.2	April 2013	
1.3	April 2014	
1.4	June 2015	