

34 Arbroath (West Links)



34.1 Background Information

The identified bathing water at Arbroath (West Links) was good quality in 2007. The substantial improvement since the 1990s is ascribed to the pumping of local sewage to Hatton STW which was commissioned in 2001. SEPA required this works to be designed to ensure that excellent quality would be achieved at Arbroath (West Links).

The disappointing failure of this bathing water in 2002 was tentatively ascribed to unplanned CSO discharges. Possible sources were investigated and freshwater inputs close to the bathing water were monitored in conjunction with the bathing water during 2003-2004. But with better Scottish Water maintenance procedures by then in place, these sources were all clean. In 2005 monitoring effort was directed elsewhere, and excellent or good bathing water quality has been maintained.

In March 2006 the revised Bathing Water Directive (2006/7/EC) entered into force and was enacted in the UK by Regulations in 2008. Key features are tighter microbiological standards to be met by 2015 and increased provision of public information.

Compliance and pollution improvement required for the designated EU Bathing Waters will be co-ordinated through the Water Framework Directive (WFD) programme of measures which will form part of the river basin management plan. The programme of measures will outline measures (actions) that are being taken to protect and improve the water environment in the river basin district. This EU designated bathing water (protected area) pollution reduction plan will identify measures relevant to this bathing water and associated water bodies that are being undertaken as part of the programme of measures.

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Good	Good	Good	Good	Excellent	Poor	Good	Excellent	Excellent	Excellent	Good

Table 34A: Record of Compliance for Arbroath (West Links), 1997 – 2007

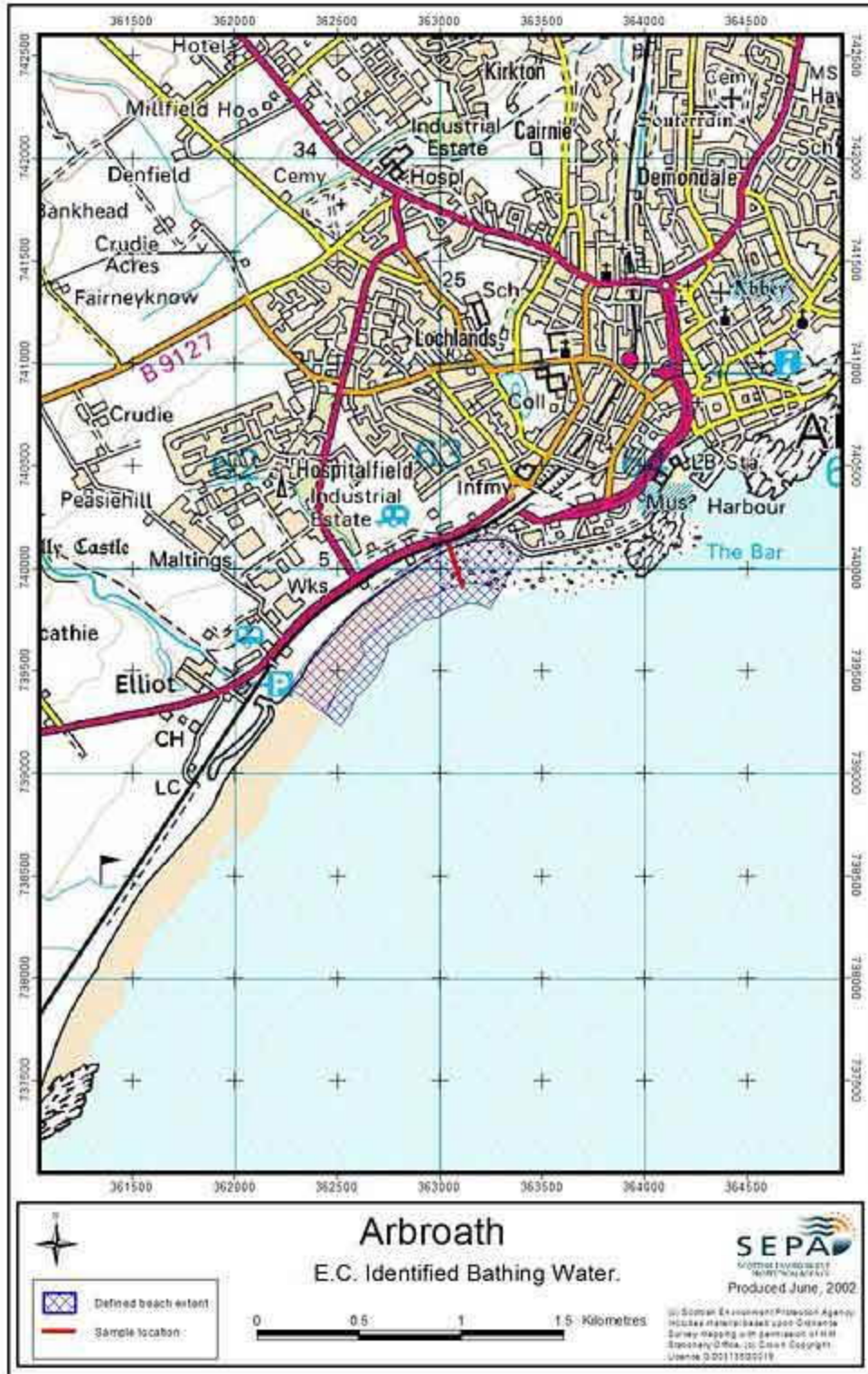


Figure 34A: Map of Arbroath (West Links) designated bathing beach and surrounding local area.

34.2 Results for 2007

Arbroath (West Links) Results				
Date	Total Coliforms (colonies/100ml)	Faecal Coliforms (colonies/100ml)	Faecal Streptococci (colonies/100ml)	Abnormal Weather Waiver
22052007	4	4	8	-
06062007	12	4	<2	-
13062007	266	256	214	-
15062007	24	14	2	-
19062007	8	6	2	-
27062007	40	34	52	-
04072007	40	20	20	-
07072007	244	136	8	-
10072007	36	24	4	-
17072007	166	80	10	-
23072007	136	124	40	-
25072007	188	166	96	-
01082007	60	60	34	-
07082007	46	26	24	-
09082007	52	52	620	-
15082007	208	76	42	-
23082007	14	6	<2	-
27082007	18	10	4	-
29082007	300	152	90	-
05092007	30	16	4	-
Number of Samples taken : 20				

Table 34B: Microbiological results for Arbroath (West Links) bathing water, June – September 2007

34.3 Scottish Water Assets

A new waste water treatment works was commissioned prior to the 2002 bathing water season to treat flows from the Arbroath catchment. This is located at Hatton, 3 km south west of the Arbroath bathing water. In addition, the headworks at Inchcape, which previously screened foul flows from Arbroath prior to a long sea outfall discharge, was converted to a pumping station. Additional storm storage was provided at Inchcape along with screening for the two existing outfalls, long and short, which were retained for use as combined sewer overflows (CSOs). The system is operated such that spills, in the main, discharge via the long outfall and only when storage capacity has been reached will spill also take place via the short outfall. SEPA required that the new works were designed to ensure the attainment of the Directive's most stringent guideline quality standards.

Testing during 2003-2004 confirmed that any risk to bathing water quality was related to the frequency of operation of the short sewer overflow at Inchcape. Ongoing dialogue is

taking place between SEPA, Scottish Water and United Utilities to discuss improvements to the operation of this overflow to reduce the spill frequency.

There is an emergency overflow at the outfall serving the old Elliot STW. SEPA monitoring as part of an Environmental Improvement Action Plan identified elevated faecal coliforms in the discharge originating from four houses with septic tanks that were using this outfall. In August 2004, flows were diverted to a soakaway arrangement.

34.4 Other Discharges

There are no other discharges in this area that are considered to affect this bathing water.

34.5 Agriculture

Agriculture is not considered to significantly affect this bathing water.

34.6 Hydrological Network

Figure 34B shows a map of the hydrometric network in the area of Arbroath (West Links) bathing water.

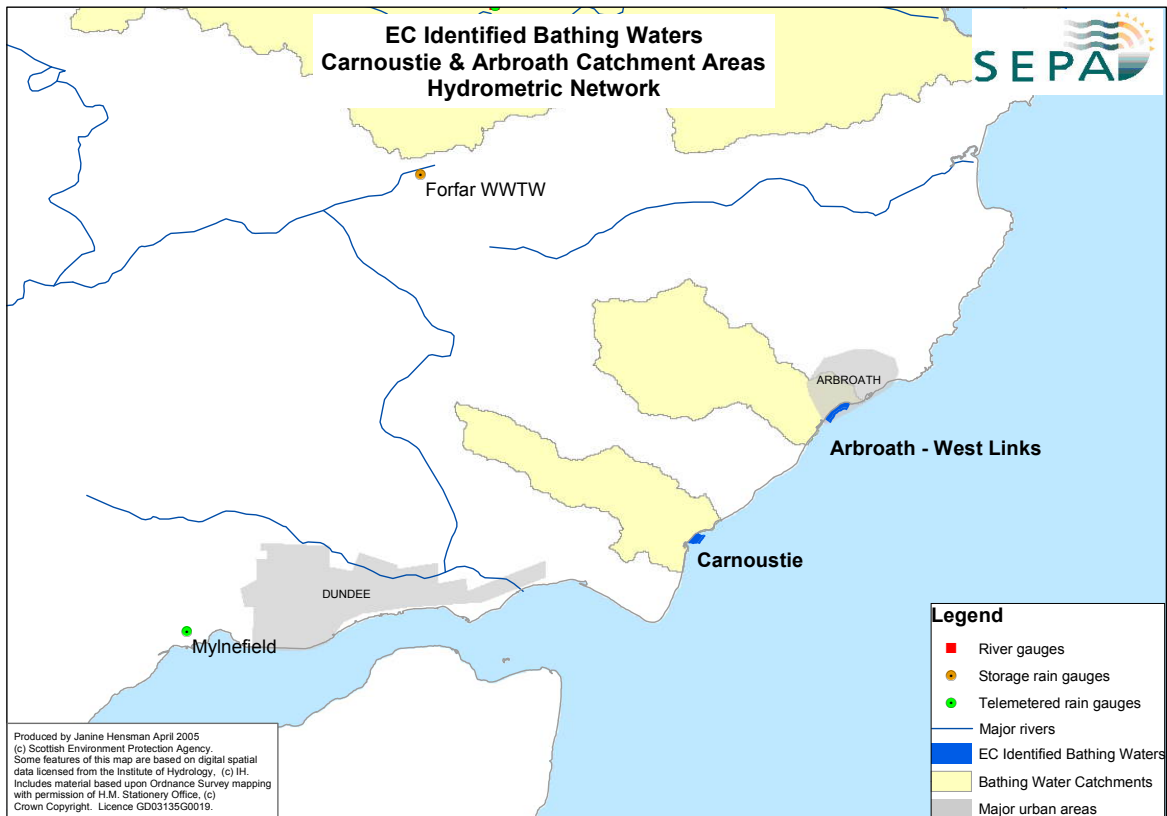


Figure 34B: Hydrometric map of Arbroath (West Links) and surrounding area

34.7 Further Investigations

In 2003, in order that any source of contamination at the bathing water could quickly be identified, samples were taken from the freshwater inputs close to the bathing water on the same days as bathing water samples were collected. The quality of these inputs were variable, and though none contained excessive bacterial indicator counts, there were a few occasions when moderate to high faecal contamination was present. This work was continued in 2004 with additional intensive sampling of the watercourses. The conclusions of the work showed that the short storm outfall at Inchcape pumping station was likely to be the main factor influencing bathing water quality. Monitoring results showed a rise in coliform levels in response to rainfall events. SEPA has since held discussions with Scottish Water and United Utilities (the operators of Inchcape Pumping Station) to discuss the best way to minimise the impact of storm sewage spills via the pumping station short storm outfall.

SEPA will continue to monitor these waters as per the requirements of the EC Bathing Waters Directive and will continue to ensure that all sewage discharge consent conditions are met.

34.8 Response to Failure

Arbroath (West Links) has been assessed for the 2008 season as being of medium risk of failing the mandatory standard.

Should there be a mandatory failure, there will be an immediate response to check all the relevant potential sources in the catchment area to confirm the reason, including follow-up microbiology sampling of the bathing water and nearby river inputs.

The regional Environmental Quality Unit will co-ordinate a response in conjunction with the local Environmental Protection and Improvement team and Environmental Science functions and post the result of the investigation and actions arising on the SEPA bathing waters internet site.