

43 Kinghorn (Pettycur)



43.1 Background Information

In 2006 Kinghorn (Pettycur) bathing water achieved excellent quality for the fourth consecutive year. In 2007, however, this very high standard was narrowly missed and only good bathing water quality was achieved. This decline in quality is ascribed to increased frequency of storm sewage discharge from the local Sewage Treatment Works (STW) due to the unusually wet summer.

New treatment facilities and a long sea outfall pipe at Pettycur were commissioned early in 1993. During 2001 the scheme was re-designed and extended to provide screening for all of Kinghorn's sewage and its discharge to the Forth via the long sea outfall. This resulted in much improved water quality being achieved at Kinghorn's other beach, Kinghorn Harbour, though excellent quality has not yet been attained there. Investigations before the 2006 season to determine the reason for this were inconclusive and will continue.

Following a poor sample in 2006, SEPA will continue to monitor the Pettycur Water to detect any discharges from the emergency outlet at the STW. If discharge occurs, then further investigation will take place and enforcement action taken if appropriate.

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	Poor	Good	Excellent	Good	Good	Excellent	Excellent	Excellent	Excellent	Good

Table 43A: Record of Compliance for Kinghorn (Pettycur), 1997 – 2007.

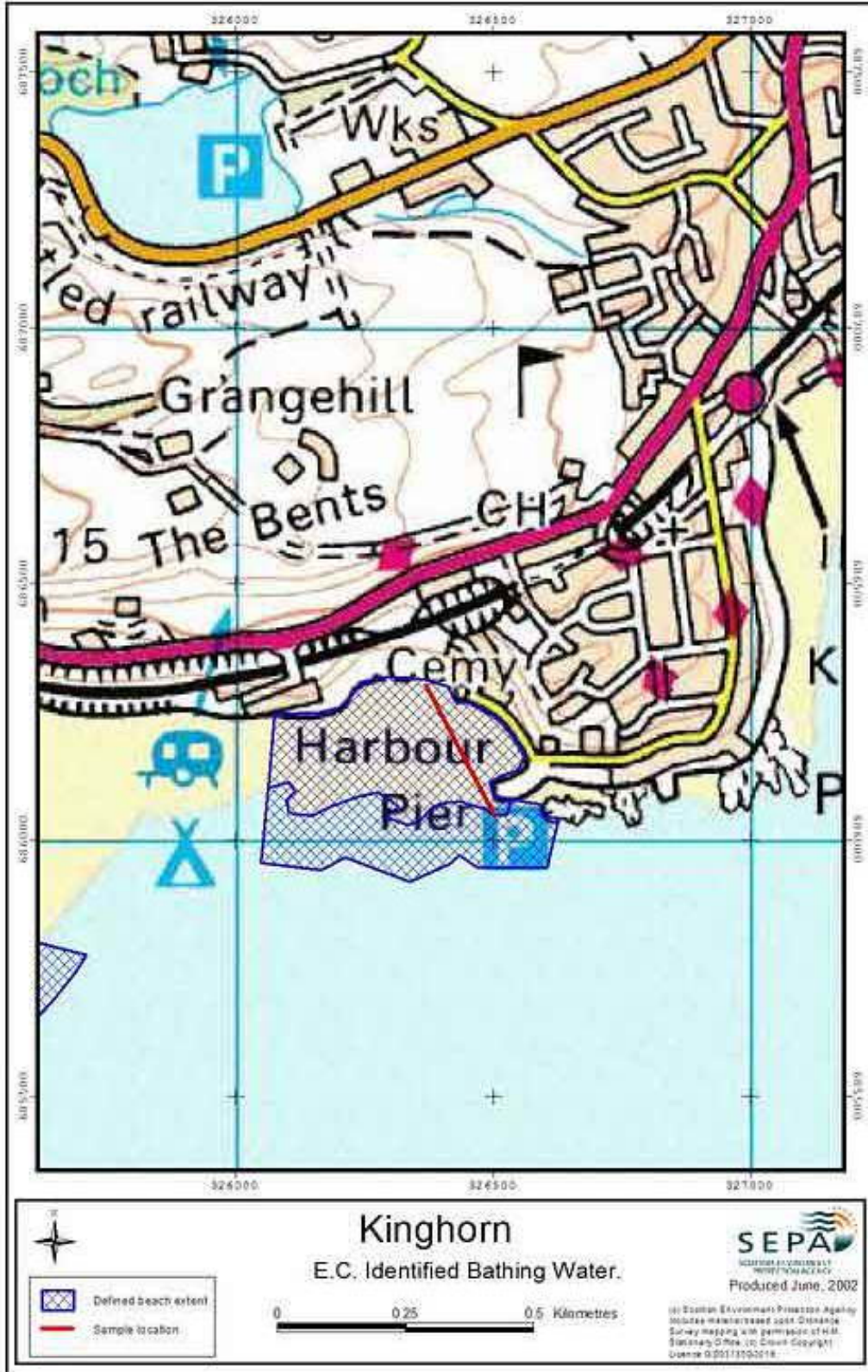


Figure 43A: Map of Kinghorn (Pettycur) designated bathing beach and surrounding local area

43.2 Results for 2007

Kinghorn (Pettycur) Results				
Date	Total Coliforms (colonies/100ml)	Faecal Coliforms (colonies/100ml)	Faecal Streptococci (colonies/100ml)	Abnormal Weather Waiver
25052007	<2	<2	<2	-
05062007	16	4	2	-
11062007	30	30	6	-
14062007	58	32	10	-
18062007	8	8	<2	-
20062007	36	8	16	-
29062007	20	14	<2	-
02072007	28	10	10	-
08072007	28	28	10	-
16072007	200	72	56	-
19072007	46	18	8	-
24072007	12	10	<2	-
01082007	276	232	470	-
06082007	400	74	113	-
08082007	2	<2	4	-
14082007	20	14	8	-
20082007	186	100	26	-
23082007	18	6	4	-
28082007	400	300	167	-
04092007	800	600	16	-
Number of Samples taken : 20				

Table 43B: Microbiological results for Kinghorn (Pettycur) bathing water, June – September 2007.

43.3 Scottish Water Assets

Prior to the 1993 bathing season, new treatment facilities and a long sea outfall pipe at Pettycur were commissioned. The work comprised a new interceptor sewer and the treatment of effluent by septic tanks before discharging through a long sea outfall. During 2001, the scheme was extended and re-designed to screen and discharge all of Kinghorn's sewage through this system. This has resulted in much improved water quality being achieved at Kinghorn's other beach, Kinghorn Harbour, although as yet excellent quality has not been attained. Investigations into water quality at Kinghorn Harbour have found problems of sewage in the Kinghorn Burn at its culvert outlet to the harbour. These have been due to incidents of chokes in the foul sewerage network in the town. As a result of the respective choke the sewage has backed up and overflowed into surface water outlets into the burn culvert. Scottish Water have responded to the individual incidents and cleared the offending choke. No particular problem area in the foul drainage network has been identified where remedial action can be taken.

43.4 Other Discharges

No other significant discharges are considered likely to threaten the quality of this bathing water. There is some concern regarding a surface water outlet that discharges directly onto the beach that can be grey in appearance on its invert suggesting some foul input.

43.5 Agriculture

Agriculture is not considered to have any significant impact on this catchment

43.6 Hydrometric Network

Figure 43B shows a map of the hydrometric network of the surface water catchment area of Kinghorn (Pettycur) bathing water.

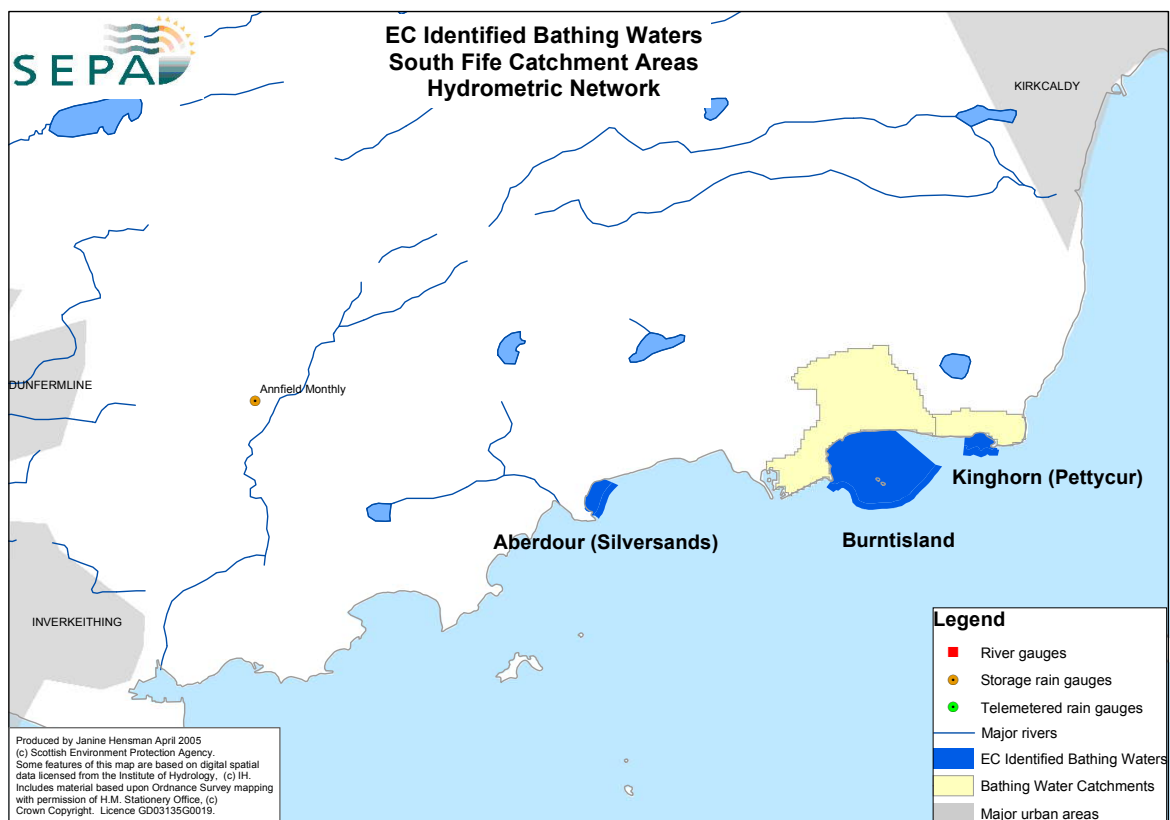


Figure 43B: Hydrometric map of Kinghorn (Pettycur) and surrounding area

43.7 Further Investigations

The Kinghorn (Pettycur) water sample taken on 25 August 2006 was of poor quality. Immediate action and investigatory work confirmed there had been a short duration discharge of untreated sewage from an emergency outlet at the treatment works around the time the polluted sample was taken and this was the likely cause of the poor result. Although a thorough investigation by both SEPA and Scottish Water did not determine

the reason for this temporary polluting discharge, SEPA will continue to monitor to detect any further discharges from the outlet in question. If discharge occurs, then further investigation will take place and enforcement action will be taken if appropriate.

SEPA will continue to monitor these waters as per the requirements of the EC Bathing Waters Directive.

43.8 Response to Failure

Kinghorn (Pettycur) has been assessed for the 2008 season as being of low 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 any nearby freshwater 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.