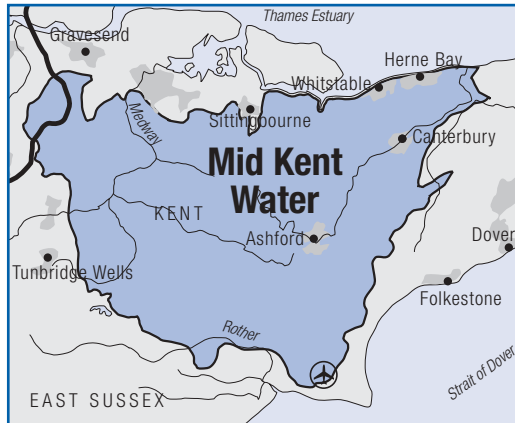


# 11 Mid Kent Water Plc

## Overall Water Quality supplied by Mid Kent Water Plc in 2002

- A total of 28,286 tests were carried out on samples taken by Mid Kent Water Plc in 2002.
- Of these tests, 99.89% complied with the Regulations.



### Company Information

Amount of Water Supplied:	167 MI/d
Consumers Supplied:	574,700
Areas of Supply:	Maidstone, Ashford, Canterbury and surrounding areas
Water Composition:	12% from rivers and reservoirs 88% from boreholes and aquifers
Treatment Works:	34
Service Reservoirs:	67
Km of Mains:	4,167
Water Supply Zones:	21

## Water Quality at Treatment Works, in Service Reservoirs and in Water Supply Zones

To be wholesome, water must comply with the standards for the parameters set out in the Water Supply (Water Quality) Regulations 1989. In 2002, the Company carried out a total of 28,286 tests on samples taken at water treatment works, from service reservoirs and in water supply zones and of these, 99.89% complied with the relevant water quality standards set down in the Regulations. A list of the parameters, the relevant standards and their significance can be found at the beginning of this section.

### Water Quality leaving Treatment works

	2002	2001	2000
<b>Number of water treatment works</b>	34	32	31
<b>COLIFORMS</b>			
<b>Total number of tests</b>	2,911	2,920	2,978
– number containing coliforms	3	4	3
– % containing coliforms	0.10%	0.14%	0.10%
<b>Treatment works with coliforms detected</b>	<b>2</b>	<b>4</b>	<b>2</b>
– % of all works with coliforms detected	5.88%	12.50%	6.45%
<b>FAECAL COLIFORMS</b>			
<b>Total number of tests</b>	2,911	2,929	2,978
– number containing faecal coliforms	0	0	0
– % containing faecal coliforms	0.00%	0.00%	0.00%
<b>Treatment works with faecal coliforms detected</b>	<b>0</b>	<b>0</b>	<b>0</b>
– % of all works with faecal coliforms detected	0.00%	0.00%	0.00%

Failure of the coliform standard at one works in 2002 was considered trivial. The Inspectorate is monitoring a second works that failed the coliform standard. Differences over the last three years in the number of treatment works, and in the number of tests carried out on samples from treatment works, in which coliforms were detected were not considered significant.

### **Cryptosporidium**

The Company has no sites for regulatory *Cryptosporidium* monitoring

### **Water Quality in Service Reservoirs**

	2002	2001	2000
<b>Number of service reservoirs</b>	67	66	68
<b>COLIFORMS</b>			
<b>Total number of tests</b>	3,296	3,289	3,464
– number containing coliforms	3	10	4
– % containing coliforms	0.09%	0.30%	0.12%
Service reservoirs with coliforms detected	3	9	4
<b>Service reservoirs with coliforms detected in more than 5% of tests</b>	<b>0</b>	<b>0</b>	<b>0</b>
– % of all service reservoirs with coliforms detected	0.00%	0.00%	0.00%
<b>FAECAL COLIFORMS</b>			
<b>Total number of tests</b>	3,296	3,289	3,464
– number containing faecal coliforms	1	1	1
– % containing faecal coliforms	0.03%	0.03%	0.03%
<b>Service reservoirs with faecal coliforms detected</b>	<b>1</b>	<b>1</b>	<b>1</b>
– % of all service reservoirs with faecal coliforms detected	1.49%	1.52%	1.47%

Failure of the faecal coliform standard at one service reservoir was considered trivial. Differences over the last three years in the number of service reservoirs, and in the number of tests carried out on samples from service reservoirs, in which coliforms or faecal coliforms were detected were not considered significant.

### Water Quality in Water Supply Zones

The table below shows the data for the key parameters and any other parameters where there was a failure of the standard. All other parameters were fully compliant.

Parameter	Total number of tests	Tests not meeting the prescribed concentration or value		Number of failures covered by Undertakings	Number of zones not complying with the standards		
		No	%		2002	2001	2000
Coliforms	1,550	6	0.39	0	0	0	0
Faecal coliforms	1,550	0	0.00	0	0	1	1
Colour	198	0	0.00	0	0	0	0
Turbidity	432	0	0.00	0	0	0	0
Odour	57	0	0.00	0	0	0	0
Taste	56	0	0.00	0	0	0	0
Hydrogen ion	197	0	0.00	0	0	0	0
Nitrate	196	0	0.00	0	0	1	0
Nitrite	196	0	0.00	0	0	0	0
Aluminium	96	0	0.00	0	0	0	0
Iron	823	9	1.09	7	5	6	8
Manganese	346	2	0.58	0	2	2	3
Lead	143	0	0.00	0	0	0	0
PAH	120	7	5.83	0	2	2	5
Trihalomethanes	28	0	0.00	0	0	0	0
Total pesticides	593	0	0.00	0	0	0	0
Other pesticides	6,516	0	0.00	0	0	0	0
All others	2,775	0	0.00	0	0	0	0
<b>TOTAL</b>	<b>15,872</b>	<b>24</b>	<b>0.15%</b>	<b>7</b>			

21 zones in 2000, 2001 and 2002

The fifth column indicates the number of failures in zones already covered by legally binding undertakings given by the Company. These undertakings require remedial work to be carried out to ensure compliance with the individual standard.

## The New Regulations

In 2002, the Company carried out monitoring for the six new parametric values set down in the new Water Supply (Water Quality) Regulations 2000. These Regulations come into force on 25 December 2003. The results are shown in the table below.

Parameter	Total number of tests	New standard	Tests not meeting the new standard
Benzene	109	1.0 µg/l	0
Bromate	8	10.0 µg/l	0
1,2 dichloroethane	109	3.0 µg/l	0
Nitrite (ex-water treatment works)	243	0.1 mg/l	0
<i>Clostridium perfringens</i>	4	0/100 ml	0
Enterococci	84	0/100 ml	0

Compliance data for 2002 has also been analysed against the revised standards and the results are shown in the following table.

Parameter	Total number of tests	Current standard	Number of tests not meeting current standard	Revised standard	Number of tests not meeting revised standard
Antimony	21	10.0 µg/l	0	5.0 µg/l	0
Arsenic	21	50.0 µg/l	0	10.0 µg/l	0
Boron	21	2.0 mg/l	0	1.0 mg/l	0
Copper	23	3.0 mg/l	0	2.0 mg/l	0
Lead	143	50.0 µg/l	0	25.0 µg/l <sup>1</sup> 10.0 µg/l <sup>2</sup>	0 3
Nickel	21	50.0 µg/l	0	20.0 µg/l	0
Nitrite (at consumers' taps)	196	0.1 mg/l	0	0.5 mg/l	0
PAH	120	0.2 µg/l	7	0.1 µg/l	0
Tetrachloroethene	28	30.0 µg/l	0	} 10.0 µg/l	0
Trichloroethene	28	10.0 µg/l	0		

Details of the new and revised standards, and the reasons for the revisions where applicable, can be found in chapter J "New Regulations and Associated Programmes of Work".

- 1 From 25.12.03
- 2 From 25.12.13

## Company Audit and Inspection

The Company was inspected or audited by the Inspectorate or its appointed consultants on a number of occasions during 2002. Where relevant, report summaries are available in the ‘Business and Technical’ section of the Inspectorate’s web site under ‘Audit and Inspection’.

Audit or Inspection	Date
Audit of progress with regulatory programmes of work	March 2002
Inspection of one water treatment works and one service reservoir	August 2002
Audit of response to selected consumer complaints	August 2002
Audit of analytical requirements for nitrate and nitrite	November 2002
Audit of <i>in situ</i> lining of mains	November 2002
Audit trails of five test results	November 2002
Review of the distribution system undertaking	November 2002
Audit of sampling arrangements	December 2002
Review of plumbosolvency treatment and control programmes of work	December 2002

A number of recommendations were made in respect of action required to avoid the risk of a breach of a regulatory duty. These recommendations were in relation to the audit trails, the treatment works, the regulatory programmes of work, sampling arrangements, *in situ* lining of mains, the analytical requirements for nitrate/nitrite and plumbosolvency treatment for lead.

## Incidents

No events were notified during 2002 by the Company. For further details on the classification of incidents, see chapter C “Events affecting Water Quality” Part 3

## Enforcement Action

No enforcement action was considered for the Company as a result of the Inspectorate’s activities during 2002.

## Undertakings and other Improvement Programmes

### Water treatment works and service reservoirs

Three statements of intent for parameters other than *Cryptosporidium* were due for completion during 2002. These programmes were completed on schedule.

No other improvement programmes were due for completion during 2002.

### Distribution

The ongoing distribution system undertaking has been progressing satisfactorily. During 2002, 80 km of mains have been renovated. The Company is required to renovate a further 180 km of mains by Dec 2005.

### Lead

The Company has a Regulation 41 programme of work to meet the revised standard for lead set down in the new Water Supply (Water Quality) Regulations 2000, which will come into force on 25 December 2003. Progress with the delivery of the programme is monitored by the Inspectorate and has been satisfactory.