

Water Quality Report 2009

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1 INTRODUCTION

Sutton and East Surrey Water supplies drinking water to approximately 648,000 people in East Surrey, parts of West Kent and West Sussex, and the London Boroughs of Sutton, Merton and Croydon, over an area covering 834 square kilometres.

The Company obtains approximately 85% of its water from boreholes in the chalk and lower greensand, and the remainder from a reservoir filled by abstracting water from the River Eden in Kent. The majority of the groundwater is softened before supply. Water is treated at 8 treatment works by a variety of processes, and supplied to customers through 32 service reservoirs or water towers and approximately 3,400 kilometres of mains, covering 20 water supply zones. Average daily demand is 160 MI (160 million litres) of water.

Water suppliers must satisfy the requirements of the Water Supply (Water Quality) Regulations 2000, which fully incorporate the requirements of the 1998 European Drinking Water Directive on the quality of water intended for human consumption. The new Regulations came fully into force on 1 January 2004 and were updated at the end of 2007 by the issue of Amendment Regulations.

The Regulations impose standards for drinking water to ensure water is safe to drink, and they also set limits for parameters that ensure that the water looks and tastes pleasant.

The Regulations define how many samples must be analysed to monitor water quality, where they must be taken from and at what frequency. Samples are taken from defined points at treatment works, service reservoirs and supply points, and at random from consumers' taps, in accordance with an annual programme.

Although the primary responsibility for monitoring water quality rests with the water supplier, water quality is also assessed by the Drinking Water Inspectorate (DWI), a division of the Department for Environment, Food and Rural Affairs. The DWI assesses the wholesomeness of water supplies and undertakes annual technical audits of water suppliers.

This report relates to water quality supplied by Sutton and East Surrey Water plc for the calendar year 2009.

2 SUMMARY OF WATER QUALITY

Sutton and East Surrey's water supplies are of very good quality and are safe to drink. During 2009, 5500 samples were taken to satisfy the requirements of the Regulations and approximately 37,000 measurements were made on those samples to assess the extent to which our water supplies met the standards set in the Regulations.

The Regulations set Prescribed Concentrations or Values (PCVs) for parameters used to determine the wholesomeness of the water, and Specification Concentrations or Values (SCVs) for parameters that are additional monitoring requirements (otherwise known as indicator parameters), but which do not impact on the determination of the wholesomeness of the water supplied. In 2009, 99.93% of the tests undertaken to determine compliance with the directive and national standards, and 99.99% of the tests taken to determine compliance with the indicator parameters met the standards set. Details of the extent of compliance are given in Appendix 1 of this report.

All contraventions of a standard are investigated in accordance with the guidance issued by the Drinking Water Inspectorate. In some cases further sampling does not confirm the original findings and no further action is required, but in other cases remedial action such as mains flushing may be required. In general, contraventions are associated with local conditions that are not representative of the water quality throughout a zone, and in particular, some contraventions can be associated with poor maintenance of the plumbing within an individual property. Irrespective of the cause of the problem, the affected consumers are advised of what action has been taken to remedy the situation, or what action they can take to ensure the problem does not recur.

Details of the numbers of tests carried out on samples from treatment works, service reservoirs, supply points and consumers' taps (or water supply zones) is given in Appendix 2. A summary of the key aspects of water quality, including commentary on all parameters where standards were exceeded in 2009, is given in sections 3 and 4.

The Chief Inspector of the DWI produces an annual report on drinking water for England, and her report for 2009 will be launched in July 2010. Her report includes a statistically determined measure for assessing water company performance – "overall drinking water quality", previously referred to as mean zonal compliance % or MZC%. The overall drinking water quality % for Sutton and East Surrey Water for 2009 has been determined as 99.92%.

Further details of the Inspectorate's assessments of the Company are available on their website – <http://www.dwi.gov.uk>.

3 MICROBIOLOGICAL QUALITY

The primary aim of microbiological monitoring is to demonstrate that water supplies are safe to drink. Coliforms are bacteria that are widespread in the environment, and whose presence in water may indicate contamination of supplies and the possible presence of harmful organisms that may cause illness. When detected in water, however, they may also be indicative of the poor hygienic condition of the sampling location.

In 2009 only one sample taken contravened the standard set for the coliform parameter, and it was immediately investigated to determine the cause and extent of the failure. All microbiological failures are notified to the relevant local and health authorities.

Water leaving treatment works was tested for total coliforms and E.coli. 100% of the 2131 samples taken from our eight treatment works were clear of both total coliforms and E.coli.

Water leaving service reservoirs was also tested for coliforms and E.coli. 100% of the 1654 samples taken from reservoirs in 2009 were free of coliforms and E.coli.

The Regulations include mandatory standards for E.coli and Enterococci in samples collected from consumers' taps. All of the 1632 samples tested for E.coli, and all of the 160 samples tested for Enterococci were free of these organisms.

Samples taken from consumer taps were also tested for coliforms. One of the 1632 samples taken contained coliforms, but all repeat and check samples taken confirmed the mains supply was of good microbiological quality. Investigations did not identify any reason for the original coliform detection.

Monitoring for *Clostridium perfringens* is carried out at supply points. The absence of this organism in treated water confirms an efficient treatment process. 100% of the 303 samples tested were free of *C.perfringens*.

4 CHEMICAL QUALITY

Chemical monitoring includes tests for a great variety of compounds, including organics, metals, inorganics and physical properties of the water, such as taste and odour. The majority of substances we check for are invisible to the consumer, but some do impact on the appearance, and therefore the acceptability, of our product to our customers. Whilst it is impossible to comment on all the chemical parameters we monitor for, those detected in exceedance of the standards during 2009, and those generally of particular interest to our customers, are discussed below.

There were fifteen exceedances of the standards set for chemical tests in 2009; three for iron, one for odour, one for lead, nine for individual pesticides (metaldehyde and carbetamide) and one for total pesticides.

4.1 IRON

There were three exceedances of the standard set for the iron parameter. The standard set for iron is based on its effect on the appearance of the water, and not on health grounds. Iron may be present in the water due to the disturbance of iron particles, accumulated over time from the corrosion of iron mains.

Investigations into the first iron exceedance identified that the property was affected by its location at the end of the supply main and quality of the water was improved by flushing the main. The second exceedance was demonstrated to be a consequence of the sampling procedure adopted on that occasion, and improvements to sampling have been made to prevent a recurrence. Check samples taken following the third iron exceedance did not confirm any issues with the iron quality of the water supplied, and no cause of the original exceedance could be determined.

4.2 TURBIDITY

There were no exceedances of the turbidity parameter in 2009, at either treatment works or in water supply zones. Turbidity is a measure of the suspended fine particulate material in a sample and the standard set for turbidity is based on its effect on the appearance of the water, and not on health grounds.

4.3 LEAD

There was a single exceedance of the lead parameter in compliance samples taken in water supply zones in 2009. Lead in drinking water arises from lead service pipes and fittings; it is not present in the mains water supplied. Whilst lead pipework has not been used for new installations for many years, there are still a large number of lead pipes in existence. The water supplier owns some of this pipework, but the vast majority actually belongs to the customer. Lead can also be introduced by the inappropriate use of lead solder. Investigations carried out following the lead exceedance in the compliance sample identified that the cause of the exceedance was most likely due to the inappropriate use of lead solder within the property itself, since there was no lead service pipe at the property.

Sutton and East Surrey Water conditions the water supplied to minimise lead pick-up from any lead pipes that may be present in the distribution network, but in some cases this is still not adequate to prevent lead dissolution into standing water.

The Company also carries out operational testing for lead, and conducts tests in response to customer requests. A low number of these samples in 2009 also exceeded the limit for lead and in these cases there is a full investigation, as there would be for a compliance failure. If it is found that the Company owned pipework is constructed of lead, then it is replaced by an alternative material free of charge. If the pipework owned by the customer is shown to be lead, or it is identified that the problem is due to the use of lead solder, then they are advised to consider replacing their problem pipework.

In all cases where a customer chooses not to replace their part of the lead service pipework following a failure, they are advised to thoroughly flush the pipework before taking any water for drinking or food preparation purposes, in order to minimise the lead concentration.

4.4 HARDNESS

Hardness is caused by naturally occurring calcium and magnesium salts dissolved in the water. Although hard water can cause scale build-up on fittings and in pipework, and can leave a scum on the surface of boiled water, it is not harmful to health.

Many of Sutton and East Surrey Water's borehole sources are in chalk aquifers that are naturally hard. The Company therefore softens the water at five of the larger treatment works to reduce the effects caused by hard water. At our other treatment works, the water is naturally softer.

Under the current Regulations there are no requirements to monitor and report on water hardness levels. We continue to monitor hardness levels at our treatment works, however, to ensure the efficient operation of the softening process, and to enable us to provide the information to consumers if required.

4.5 TASTE AND ODOUR

The taste and odour of the water is monitored in samples taken from customer properties in water supply zones. The standards for taste and odour were modified under the Amendment Regulations issued in 2007. The requirement to comply with a dilution number of 3 or less was replaced with a requirement to supply water that was "acceptable to consumers and no abnormal change". In order to assess compliance, however, the method of testing (generating a result as a dilution number) was unchanged.

In 2009 one sample had a mild musty odour detected with a dilution number of 1. The odour was not detected in repeat and check samples taken at the original property and other properties served by the same supply main and no cause for the original odour was found. The customer did not report any concerns with their water supply.

4.6 METALDEHYDE

Metaldehyde is a selective pesticide, used by farmers and gardeners to control slugs in a wide variety of crops. The standard for the individual pesticide parameter is a target for treatment, and is not based on the impact to health.

Metaldehyde was detected at concentrations greater than the PCV for individual pesticides in all of the eight statutory samples taken in 2009 from the treated water supply point at one of our treatment works supplied from a surface water reservoir. Investigations have identified that metaldehyde is not effectively removed from water using existing advanced water treatment processes, and the issue is widespread, affecting many water companies in the UK.

Sutton and East Surrey Water is working with other water companies, the Metaldehyde Stewardship Group, the Environment Agency, Natural England, the Chemicals Regulation Directorate, the Drinking Water Inspectorate and farmers (through the Voluntary Initiative) to ensure significant reductions are seen in the levels of metaldehyde in water sources through improved practices of product application.

The Health Protection Agency has confirmed there is no risk to health at the levels being detected in drinking water.

4.7 CARBETAMIDE

Carbetamide is a selective pesticide used by farmers for the control of weeds in crops such as field beans and oilseed rape.

Carbetamide was detected above the standard for individual pesticides in a single sample taken from one of our treatment works supply points supplied from a surface water reservoir. Investigations confirmed that carbetamide concentrations in the raw water source had increased to a level that was untreatable by the currently installed pesticide treatment process at that works following the use of the pesticide by a local farmer and subsequent heavy rainfall. The carbetamide rapidly degraded in the reservoir and the treated water was compliant within a number of weeks.

Sutton and East Surrey Water is working with local farmers to ensure good practice is followed at all times thereby minimising the risks of pesticide usage on the quality of our reservoir source. Sutton and East Surrey Water is also installing additional pesticide treatment capacity at the treatment works to deal with higher raw water pesticide concentrations.

The standard for the individual pesticide parameter is a target for treatment, and is not based on the impact to health. The Health Protection Agency raised no concerns over the levels of carbetamide detected in drinking water over this short period of time.

4.8 TOTAL PESTICIDES

The total pesticide determination is the sum of the individual pesticides detected. The standard for total pesticides is five times the limit set for individual pesticides.

The exceedance of the total pesticide standard in a single sample was largely due to the combined concentrations of the pesticides metaldehyde and carbetamide, discussed separately in sections 4.6 and 4.7 above. None of the individual pesticides contributing to the total pesticide result pose any risk to health at the concentrations detected.

5 OPERATIONAL MONITORING

In addition to the tests carried out on treated waters for regulatory purposes, Sutton and East Surrey Water commenced regulatory monitoring of raw water abstraction points in 2009, following the introduction of amendments to the Regulations. Samples are taken to confirm source water quality and to verify the risk assessment of sources carried out as part of the Company's Drinking Water Safety Plans in 2008. The Company also takes a number of samples for operational reasons such as monitoring the efficiency of treatment processes and checking the integrity of the distribution network after maintenance work. Approximately 73,000 additional tests (operational and regulatory abstraction monitoring) were carried out for this purpose in 2009.

6 IMPROVEMENT PROGRAMMES

If a water supply exceeds a standard in the Regulations and the investigation concludes that it is likely to recur, the Secretary of State can require a water supplier to put in place a legally binding improvement programme of work to improve drinking water quality. This improvement programme can be in the form of an "Undertaking" or an "Authorised Departure".

Sutton and East Surrey Water had no Authorised Departures in force during 2009, but agreed an Undertaking with the Drinking Water Inspectorate in December 2009 in respect of the pesticide metaldehyde. This Undertaking places a legal obligation on the Company to complete a number of agreed steps, aiming to secure or facilitate compliance with the standard for metaldehyde in the period to 31 March 2015. A summary of the agreed steps of the Undertaking are shown in Appendix 3, or can be found on the DWI website, <http://www.dwi.gov.uk/stakeholders/improvement-programmes/ses/SES2654.pdf>.

7 PROVISION OF INFORMATION

The requirement for all water companies to maintain a Public Register for public inspection was removed under the Amendment Regulations issued in 2007. Companies are still obliged, however, to maintain records and provide details of regulatory water quality analysis within seven days of a request from any person.

Information on water quality is generally requested by telephone or e-mail.

Customers wishing to receive a water quality report for their area should contact Customer Services on 01737 772000, or e-mail customer_services@waterplc.com. Alternatively they can now download the latest report for their area, or any other part of the Company supply area, from our Company website. Access to this and other general information and frequently asked questions about water quality can be found on the internet at <http://www.waterplc.co.uk/pages/home/water-quality/>.

Reports on the results of regulatory sampling and general water quality issues are regularly sent to all Environmental Health Officers and Consultants in Communicable Disease Control covering the Company's area of supply, as well as this annual summary report. Regular meetings are held with representatives of local and health authorities to discuss water quality. In 2009, meetings were held in February and October.

APPENDICES

APPENDIX 1 – SUMMARY OF WATER QUALITY, 2009

Schedule 1 Mandatory Determinands (Directive and National standards)			
Asset	No. of tests	No. of failures	% Compliance
Treatment Works	6393	0	100.00
Service Reservoirs	3308	0	100.00
Supply Points	2121	10	99.53
Water Supply Zones	10222	5	99.95
Total for mandatory dets	22044	15	99.93

Schedule 2 Indicator Determinands			
Asset	No. of tests	No. of failures	% Compliance
Treatment Works	6393	0	100.00
Service Reservoirs	3308	0	100.00
Supply Points	1113	0	100.00
Water Supply Zones	4209	1	99.98
Total for indicator dets	15023	1	99.99

Schedule 1 & 2, Mandatory & Indicator Determinands			
Asset	No. of tests	No. of failures	% Compliance
Treatment Works	12786	0	100.00
Service Reservoirs	6616	0	100.00
Supply Points	3234	10	99.69
Water Supply Zones	14431	6	99.96
Total for mandatory & indicator dets	37067	16	99.96

Notes:

It is not possible to make a direct comparison between the annual % compliance figures determined under the Water Supply (Water Quality) Regulations 1989, and any determination of compliance under the Water Supply (Water Quality) Regulations 2000 due to changes in the sampling regimes implemented under the new Regulations.

The figures in the tables above do not include tests for parameters that do not have a standard. 5434 additional tests were carried out for the determination of gross alpha, gross beta and residual disinfectant, as required by the Regulations.

Details of the failures are discussed in the main body of the report.

APPENDIX 2 – ANNUAL WATER QUALITY REPORT, 2009

Quality of Water at Water Treatment Works							
<i>Number of water treatment works: 8</i>							
Parameter	No. of samples taken	PCV or SCV	Unit of Measure	Samples Contravening PCV or SCV		Water Treatment Works Contravening PCV or SCV	
				No.	%	No.	%
Schedule 1 parameters							
Total coliforms	2131	0	No./100ml	0	0.00	0	0.00
<i>E.coli</i>	2131	0	No./100ml	0	0.00	0	0.00
Nitrite	2131	0.1	mg NO ₂ /l	0	0.00	0	0.00
Indicator parameters							
Colony count 48h at 37°C	2131	N/A	No./ml	0	0.00	0	0.00
Colony count 72h at 22°C	2131	N/A	No./ml	0	0.00	0	0.00
Residual Disinfectant	2131	N/A	mg/l	-	-	-	-
Turbidity	2131	1	NTU	0	0.00	0	0.00

Quality of Water at Service Reservoirs							
<i>Number of service reservoirs: 32</i>							
Parameter	No. of samples taken	PCV or SCV	Unit of Measure	Samples Contravening PCV or SCV		Service Reservoirs Contravening PCV or SCV	
				No.	%	No.	%
Schedule 1 parameters							
Total coliforms	1654	0	No./100ml	0	0.00	0	0.00
<i>E. coli</i>	1654	0	No./100ml	0	0.00	0	0.00
Indicator parameters							
Colony count 48h at 37°C	1654	N/A	No./ml	0	0.00	0	0.00
Colony count 72h at 22°C	1654	N/A	No./ml	0	0.00	0	0.00
Residual Disinfectant	1654	N/A	mg/l	-	-	-	-

Note:

Compliance with the required standard for total coliforms at a service reservoir is achieved if coliforms are absent in 95% samples taken at any single reservoir. All reservoirs complied with this standard.

Quality of Water at Supply Points							
<i>Number of supply points: 8</i>							
Parameter	No. of samples taken	PCV or SCV	Unit of Measure	Samples Contravening PCV or SCV		Supply Points Contravening PCV or SCV	
				No.	%	No.	%
Schedule 1 parameters							
Boron	58	1	mg B/l	0	0.00	0	0.00
Bromate	58	10	µg BrO3/l	0	0.00	0	10.00
Cyanide	58	50	µg CN/l	0	0.00	0	0.00
Fluoride	58	1.5	mg F/l	0	0.00	0	0.00
Mercury	58	1	µg Hg/l	0	0.00	0	0.00
<u>Pesticides:</u>							
2,4-D	58	0.1	µg/l	0	0.00	0	0.00
Aldrin	58	0.03	µg/l	0	0.00	0	0.00
Atrazine	58	0.1	µg/l	0	0.00	0	0.00
Azoxystrobin	58	0.1	µg/l	0	0.00	0	0.00
Boscalid	58	0.1	µg/l	0	0.00	0	0.00
Bromoxnil	8	0.1	µg/l	0	0.00	0	0.00
Carbendazim	8	0.1	µg/l	0	0.00	0	0.00
Carbetamide	58	0.1	µg/l	1	1.72	1	12.5
Chlormequat	8	0.1	µg/l	0	0.00	0	0.00
Chlorothalonil	58	0.1	µg/l	0	0.00	0	0.00
Chlorotoluron	58	0.1	µg/l	0	0.00	0	0.00
Dieldrin	58	0.03	µg/l	0	0.00	0	0.00
Diuron	58	0.1	µg/l	0	0.00	0	0.00
Epoxiconazole	58	0.1	µg/l	0	0.00	0	0.00
Fenpropimorph	58	0.1	µg/l	0	0.00	0	0.00
Flufenacet	58	0.1	µg/l	0	0.00	0	0.00
Flusilazole	58	0.1	µg/l	0	0.00	0	0.00
Flutriafol	58	0.1	µg/l	0	0.00	0	0.00
Glyphosate	51	0.1	µg/l	0	0.00	0	0.00
Heptachlor	58	0.03	µg/l	0	0.00	0	0.00
Heptachlor Epoxide	58	0.03	µg/l	0	0.00	0	0.00
Isoproturon	58	0.1	µg/l	0	0.00	0	0.00
Mecoprop	58	0.1	µg/l	0	0.00	0	0.00
Metaldehyde	58	0.1	µg/l	8	13.79	1	12.5
Metazachlor	8	0.1	µg/l	0	0.00	0	0.00
Methabenzthiazuron	58	0.1	µg/l	0	0.00	0	0.00
Pendimethalin	58	0.1	µg/l	0	0.00	0	0.00
Propachlor	8	0.1	µg/l	0	0.00	0	0.00
Propyzamide	58	0.1	µg/l	0	0.00	0	0.00
Simazine	58	0.1	µg/l	0	0.00	0	0.00
Tebuconazole	58	0.1	µg/l	0	0.00	0	0.00
Total Pesticides	58	0.5	µg/l	1	1.72	1	12.5
Triclopyr	58	0.1	µg/l	0	0.00	0	0.00
Trifluralin	58	0.1	µg/l	0	0.00	0	0.00

Quality of Water at Supply Points							
<i>Number of supply points: 8</i>							
Parameter	No. of samples taken	PCV or SCV	Unit of Measure	Samples Contravening PCV or SCV		Supply Points Contravening PCV or SCV	
				No.	%	No.	%
Indicator parameters							
<i>Clostridium perfringens</i>	303	0	No./100ml	0	0.00	0	0.00
Chloride	58	250	mg Cl/l	0	0.00	0	0.00
Conductivity	636	2500	µS/cm	0	0.00	0	0.00
Sulphate	58	250	mg SO4/l	0	0.00	0	0.00
Total Organic Carbon	58	N/A	mg C/L	0	0.00	0	0.00
Gross alpha activity	8	N/A	Bq/l	-	-	-	-
Gross beta activity	8	N/A	Bq/l	-	-	-	-

Note: A supply point is a monitoring point at a water treatment works, service reservoir, blending point or fixed point in distribution where the result of analysis of the water at that point will not change in material respect in its passage to the consumer's tap. Sutton and East Surrey Water monitored for supply point parameters at water treatment works.

Quality of Water in Water Supply Zones (at consumers' taps)							
<i>Number of water supply zones: 20</i>							
Parameter	No. of samples taken	PCV or SCV	Unit of Measure	Samples Contravening PCV or SCV		Water Supply Zones Contravening PCV or SCV	
				No.	%	No.	%
Schedule 1 parameters							
<i>E. coli</i>	1633	0	No./100ml	0	0.00	0	0.00
Enterococci	160	0	No./100ml	0	0.00	0	0.00
1,2-Dichloroethane	160	3	µg/l	0	0.00	0	0.00
Aluminium	425	200	µg Al/l	0	0.00	0	0.00
Antimony	160	5	µg Sb/l	0	0.00	0	0.00
Arsenic	160	10	µg As/l	0	0.00	0	0.00
Benzene	160	1	µg/l	0	0.00	0	0.00
Benzo 3,4 pyrene	160	0.01	µg/l	0	0.00	0	0.00
Cadmium	160	5	µg Cd/l	0	0.00	0	0.00
Chromium	160	50	µg Cr/l	0	0.00	0	0.00
Colour	644	20	Mg/l Pt/Co	0	0.00	0	0.00
Copper	160	2	mg Cu/l	0	0.00	0	0.00
Iron	512	200	µg Fe/l	3	0.59	3	15.00
Lead	160	25	µg Pb/l	1	0.63	1	5.00
Manganese	424	50	µg Mn/l	0	0.00	0	0.00
Nickel	160	20	µg Ni/l	0	0.00	0	0.00
Nitrate	644	50	mg NO3/l	0	0.00	0	0.00
Nitrite	644	0.5	Mg NO2/l	0	0.00	0	0.00
Nitrite/Nitrate formula	644	1	-	0	0.00	0	0.00
Odour	644	N/A	Dil. Num.	1	0.16	1	5.00
Selenium	160	10	µg Se/l	0	0.00	0	0.00
Sodium	160	200	mg Na/l	0	0.00	0	0.00
Sum Tetra- & Trichloroethene	160	10	µg/l	0	0.00	0	0.00
Taste	644	N/A	Dil. Num.	0	0.00	0	0.00
Tetrachloromethane	160	3	µg/l	0	0.00	0	0.00
Total PAH (4 Substances)	160	0.1	µg/l	0	0.00	0	0.00
Total Trihalomethanes	160	100	µg/l	0	0.00	0	0.00
Turbidity	644	4	NTU	0	0.00	0	0.00
Indicator parameters							
Total coliforms	1633	0	No./100ml	1	0.06	1	5.00
Colony Count 48h at 37 C	644	N/A	No./ml	0	0.00	0	0.00
Colony Count 72h at 22 C	644	N/A	No./ml	0	0.00	0	0.00
Residual Disinfectant	1633	N/A	mg/l	-	-	-	-
Ammonium	644	0.5	mg NH4/l	0	0.00	0	0.00
Hydrogen Ion (pH)	644	9.5(6.5min)	pH units	0	0.00	0	0.00

Note:

A water supply zone is a geographically defined area with a population not exceeding 100000.

APPENDIX 3 – IMPROVEMENT PROGRAMMES in force during 2009

Parameter	Water Supply Zones affected	Agreed steps to be taken	Completion date
Undertaking in respect of Metaldehyde in Water Supply Zones Supplied from Bough Beech TW	L03, L04, L08, L24 & L11 (part) will have had non-trivial breaches of the metaldehyde standard L17 could be at risk of exceeding the standard if receiving an input from Bough Beech TW L01 and L19 are not considered as being at risk of exceeding the standard, but they do receive a small input from Bough Beech TW	Assess metaldehyde as a hazard for the Bough Beech Treatment Works supply system;	Completed by 31/10/08
		Submit an action plan that identifies the short, medium and long term mitigating steps;	Completed
		Develop and implement an enhanced monitoring strategy;	Completed
		Confirm the extent of metaldehyde usage in the catchment;	31/08/10
		Review the abstraction regime from the River Eden;	31/08/10
		Investigate the effectiveness and feasibility for cost effective optimisation of existing treatment processes at Bough Beech;	For the duration of the Undertaking
		Provide support to all national, regional and local catchment management initiatives aiming to reduce the amounts of metaldehyde that reaches water sources;	For the duration of the Undertaking
		Support industry investigations into treatment options for metaldehyde;	For the duration of the Undertaking
		Continually appraise the risk of metaldehyde;	Ongoing
		Report to DWI at regular intervals;	Every six months
Provide an interim report to DWI;	31/03/10		
Provide a final report to DWI.	31/03/15		