

ENVIRONMENTAL PROTECTION ACT 1990, SECTION 78E(1)
THE CONTAMINATED LAND (ENGLAND) REGULATIONS 2006
(SI 2006 NO: 1380)

CONTAMINATED LAND (ENGLAND) (AMENDMENT)
REGULATIONS 2012 (SI 2012 NO: 263)

REMEDIATION NOTICE – St Leonard's Court

TO:

1. Redland Minerals Limited of Portland House, Bickenhill Lane, Solihull, Birmingham, B37 7BQ
2. Crest Nicholson Residential Limited of Crest House, Pyrcroft Road, Chertsey, Surrey, KT16 9GN

This Notice is served on you by the Environment Agency (the Agency) pursuant to s.78E of the Environmental Protection Act 1990 (EPA) in relation to contaminated land identified by St Albans City & District Council under s.78B EPA and designated as a special site under s.78C EPA.

A notice of identification of contaminated land dated 20 June 2002 was given to you by St Albans City and District Council of St Peter's Street, St Albans, Hertfordshire AL1 3JE in accordance with s.78B EPA that St Leonard's Court, Sandridge (SLCourt) is contaminated land.

The location and extent of the contaminated land to which this Notice relates are set out in Schedule 1, shown edged red on the plan.

The Agency considers that you are an appropriate person within the meaning of the EPA, by reason of having caused or knowingly permitted the substances, or any of the substances, by reason of which the contaminated land to which this Notice relates is contaminated land, to be in, on or under that land.

The things that you are required to do by way of remediation and the period within which you are required to do each of these things are set out in Schedule 2.

The further matters required to be stated in this Notice are set out in Schedules 3 to 7.

A remediation notice (the First Notice) was confirmed in a modified form by the Secretary of State for Environment, Food and Rural Affairs following appeals made by both parties identified as appropriate persons. The First Notice was appended to his decision letter dated 22 July 2009, and set out a series of things the appropriate persons were required to do by way of remediation and the period

within which they were required to do each of these things. This notice builds on those, particularly Assessment Action F1 as reported in Report F1, *Consideration of the Options and the Best Practicable Technique for the Remediation of the Bromate and Bromide Contamination in Groundwater*, Report dated July 2018 (Report F1). In accordance with 6.12 of the Contaminated Land Statutory Guidance, April 2012 (2012 Guidance) the Agency considers that a further remediation notice is needed for further phases. Actions under the First Notice have not achieved the remediation of the land to the required standard and further action is still necessary to achieve remediation of the land. That more than one notice may be required was acknowledged at paragraph 26 of the Report by the Planning Inspectorate to the Secretary of State for Environment, Food and Rural Affairs dated 23 November 2007 following the Public Inquiry (IR).

Signed.....

Print Name Keith Spence

Position Team Leader, Groundwater and Contaminated Land
Hertfordshire and North London Area
Environment Agency

Date

The Agency's address for the purposes of this Notice is:

Environment Agency
Kings Meadow House
Kings Meadow Road
READING
RG1 8DQ
Tel: +442030258833
Ref: Legal/PC/SLCourt

Contact name for the purposes of this notice is Pete Carty
(peter.carty@environment-agency.gov.uk).

Notes to recipient (these notes do not form part of the Notice):

1. Part 2A of the Environmental Protection Act 1990, which was inserted by section 57 of the Environment Act 1995, establishes a framework for the identification and remediation of contaminated land. Part 2A came into force in England on 1st April 2000. Part 2A contains the structure and main provisions of the regime. The Contaminated Land (England) Regulations 2006 (SI2006/1380) and the Contaminated Land (England) (Amendment) Regulations 2012 (SI2012/263) contain additional details including provisions relating to remediation notices and appeals.

The statutory guidance contains the detailed framework for the various key elements of the regime:

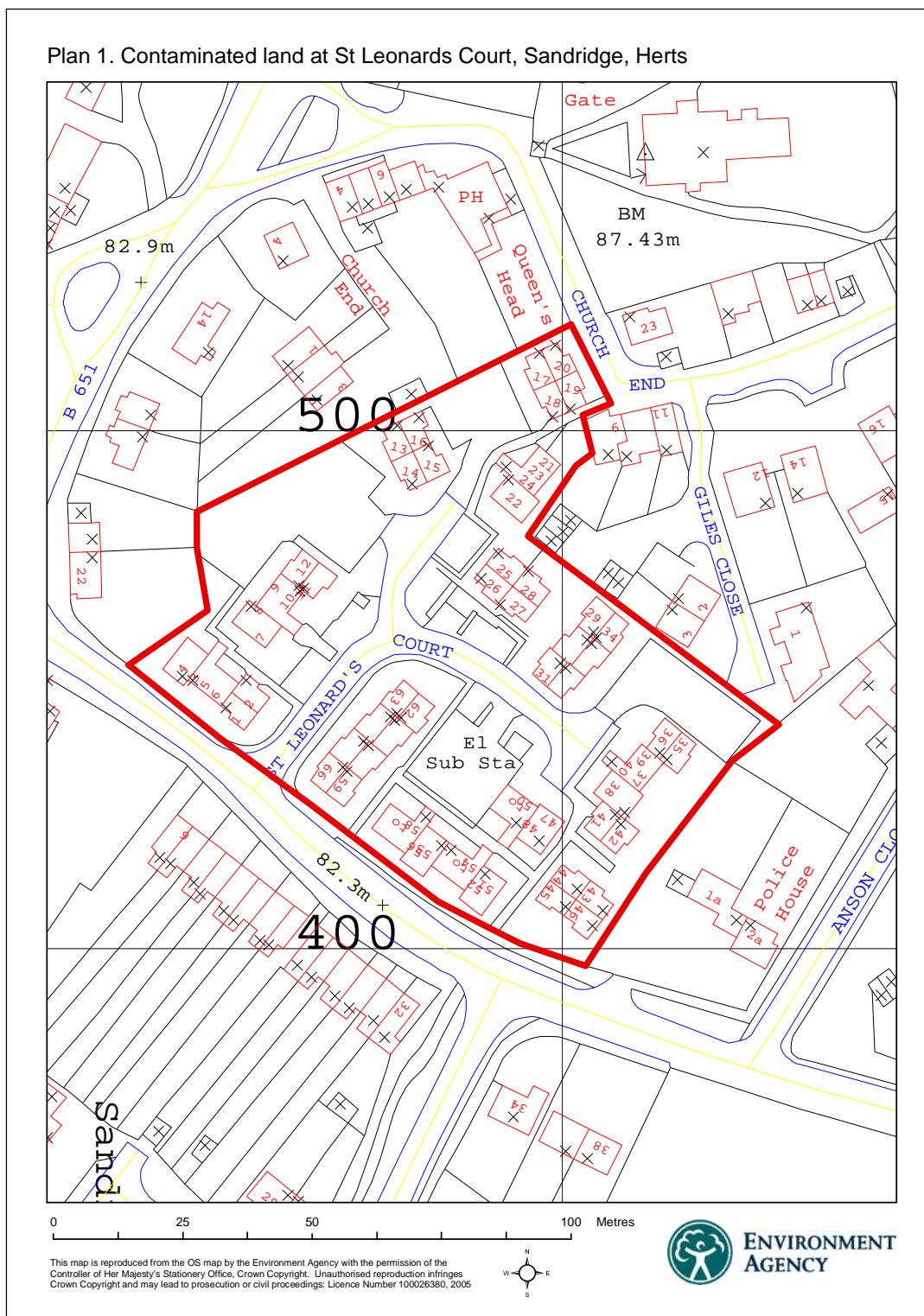
Environment Protection Act 1990: Part 2A, Contaminated Land Statutory Guidance

(<https://www.gov.uk/government/publications/contaminated-land-statutory-guidance>);

2. You can request an independent internal review of our decision to issue this notice. Asking us to review our decision will not affect the time limits within which any statutory appeal must be made. We expect any request to review a regulatory decision to be made within 14 days.

SCHEDULE 1

Location and extent of contaminated land to which this notice relates (Reg 4(1)(b)). The contaminated land is marked by the area edged red shown on the plan annexed hereto and centered on grid reference TL 17086 10460. The current use of SLCourt is residential (paragraph 1(e) of schedule 3 of the Contaminated Land (England) Regulations 2006)



SCHEDULE 2

Remediation requirements and periods (Section 78E(1)EPA)

The final Remedial Treatment Actions which will enable the land and controlled waters to be effectively remediated, to the required standards, still cannot be identified. This is because specific Assessment Actions are needed to characterise in detail the Significant Contaminant Linkages and to collect data to evaluate the likely effectiveness of Remedial Treatment Actions. Schedule 2 identifies a series of Assessment Actions that will enable Remedial Treatment Actions to be specified in one or more subsequent Remediation Notices or Voluntary Remediation Statements. However pollution of controlled waters is continuing. Schedule 2 therefore also includes an interim Remedial Treatment Action which is required to be implemented in a timescale and a form set out in this schedule.

Before carrying out the Actions below the Agency shall be informed, in writing, of the person(s) who will do the work, and of their qualifications and experience. The work shall be done only by persons who have been approved by the Agency, in writing, on the basis of such information, such approval will not be unreasonably withheld.

Definitions:

The following definitions shall apply throughout this notice:

“Water Companies” shall mean Affinity Water and Thames Water Utilities;

“Affinity Water” shall mean Affinity Water Ltd or any successor(s) to its water Undertakings;

“Thames Water Utilities” shall mean Thames Water Utilities Ltd or any successor(s) to its water undertakings.

Assess the feasibility of treating the contaminated groundwater for public water supply or similar quality standards

1. An Assessment Action must be undertaken as below:

- a. Assess the feasibility of treating groundwater from locations within the bromate plume between SLCourt and Bishop's Rise. The locations are: Orchard Garage, Harefield House, Nashes Farm, Hatfield Quarry and Bishop's Rise. Treatment is to use:

- (A) Granular Activated Carbon (GAC)
- (B) Ion Exchange
- (C) Combinations of treatment options, not necessarily limited to A and B.

In each case:

- (i) Assess the before and after treatment concentrations for a range of starting concentrations found within that part of the plume, by bench tests, results of a literature search and/or communications with the water industry, to provide reliable estimates;
- (ii) Assess: residence times; the availability of appropriate businesses where the media, (A) GAC and (B) Ion Exchange resin, can be sent for regular regeneration;
- (iii) Assess plant installation costs for (A), (B) and (C) above;
- (iv) Assess annual running costs for (A), (B) and (C) above.
- (v) Assess the feasibility and cost of running pilot plant scale tests for treatments selected from the results of assessments (i)–(iv) above.

- b. Report on the outcome of (a) above to the Agency in writing.

This Action must be completed within four months of the date of this notice.

Assess locations in the vicinity of Bishop's Rise and up gradient for a treatment plant and connection to the raw water public water supply network

2. An Assessment Action must be undertaken as below:

- a. Assess locations near to Bishop's Rise, Orchard Garage, Harefield House, Nashes Farm and Hatfield Quarry for the installation of a treatment plant which could be installed and operated to allow connection to Affinity's raw water supply network and/or connection to an injection borehole(s), surface water and/or the sewer network.
- b. For each treatment plant location, and each treatment method in 1, estimate costs including:
- (i) Acquiring legal rights to carry out the operation at that location;
 - (ii) Installing treatment equipment;

- (iii) Providing a pipeline connection from the abstraction borehole(s) to the location;
 - (iv) Providing a pipeline connection to a suitable point on the raw supply network which has adequate capacity for the anticipated flow;
 - (v) Recurring annual operations;
 - (vi) Providing and maintaining injection boreholes;
 - (vii) Providing a connection to a suitable sewer.
- c. For each treatment plant location estimate the maximum rate of abstraction that could reasonably be achieved and assess the likely rate of removal of bromate and bromide from the aquifer.
- d. Identify any alternatives to the arrangements outlined in (a)-(c) above that might achieve the same objective of removing bromate and bromide from the aquifer and dealing with the abstracted water.
- e. Report the outcome of (a)-(d) above to the Agency in writing.

This Action must be completed within four months of the date of this notice.

Identify the best practicable technique

3. An Assessment Action must be undertaken as below:

- a. Using the information gained from actions 1 and 2 above:
 - (i) Assess the practicality, effectiveness and durability of each option;
 - (ii) Evaluate including by comparison of the cost benefit analysis for each option, which option amounts to the best practicable technique and provide the reasons for that assessment.
- b. Report the outcome of (a) above to the Agency in writing.

This action must be completed within two months of completion of the reports required under Actions 1 and 2 above.

Assess scavenge pumping from a borehole array at Orchard Garage and other sites

4. An Assessment action must be undertaken as below:

- a. Assess for Orchard Garage, Harefield House, Nashes Farm and Hatfield Quarry, a scavenge pumping trial of one year's duration from borehole(s) to remove bromate and bromide from the plume.
- b. Estimate the costs of:
 - (i) Acquiring legal rights to carry out the operation;
 - (ii) Installing suitable boreholes and pumps, or adapting the existing boreholes and pumps;
 - (iii) Providing a pipeline connection to enable disposal of the abstracted water;
 - (iv) Recurring annual operating and other costs, excluding any costs related to treatment of the water to remove bromate and bromide, or reduce bromate to bromide, and the chemical loading element of any trade effluent or other charges.
- c. Estimate the maximum rate of abstraction that could be achieved within the constraints above, and assess whether this is likely to be the optimal rate to maximise removal of bromate and bromide: a) from the aquifer, and b) from the pumping trial location(s).
- d. Assess low flow rate scavenge pumping from selected existing boreholes which show high contaminant concentrations at SLCourt or alternative locations proposed to, and approved by the Agency in writing.
- e. Identify any alternatives to the arrangements outlined in (a)-(d) above that would achieve the same objective of removing bromate and bromide from the aquifer.
- f. Report the outcome of (a)-(e) above to the Agency in writing.

This action must be completed within four months of the date of this Notice.

Cost of scavenge pumping from an array of boreholes at Orchard Garage and other sites

5A. An Assessment Action must be undertaken as below:

- a. In relation to Action 4 above for Orchard Garage, Harefield House, Nashes Farm and Hatfield Quarry, estimate:
 - (i) The cost of installing any treatment plant required to reduce bromate to bromide;

- (ii) Annual operating costs associated with the treatment plant, including any fees for an associated mobile treatment permit, and for a longer term Environmental Permit;
- (iii) Annual trade effluent charges relating to discharge of the products of treatment to reduce bromate to bromide.

b. Report the outcome of (a) above to the Agency in writing.

This action must be completed within four months of the date of this Notice.

5B. An Assessment Action must be undertaken as below:

- a. In relation to Action 4 above for Orchard Garage, Harefield House, Nashes Farm and Hatfield Quarry estimate:
 - (i) The cost of installing any treatment plant required to treat bromate and bromide;
 - (ii) Annual operating costs associated with the treatment plant, including any fees for an associated mobile treatment permit, and for a longer term Environmental Permit for treatment;
 - (iii) Cost of constructing a pipeline to the point of discharge;
 - (iv) Cost of constructing discharge boreholes;
 - (v) Environmental Permit charges for discharge of treated groundwater.

b. Report the outcome of (a) above to the Agency in writing.

This action must be completed within four months of the date of this Notice.

Estimate costs of discharge and disposal of scavenged groundwater

6. An Assessment Action must be undertaken as below:

- a. In relation to action 4 above, for Orchard Garage, Harefield House, Nashes Farm and Hatfield Quarry, estimate the annual costs relating to the discharge and disposal of bromide-contaminated water to the foul sewer and/or by some other means, excluding bromide resulting from the reduction of bromate.

b. Report the outcome of (a) above to the Agency in writing.

This action must be completed within four months of the date of this notice.

Report on one year's scavenge pumping trial

7. An Assessment Action must be undertaken as below:

- a. Carry out a review of the findings of actions 1, 4, 5A, 5B, and 6, and using the results from action 1.
- b. Based on the review, proposals for a scavenge pumping trial shall be submitted in writing, for approval in writing within five months of the date of this notice.
- c. Carry out the agreed scavenge pumping, to find the most effective means of removing bromate and bromide, in line with an abstraction licence (if required), and dispose of the pumped water arising from the trial without adverse environmental effects, unless otherwise agreed with the Agency in writing.
- d. The outcome of the trial shall be reported to the Agency in writing.

This action must be completed within fourteen months of approval by the Agency under (7b), unless otherwise agreed in writing by the Agency.

Report F1 update

8. An Assessment Action must be undertaken as below:

- a. Taking account of the information gained from actions 1-7 above and the information gained from actions taken under the First Notice:
 - (i) Assess or update the practicality, effectiveness and durability of each option, individually and/or in combination, as appropriate;
 - (ii) Evaluate, including by comparison of the cost benefit analysis for each, which option individually and/or in combination amounts to the best practicable technique and provide the reasons for that assessment;
 - (iii) Update and refine the conceptual model;
 - (iv) Assess the effectiveness of the scavenge pumping at Bishop's Rise and propose improvements to maximise hydraulic containment and contaminant removal.
- b. Report the outcome of (a) above to the Agency in writing by means of an update of Report F1.

This action must be completed within two months of completion of the report required under action 7 above.

Groundwater monitoring of the bromate and bromide plumes

9. A Monitoring Action must be undertaken as below:

- a. Provide quality-assured monitoring data at the locations identified in Table 1 below for the parameters, and at the frequencies, listed in Table 2 below, unless otherwise agreed in writing with the Agency.

Table 1. Locations to be monitored under Monitoring Action 9

Location reference	Site name	Type ¹	NGR*
080	MW2, St Leonards Court	M	TL 17070 10455
223	SLC10, St Leonard's Court	M	TL 17134 10440
082	MW4, St Leonard's Court	M	TL 17121 10427
081	MW3, St Leonards Court	M	TL 17096 10435
083	MW5, St Leonards Court	M	TL 17074 10411
216	SLC03, St Leonards Court	M	TL 17080 10475
028	Orchard Garage	P	TL 17500 10300
028b	Orchard Garage MJCA BH1	M	TL 17507 10293
028c	Orchard Garage MJCA BH2	M	TL 17510 10305
028d	Orchard Garage MJCA BH3	M	TL 17561 10316
225	GW12, top of House Lane	M	TL 17152 10365
226	GW13, Harefield House	M	TL 17748 10035
227	GW14, beside Jersey Farm pond	M	TL 17754 09706
019	Nashes Farm	P	TL 18000 09600
166	Hatfield Quarry, WPG16	M	TL 20241 09741
162	Hatfield Quarry WM3B	M	TL 19283 08858
061	Hatfield Quarry WM4	M	TL 19661 09103
062	Hatfield Quarry WM5	M	TL 20175 09499
064	Hatfield Quarry WM7	M	TL 19900 09275
066	Hatfield Quarry WM10, lower level (P2)	M	TL 20051 09393
402	Comet Way BH5	M	TL 21760 08911
002	Hatfield Business Park	P	TL 21350 09795
001	Hatfield PWS BH	PWS	TL 22000 07700

Notes to Table 1:

*Precise locations of abstractions are masked

¹M – monitoring borehole, P – private water supply, PWS – public water supply

Table 2. Parameters to be measured and frequency of measurement

Controlled waters	Frequency	Parameters to be measured (see Table 3 for abbreviations & symbols)
Groundwater in, or in continuity with, the Chalk aquifer	4 times per calendar year* in January, April, July, & October	pH, EC, Cl, Na, BrO ₃ , Br, Temperature, DO, Redox potential, Water level AOD, Depth to base of borehole where feasible.
Surface waters	4 times per calendar year* in January, April, July, & October	pH, EC, Cl, Na, BrO ₃ , Br.

Note to Table 2: * pro rata per part of calendar year

- b. Update the Method Statement completed for Action G of the First Notice so that it is in accordance with relevant British Standards, and paragraph (c) below, unless otherwise agreed in writing by the Agency. Specify in the Method Statement the precision, bias and limit of detection to be achieved for each parameter monitored.

Submit the Method Statement to the Agency for approval prior to sampling commencing.

- c. Analysis of samples is to be carried out by a laboratory accredited to ISO/IEC 17025:2017 and using United Kingdom Accreditation Service accredited methods, performance-tested in accordance with Water Research Centre plc (WRc) publication NS30, '*Analytical Quality Control in the Water Industry*' (WRc Report NS30, June 1989, ISBN 0902156853). The laboratory will operate a system of routine analytical quality control, preferably based on the use of control charts (see WRc Report Ref: Co4239 '*Quality Control Charts in Routine Analysis*'). Samples must be analysed within 72 hours of collection.
- d. Results are to be reported to the Agency no more than six weeks after sampling and measurement, in a summarised format to be agreed in writing by the Agency, accompanied, where relevant, by laboratory certificates of analysis, which must state the associated measurement uncertainty.

This action must be started within three months of the date of this notice and continued for ten years, or such shorter period as may be agreed in writing by the Agency.

Groundwater and surface water monitoring of the bromate plume

10. A Monitoring Action must be undertaken as below:

- a. Provide quality-assured monitoring data and report it to the Agency quarterly within six weeks of sampling in January, April, July and October at the locations identified in Table 3 below for the parameters, and at the frequencies, in Table 2 above and to the detection limits, precision and bias specified in the approved Method Statement referred to in Action 9b above, unless otherwise agreed in writing with the Agency.
- b. Procedures for sampling, sample handling and sample analysis are to be as specified for Action 9 above.

Table 3. Locations to be monitored under Monitoring Action 10

Location reference	Site name	Type ¹	NGR*
020	Cap's Cottages	P	TL 18400 09900
018	Fairfolds Farm	P	TL 18800 10100
059	Hatfield Quarry, WM1	M	TL 18800 08395
375	Symonshyde Quarry, W29	M	TL 2129010670
378	Symonshyde Quarry, W35	M	TL 20370 10445
379	Symonshyde Quarry, W36	M	TL 21100 10500
167	The Old Cottage, new bh	P	TL 21900 10700
191	M7, Mill Green Borehole	M	TL 23716 09780
005	Hatfield and London Country Club Workshop	P	TL 28200 08500
265	Park Street, Old Hatfield	M	TL 23410 08778
195	M10, Sleafshyde OBH	M	TL 20251 06887
010b	BH by Block 3 Glinwell's Nursery	P	TL 19500 07400
041	Ellenbrook @ North Orbital Road (A414)	S	TL 20882 07164
292	R Lee, Water Hall gauging station	S	TL 29967 09978
101	River Lee downstream from Essendon Pumping Station (Holwell Bridge)	S	TL 27641 09814
142	Roestock P.S. (raw water sampling point)	PWS	TL 21000 05900
141	Tyttenhanger P.S. (raw water sampling point)	PWS	TL 19800 05700
143	Essendon P.S. (raw water sampling point)	PWS	TL 27300 09800
144	Waterhall P.S. (raw water sampling point)	PWS	TL 29400 09500
298	Broadmeads PWS	PWS	TL 35300 13900
295	Amwell End PWS	PWS	TL 35800 13900
296	Amwell Hill PWS	PWS	TL 36700 12700
297	Amwell Marsh PWS	PWS	TL 37600 12300
301	Rye Common PWS	PWS	TL 37900 11100
MR	Middlefield Road PWS	PWS	TL 37400 09500
300	Hoddesdon PWS	PWS	TL 37800 08900
299	Broxbourne PWS	PWS	TL 37300 07500
302	Turnford PWS	PWS	TL 36000 04400

Notes to Table 3:

*Precise locations of abstractions are masked

¹M – monitoring borehole, P – private water supply, PWS – public water supply, S – surface water

This action must be started within three months of the date of this notice and continued for ten years, or such shorter period as may be agreed in writing by the Agency.

Continuation of scavenge pumping at Bishop's Rise

11. A Remedial Treatment Action must be undertaken in accordance with the requirements set out below unless varied in writing by the Agency:

- a. Continue to procure the existing scavenge pumping and treatment programme being carried out from the Affinity Water existing abstraction boreholes at Bishops Rise, Hatfield (Bishops Rise). For the purposes of this action the material features of the existing scavenge pumping and treatment programme are as follows:
- (i) Maintaining abstraction from Bishops Rise source. Actual abstraction rates are maximised on a day by day basis, taking into account constraints imposed by the treatment process, operational considerations and the capacity of the receiving sewer system. Rainfall events have an impact on the attainable flows. Maximum rates of abstraction are 9 MI/d (the licensed amount), with an average annual daily target of 6 MI/d.
 - (ii) Dosing the abstracted water with ferrous chloride or an alternative suitable reducing agent of reasonable cost to reduce bromate in the water to bromide, if required.
 - (iii) Using a dedicated pipeline to remove the abstracted water to a trunk sewer system managed by Thames Water Utilities Ltd.
 - (iv) Monitoring water levels in the receiving sewer manhole and ensure that the discharge has no detrimental impacts on the sewer network.
- b. Continue to procure monitoring, or carry out monitoring in agreement with the Water Companies, as follows:
- (i) Monitoring at the locations and frequencies in Table 5 below for the parameters in Table 2 above and to the detection limits, precision and bias set out in the Method Statement specified in Action 9b above, unless otherwise agreed in writing by the Agency.
 - (ii) Monitoring of bromate and bromide weekly, or at such other frequency as may be agreed in writing by the Agency, in the final effluent at the receiving sewage treatment works, Blackbirds and Maple Lodge.
 - (iii) Reporting of the results of monitoring, under 11a(iv) to 11b(ii) above, to the Agency and in accordance with a scheme of reporting that has been agreed in writing by the Agency.
- c. In connection with this action the following definitions shall apply:
- (i) "procure" shall mean payment quarterly in arrears as follows:
 - 1. To Affinity Water, all the costs solely attributable to pumping and treatment of bromate-contaminated groundwater, and associated costs of monitoring (at the locations and frequencies designated for Affinity Water in Table 5 below) and management.
 - 2. To Thames Water Utilities Ltd, all costs solely attributable to disposal of the treated groundwater by foul sewer and associated costs of monitoring (at the

- locations and frequencies designated for Thames Water Utilities Ltd in Table 5 below) and management.
- (ii) “Water Companies” shall mean Affinity Water and Thames Water Utilities Ltd or any successor(s) to their respective water undertakings.
 - (iii) “Required Concentration Standards” shall (other than those relating to sewage effluent, and unless otherwise agreed by the Agency) mean, in relation to each location in Table 4 below:
 - 1. For bromate less than or equal to 5 µg/l.
 - 2. For bromide less than or equal to 500 µg/l.
 - (iv) “Relevant Abstraction Points” shall mean the public water supply sources and associated monitoring points, other than those relating to sewage effluent, listed in Table 4 below.
- d. This action must be commenced from the date of this notice. It must be continued for the period defined by whichever is the shortest of (i) or (ii) or (iii) below:
- (i) Until an alternative Remedial Treatment scheme has been approved by the Agency, implemented and shown to be effective in controlling concentrations of bromate at the Relevant Abstraction Points without any associated adverse environmental consequences;
 - (ii) Until the Appropriate Person(s) demonstrate that the Required Concentration Standards have been achieved and can be maintained in the raw water abstracted from all the Relevant Abstraction Points, with the exception of Bishops Rise, without the continuation of such pumping at Bishops Rise;
 - (iii) Ten years, or such shorter period as may be agreed in writing by the Agency.

Table 4. Locations to be monitored in connection with remedial treatment action 11

Loc ref	Site name	Type	NGR	Designation ¹ in relation to payments for monitoring	Frequency
143	Essendon PWS	PWS	TL 27300 09800	Affinity	Weekly
001	Bishops Rise PWS	PWS	TL 22000 07700	Affinity	Weekly
298	Broadmeads PWS	PWS	TL 35300 13900	TWUL	Fortnightly
295	Amwell End PWS	PWS	TL 35800 13900	TWUL	Fortnightly
296	Amwell Hill PWS	PWS	TL 36700 12700	TWUL	Fortnightly
297	Amwell Marsh PWS	PWS	TL 37600 12300	TWUL	Fortnightly
301	Rye Common PWS	PWS	TL 37900 11100	TWUL	Fortnightly
MR	Middlefield Road PWS	PWS	TL 37400 09500	TWUL	Fortnightly
300	Hoddesdon PWS	PWS	TL 37800 08900	TWUL	Fortnightly
299	Broxbourne PWS	PWS	TL 37300 07500	TWUL	Fortnightly
302	Turnford PWS	PWS	TL 36000 04400	TWUL	Fortnightly
103	Chadwell Spring	S	TL 34997 13683	TWUL	Fortnightly
382	Lynch Mill Spring	S	TL 37711 08519	TWUL	Monthly
288	Stream from Arkley Hole spring, upstream of confluence with Lee	S	TL 28976 10021	Affinity	Monthly
GB	River Colne at Green Bridge	S		Affinity	Monthly
ML	Maple Lodge sewage treatment works final effluent	E		TWUL	Weekly
BB	Blackbirds sewage treatment works final effluent	E		TWUL	Weekly
S = surface water, PWS = public water supply, E = sewage effluent					

Note to Table 5: ¹Affinity - Affinity Water, TWUL - Thames Water Utilities Ltd

Annual Reports

12. An Assessment Action must be undertaken as below:

Provide annual progress reports to the Agency in writing to include reviews of:

- (i) the effectiveness of remediation;
- (ii) the evolution of the plumes; and
- (iii) the need for further active measures.

This action must be completed within 14 months of the date of this notice and every 12 months thereafter, unless otherwise agreed in writing with the Agency.

SCHEDULE 3

Particulars of significant pollution of controlled waters and particulars of substances (Regulation 4(1)(e) and (f))

The particulars of the contaminant linkages that form the basis of the determination of land as Contaminated Land and to which this Notice relate are set out below:

Contaminant linkage number	Contaminant	Source location	Pathway	Receptor	Description
1	Bromate	Soil at land identified in Schedule 1	Unsaturated zone and groundwater contained in, or in hydraulic continuity with the Chalk aquifer	Controlled waters: Groundwater contained in, or in hydraulic continuity with the Chalk aquifer.	Significant Pollution of controlled waters is being caused.
2	Bromide	Soil at land identified in Schedule 1.	Unsaturated zone and groundwater contained in, or in hydraulic continuity with the Chalk aquifer	Controlled waters: Groundwater contained in, or in hydraulic continuity with the Chalk aquifer.	Significant Pollution of controlled waters is being caused.

SCHEDULE 4

Reasons for the Environment Agency's decision on remediation requirements (Regulation 4(1)(g))

The final Remedial Treatment Actions which will enable the land and controlled waters to be effectively remediated, to the required standards, cannot yet be identified. This is because specific Assessment Actions are needed to characterise in detail the SCLs and to collect data to evaluate the likely effectiveness of Remedial Treatment Actions. Schedule 2 identifies a series of Assessment Actions that will enable Remedial Treatment Actions to be specified in one or more subsequent Remediation Notices. However pollution of controlled waters is continuing. Schedule 2 therefore also includes an interim Remedial Treatment Action which is required to continue to a timescale and in a form set out in Schedule 2.

SCHEDULE 5

Appropriate persons (Section 78E(3)EPA and Regulation 4(1)(h),(i) and (j))

The following are the appropriate persons responsible for all of the assessment actions, monitoring actions and the remedial treatment action described in Schedule 2 of this Notice for the following reasons

1. Redland Minerals Limited of Portland House, Bickenhill Lane, Solihull, Birmingham, B37 7BQ.

Although they caused and knowingly permitted bromide to be in the land and are thereby responsible for the bromide SCL, at least in part, they are partly excluded from the bromide SCL by exclusion test 3, "sold with information" because Crest Nicholson Residential Limited bought the land with the broad measure of the presence of the pollutant.

They are also partly responsible for the bromate SCL by virtue of causing the pollutant to be in the land.

2. Crest Nicholson Residential Limited of Crest House, Pyrcroft Road, Chertsey, Surrey, KT16 9GN.

They are responsible for bromide SCL by virtue of:

- a) Causing and knowingly permitting the pollutant to be in the land; and
- b) The other member of the liability group for this SCL, namely Redland Minerals Limited, are partly excluded by virtue of exclusion test 3 "sold with information" because Crest Nicholson Residential Limited bought the land when they were in possession of information that would reasonably allow them to be aware of the presence on and in the land of bromide and the broad measure of that presence, at that time, and Redland Minerals Limited did nothing material to misrepresent the implications of that presence.

They are also partly responsible for the bromate SCL by virtue of causing the pollutant to be in the land.

Proportion of Overall Costs to be borne:

Redland Minerals Limited:

Redland Minerals Limited bear 85% of costs associated with the bromate significant contaminant linkage (SCL) and 45% of costs associated with the bromide SCL that is:

Schedule 2 Actions 1, 2, 3, 5A, 10 and 11 – 85% of costs of these Single Linkage Actions as they are associated with the bromate SCL only.

Schedule 2 Action 6 – 45% of costs of this Single Linkage Action as this is associated with the bromide SCL only.

Schedule 2 Actions 4, 5B, 7, 9 – 65% of the costs of these Shared Common Actions. The Actions are referable to both bromide and bromate and are Actions which would have been part of the remediation package for each of the bromide and the bromate SCLs had they been addressed separately. The cost is therefore shared equally between the bromate and bromide SCLs.

Schedule 2 Actions 8, 12 – 65% of the cost of this Shared Collective Action. The Actions are referable to both bromide and bromate; however, if taken individually, the actions for each SCL would not be identical. In particular some locations may be referable to bromate only and some to bromide only. The hypothetical costs of each are likely to be the same. It is therefore considered that Redland Minerals Limited are responsible for 85% of 50% and for 45% of 50% of the cost of the Action as a whole.

Crest Nicholson Residential plc:

Crest Nicholson Residential plc bear 15% of costs associated with the bromate SCL and 55% of costs associated with the bromide SCL that is:

Schedule 2 Actions 1, 2, 3, 5A, 10 and 11 – 15% of costs of these Single Linkage Actions as they are associated with the bromate SCL only.

Schedule 2 Action 6 – 55% of costs of this Single Linkage Action as it is associated with the bromide SCL only.

Schedule 2 Actions 4, 5B, 7, 9 – 35% of the costs of these Shared Common Actions. The Actions are referable to both bromide and bromate and are actions which would have been part of the remediation package for each of the bromide and the bromate SCLs had they been addressed separately. The cost is therefore shared equally between the bromate and bromide SCLs.

Schedule 2 Actions 8, 12 – 35% of the costs of this Shared Collective Action. The Actions are referable to both bromide and bromate; however, if taken individually, the actions for each SCL would not be identical. In particular some locations may be referable to bromate only and some to bromide only. The hypothetical costs of each are likely to be the same. It is therefore considered that Crest Nicholson Residential Limited are responsible for 15% of 50% and for 55% of 50% of the cost of the Action as a whole.

SCHEDULE 6

Names and addresses of owners and occupiers of the contaminated land to which this notice relates and persons whose consent is required for remediation purposes (Regulation 4(1)(k) and (l))

The owners and occupiers of the contaminated land are:

Freehold owner of land: Beechgrove (Sandridge) Management Limited

The names and addresses of persons whose consent is required under section 78G(2) EPA are:

Director, Beechgrove (Sandridge) Management Ltd, St Leonards Court, House Lane, Sandridge, St Albans, Herts AL4 9UY
Landowner for Harefield, Church End, Sandridge, St Albans, Herts
Landowner for Orchard Garage, c/o Bidwells, John Ormond House, 899, Silbury Boulevard, Milton Keynes, MK9 3XJ
Principal Land Agent, Hertfordshire County Council, County Hall, Pegs Lane, Hertford, SG13 8DN
Valuer and Estates Surveyor, St. Albans City & District Council, Civic Centre, St Peters Street, St Albans, AL1 3JE
Landowner, Nashes Farm, Sandridge, St Albans, Herts
Landowner, Green Lanes, Hatfield, Herts
Manager, Essendon Country Club, Bedwell Park, Essendon, Hatfield, Herts AL9 6HN
Chief Executive, Estate Office, Hatfield Park, Hatfield, Herts AL9 5NQ
Estates and Development Manager, RMC Materials Ltd, Cemex UK Operations, Cemex House, Evreux Way, Rugby, Warwickshire CV21 2DT
Manager, Glinwell plc, Hatfield Road, Smallford, nr St Albans, Herts AL4 0HD
Landowner, Woolmers Park, Letty Green, Herts SG14 2NX
Solicitor, Affinity Water, Tamblin Way, Hatfield, Herts, AL10 9EZ
Company Secretary, Thames Water Utilities Ltd, Clearwater Court, Vastern Road, Reading, Berks RG1 8DB
Landowner for Cap's Cottage, Capps Farmhouse, Sandridge, St Albans, Herts
Manager, Arlington, 1230 Parkview, Arlington Business Park, Theale, Berks, RG7 4SA
Executive Director, Public Protection, Planning & Governance, Welwyn Hatfield Borough Council, The Campus, Welwyn Garden City, AL8 6AE

SCHEDULE 7

(Offences, penalties and appeals)

Offences, Penalties and Appeals (Regulation 4(1)(n) and (o), Regulation 4(2)(a), (b) and (c))

Offences and penalties (section 78M EPA)

Under section 78M EPA, it is an offence to fail, without reasonable excuse, to comply with any of the requirements of this Notice.

A person who commits such an offence is liable to the following penalties:

Where the contaminated land to which the notice relates is “industrial, trade or business premises” as defined in section 78M(6) EPA, on summary conviction, to a fine not exceeding £20,000 or such greater sum as the Secretary of State may from time to time by order substitute and to a further fine of an amount equal to one-tenth of that sum for each day on which the failure continues after conviction of the offence and before the enforcing authority has begun to exercise its powers by virtue of section 78N(3)(c) EPA.

Where the contaminated land to which the notice relates is not “industrial, trade or business premises”, on summary conviction, to a fine not exceeding level 5 on the standard scale and to a further fine of an amount equal to one-tenth of level 5 on the standard scale for each day on which the failure continues after conviction of the offence and before the enforcing authority has begun to exercise its powers by virtue of section 78N(3)(c).

Right of appeal (section 78L, EPA)

You have a right of appeal against this Notice under section 78L EPA. If you wish to appeal you must do so within the period of twenty-one days, beginning with the day on which the notice is served: if it was served by a local authority, to a magistrates’ court; or

Appeals to Secretary of State (Regulation 8 England)

Regulation 8 states the following:

- (1) An appeal to the Secretary of State against a remediation notice must be made to him by a notice (“notice of appeal”) which states-
 - (a) The name and address of the appellant
 - (b) The grounds on which the appeal is made; and

- (c) Whether the appellant wishes the appeal to be in the form of a hearing or to be disposed of on the basis of written representations.
- (2) The appellant must, at the same time as he serves a notice of appeal on the Secretary of State, -
- (a) serve a copy of it on-
 - (i) the enforcing authority;
 - (ii) any person named in the remediation notice as an appropriate person;
 - (iii) any person named in the notice of appeal as an appropriate person; and
 - (iv) any person named in the remediation notice as the owner or occupier of the whole or any part of the land to which the notice relates;
 - (b) serve on the Secretary of State a statement of the names and addresses of any persons falling within paragraph (ii), (iii) or (iv) of sub-paragraph (a); and
 - (c) serve a copy of the remediation notice to which the appeal relates on the Secretary of State and on any person named in the notice of appeal as an appropriate person who is not so named in the remediation notice
- (3) If the appellant wishes to abandon an appeal, he must do so by notifying the Secretary of State in writing. The appeal is then treated as abandoned with effect from the date on which the Secretary of State receives that notification.
- (4) The Secretary of State may refuse to permit an appellant to abandon his appeal against a remediation notice where the notification by the appellant in accordance with paragraph (3) is received by the Secretary of State at any time after the Secretary of State has notified the appellant in accordance with regulation (11)(1) of a proposed modification of that notice.
- (5) Where an appeal is abandoned, the Secretary of State must give notice of the abandonment to any person on whom the appellant was required to serve a copy of the notice of appeal.

Appeals to the Secretary of State should be submitted to the Planning Inspectorate. Their current address and telephone number is: The Planning Inspectorate, Room 3/13, Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 SPN Tel: 0303 444 5000.

Grounds of Appeal (Section 78L EPA and Regulation 7)

- (1) The grounds of appeal against a remediation notice pursuant to section 78L EPA are any of the following:-

- (a) that, in determining whether any land to which the notice relates appears to be contaminated land, the local authority-
 - (i) failed to act in accordance with guidance issued by the Secretary of State under section 78A(2), (5) or (6); or
 - (ii) whether by reason of such a failure or otherwise, unreasonably identified all or any of the land to which the notice relates as contaminated land;
- (b) that, in determining a requirement of the notice, the enforcing authority-
 - (i) failed to have regard to guidance issued by the Secretary of State under section 78E(5); or
 - (ii) whether by reason of such a failure or otherwise, unreasonably required the appellant to do any thing by way of remediation;
- (c) that the enforcing authority unreasonably determined the appellant to be the appropriate person who is to bear responsibility for any thing required by the notice to be done by way of remediation;
- (d) subject to paragraph (2) below, that the enforcing authority unreasonably failed to determine that some person in addition to the appellant is an appropriate person in relation to any thing required by the notice to be done by way of remediation;
- (e) that, in respect of any thing required by the notice to be done by way of remediation, the enforcing authority failed to act in accordance with guidance issued by the Secretary of State under section 78F(6);
- (f) that, where two or more persons are appropriate persons in relation to any thing required by the notice to be done by way of remediation, the enforcing authority-
 - (i) failed to determine the proportion of the cost stated in the notice to be the liability of the appellant in accordance with guidance issued by the Secretary of State under section 78F(7); or
 - (ii) whether, by reason of such a failure or otherwise, unreasonably determined the proportion of the cost that the appellant is to bear;
- (g) that service of the notice contravened a provision of subsection (1) or (3) of section 78H (restrictions and prohibitions on serving remediation notices) other than in circumstances where section 78H(4) applies;
- (h) that, where the notice was served in reliance on section 78H(4) without compliance with section 78H(1) or (3), the enforcing authority could not reasonably have taken the view that the contaminated land in question was in such a condition by reason

of substances in, on or under the land, that there was imminent danger of serious harm, or serious pollution of controlled waters, being caused;

- (i) that the enforcing authority has unreasonably failed to be satisfied, in accordance with section 78H(5)(b), that appropriate things are being, or will be, done by way of remediation without service of a notice;
- (j) that any thing required by the notice to be done by way of remediation was required in contravention of a provision of section 78J (restrictions on liability relating to the pollution of controlled waters);
- (k) that any thing required by the notice to be done by way of remediation was required in contravention of a provision of section 78K (liability in respect of contaminating substances which escape to other land);
- (l) that the enforcing authority itself has power, in a case falling within section 78N(3)(b), to do what is appropriate by way of remediation;
- (m) that the enforcing authority itself has power, in a case falling within section 78N(3)(e), to do what is appropriate by way of remediation;
- (n) that the enforcing authority, in considering for the purposes of section 78N(3)(e), whether it would seek to recover all or a portion of the cost incurred by it in doing some particular thing by way of remediation-
 - (i) failed to have regard to any hardship which the recovery may cause to the person from whom the cost is recoverable or to any guidance issued by the Secretary of State for the purposes of section 78P(2); or
 - (ii) whether by reason of such a failure or otherwise, unreasonably determined that it would decide to seek to recover all of the cost;
- (o) that, in determining a requirement of the notice, the enforcing authority failed to have regard to guidance issued by the Environment Agency under Section 78V(1);
- (p) that a period specified in the notice within which the appellant is required to do anything is not reasonably sufficient for the purpose;
- (q) that the notice provides for a person acting in a relevant capacity to be personally liable to bear the whole or part of the cost of doing any thing by way of remediation, contrary to the provisions of section 78X(3)(a);

- (r) that service of the notice contravened a provision of section 78YB (which makes provision regarding the interaction of Part 2A EPA with other enactments), and – in a case where
 - (i) subsection (1) of that section is relied on, that it ought to have appeared to the enforcing authority that the powers of the Environment Agency under section 27 might be exercised;
 - (ii) subsection (3) of section 78YB is relied on, that it ought to have appeared to the enforcing authority that the powers of a waste regulation authority or waste collection authority under section 59 might be exercised; or
 - (s) that there has been some informality, defect or error in, or in connection with, the notice, in respect of which there is no right of appeal under the grounds set out in sub-paragraphs (a) to (r) above.
- (2) A person may only appeal on the ground specified in paragraph (1)(d) above in a case where-
- (a) the enforcing authority has determined that he is an appropriate person by virtue of subsection (2) of section 78F and he claims to have found some other person who is an appropriate person by virtue of that subsection;
 - (b) the notice is served on him as the owner or occupier for the time being of the contaminated land in question and he claims to have found some other person who is an appropriate person by virtue of that subsection; or
 - (c) the notice is served on him the person as the owner or occupier for the time being of the contaminated land in question, and he claims that some other person is also an owner or occupier for the time being of the whole or part of that land.
- (3) If and in so far as an appeal against a remediation notice is based on the ground of some informality, defect or error in, or in connection with, the notice, the Secretary of State must dismiss the appeal if he is satisfied that the informality, defect or error was not a material one.

Suspension of remediation notice upon appeal (Regulation 12)

Once an appeal has been duly made, the relevant remediation notice is suspended until the appeal is finally determined or is withdrawn (abandoned) by you. “Duly made” for this purpose means that an appeal must be made within the time limit, and in accordance with the Regulations.