

Our Ref: DWI 116/08 (CPEO/08/02)

Date: 08 July 2011

Mr G Butler  
Asset Management Director  
Northern Ireland Water Ltd  
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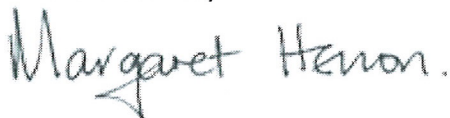
Dear George

**KILLYLANE WATER SUPPLY AREA – NOTICE ISSUED UNDER SECTION 31(3)(A):  
WATER AND SEWERAGE SERVICES (NORTHERN IRELAND) ORDER 2006 –  
COMPLETION OF UNDERTAKINGS**

- 1.1 The Inspectorate has reviewed the undertakings associated with THM non-compliances in the Killylane water supply area, details of which are listed in the Notice of Acceptance of Undertakings we issued on 7 November 2008.
- 1.2 The Inspectorate accepts that the work detailed within these specific undertakings has been completed by NI Water, as detailed in Annex A. The Inspectorate will therefore close the Consideration of Provisional Enforcement Order (CPEO/08/02) for this works and associated water supply area.
- 1.3 NI Water, in complying with the undertaking 3(ii), was required to review the options and appropriateness of the treatment methodology required to treat Killylane raw water. The Inspectorate has been advised by NI Water that a report 'Killylane WTWs – Asset Performance and Condition Survey', prepared by Jacobs UK Limited, is now complete. NI Water should now consider appropriate recommendations relating to quality and process issues presented in the report and incorporate these in the ongoing review of its Drinking Water Safety Plan for the works.

- 1.4 NI Water should provide an updated Regulation 28 (Risk Assessment) report to the Inspectorate on completion of this review.
- 1.5 Any enquiries about this letter should be addressed to David O'Neill (028 9056 9243).
- 1.6 Copies of this letter and attached undertakings are being sent to the Director of Water Policy Division, DRD; Director of Environmental Protection (Northern Ireland Environment Agency); the Director of Public Health; Consultants in Health Protection; the Chief Environmental Health Officer (DHSSPS); Chief Environmental Health Officers, district councils; Director of Water Regulation, NIAUR; and Head of Water, CCNI.
- 1.7 Please acknowledge receipt of this letter, by e-mail, to:  
DWI@doeni.gov.uk

Yours sincerely



Margaret Herron

**Chief Inspector of Drinking Water  
Drinking Water Inspectorate**

Enc: Annex 1: Killylane (CPEO/08/02) – Completion of Undertakings

cc: David O'Neill

## Annex 1: Killylane (CPEO/08/02) - Completion of Undertakings

Reference Number	Location	Parameter	Notice of Acceptance Point	Additional Information	NI Water Action
CPEO/08/02 Issued 7/11/08	Killylane Water Supply Area	THMs recurring failures.	3 (i)	DWSP: water treatment works risk assessment scores.	Water treatment works risk assessment scores completed and draft DWSP provided to the Inspectorate on 23/03/2009. <b>Action Status: Completed</b>
			3 (ii)	Undertake a review of options and appropriateness of the treatment methodology required to treat Killylane raw water.	AO approval granted for a treatment specialist to carry out an assessment. Invitation to tender issued on 7 September 2009. Contract awarded to Jacobs. Data gathering and site investigations commenced on 26/10/2009 Interim Report produced 31/12/2009. Final Report due end March 2010. Killylane WTWs Treatability Appraisal Study - Final Report issued 31 March 2010. Further work identified in the report. Copy of the Jacobs draft report 'Killylane WTWs – Asset Performance and Condition Survey' issued to DWI 16/04/2010. Report issued to DWI 23/06/2011. <b>Action Status: Completed</b>
			3 (iii)	Undertake a DWSP pilot scheme of the Killylane distribution system.	Draft DWSP and risk scores for the Killylane distribution system provided to the Inspectorate on 23 March 2009. The 2010 regulation 28 report covering the distribution system was received on 23/10/2010. <b>Action Status: Completed</b>

Annex 1: Killylane (CPEO/08/02) - Completion of Undertakings

Reference Number	Location	Parameter	Notice of Acceptance Action Point	Additional Information	NI Water Action
CPEO/08/02 Issued 7/11/08	Killylane Water Supply Area	THMS recurring failures.	3 (iv)	<p>DWSP: catchment and distribution risk assessment scores.</p> <p>3 (v) (a)</p> <p>3 (v) (b)</p>	<p>Risk assessment scores and draft DWSP for catchment and distribution elements completed. Draft DWSP issued to Inspectorate on 23 Mar 2009. DWSP Risk Assessment for Killylane WTWs and supply system submitted to Inspectorate – 23.12.10 <b>Action Status: Completed</b></p> <p>A survey of the water quality ex DAF cell following replacement of the Earth-tech nozzles showed only marginal improvement. It is not proposed to replace the nozzles in the second DAF cell during 2009. Letter of 6 May 2009 to the Inspectorate refers. <b>Action Status: Completed</b></p> <p>WTWs residual sludge is now taken off site for pressing at Dorisland WTWs. Letter from NI Water (27 October 2008) confirmed sludge taken off site. <b>Action Status: Completed</b></p>

Annex 1: Killylane (CPEO/08/02) - Completion of Undertakings

Reference Number	Location	Parameter	Notice of Acceptance Point	Additional Information	NI Water Action
CPEO/08/02 Issued 7/11/08	Killylane Water Supply Area	THMs recurring failures.	3 (v) (c)	Undertake a trial of a new lime dosing system post DAF.  Refurbishment of Rashee and Ballybracken SRs.  Slimero SR to be cleaned.	<p>The lime dosing pipe work has been replaced with a larger bore pipe (3/4" pipe with no connections). This has improved the reliability and stability of the dosed raw pH and the lowering of the coagulation pH. From 1.08.09 the dosed raw pH was gradually reduced to pH 6.3.</p> <p>Improvements to the operation of the primary filters to be investigated (topping up and back-wash modification).</p> <p>Water quality will be monitored following these changes prior to making changes to the inter-stage pH.</p> <p>Refer to list of actions taken at Killylane WTWs – Jan and April 2010 QR meeting updates. <b>Action Status: Completed</b></p> <p>Completed Dec '08. Back in service 20/12/08 and 07/01/09 respectively. <b>Action Status: Completed</b></p> <p>By 31/12/08. Completed 12/12/08. <b>Action Status: Completed</b></p>

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Reference Number	Location	Parameter	Notice of Acceptance Point	Additional Information	NI Water Action
			3 (vii) (a)	Monitor chlorine (Cl) residuals of the final water.	Three-monthly analytical data summary report data for January to March 2011 provided to DWI on 04/05/2011.
			3 (vii) (b)	Monitor Cl patterns and Cl demand throughout distribution system.	Ongoing study of chlorine residuals at SRs and extremities of system. Distribution schema produced for DWSP (to include Cl residuals).
			3 (vii) (c)	Monitor THM levels in final water, forming potential; and levels in distribution system.	A trial of Intellisonde units to monitor water quality in the distribution system is to be carried out. The units have been installed on the outlet main at Killyglen and Ballymullock SR. Water quality will be monitored for a period of six months.
			3 (vii) (d)	TOC monitoring of the raw water.	Monitoring of data showed limited reliable information – the use of the units will be reassessed. Update on all monitoring up to April 2011 received 04/05/2011, including THMs, TOC and chlorine residuals. <b>Action Status: Completed</b>
				Progress updates at monthly NIW/DWI meetings.	Ongoing. <b>Action Status: Completed</b>