

Powered KalGUARD

Site Report

**Somerset County Council,
Elderly Persons Home (EPH),
Frome.**

Critchell Court EPH, Frome

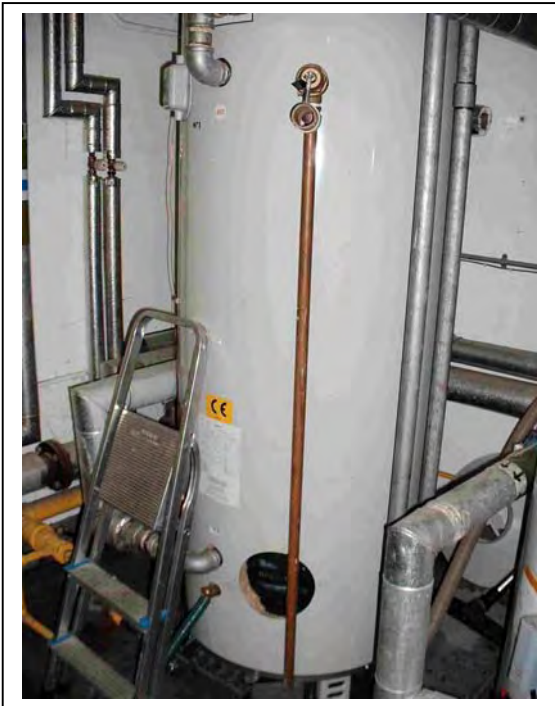


The pictures shown here were taken in the plant room of this E.P.H.

At this site, the water is particularly hard and was responsible for the excessive limescale build-up in the Lochinvar boilers . After fitting new boilers, at six months the limescale was usually seen to be as indicated in the next photographs.



This usually meant that the installation would require boiler replacement every 16 – 20 months at a cost of about £4,000. This has now been stopped and is due to the use of WaterMATIC's enhanced KalGUARD Limescale Management System.



One of two unopened Lochinvar Boiler in the E.P.H's plant room'

Boiler No. 1.

60°C boiler opened, showing heat exchanger floor and flues.



Same boiler looking to side, showing outer wall, heat exchanger floor and only a trace of accumulated scale.



A closer view of limited 'flaky' scale in base of 60°C boiler unit.

Boiler No.2 operating at 65°C showed the following limescale formation.

A view through the inspection hatch showing complete absence of scale debris and only a slight coating of soft scale on the heat exchanger flues from the gas burners below.



A view to one side shows even less effect on the rear flue and again no debris on the floor of the heat exchanger surface.

Confirmation Letter

Property Services

Street Divisional Office
95 High Street
STREET Somerset BA16 0EZ
Tel: (01458) 446204 Fax: (01458) 446032



Planned Maintenance Engineering Ltd Bradley Lane NEWTON ABBOT Devon TQ12 1LZ	please ask for Clive Sowells my reference CAS/M/AMF	extension 207 casowells@somerset.gov.uk your reference
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For the Attention of Mr G Lockton

7 July 2003

Dear Sirs

Re: Critchill Court EPH, Frome

Further to the site meeting on Tuesday 1st July 2003, to inspect the inside surfaces of the two Lochinvar Gas-fired water heaters, I would record the findings made on that occasion, together with the past history.

Present at the meeting were the following personnel:-

Clive Sowells	Somerset County Council, Property Services Area Maintenance Engineer
Gordon Lockton	Planned Maintenance Engineering, Maintenance Contract Manager
Simon French	Environment Plus (UK) Ltd, Managing Director
Alistair Basson	Environment Plus (UK) Ltd, Planning Manager
Mike Potter	Watermatic, Product Development Manager

The history of the hot water problems are that the low temperature heater, running at 60°C and serving bathrooms, toilets and resident's bedrooms suffered with limescale build up which was getting progressively worse.

The high temperature heater, running at 65°C, serving the kitchen and laundry had to be renewed after, initially 14 months and then, despite de-scaling at approximately 18-20 week intervals but were still progressively "rocking up".

In early 2002, Gordon Lockton (PME) contacted me to advise that Simon French (Environment Plus) may have a unit which could possible improve the limescale build-up problem. A site meeting was arranged for 30th July 2002 and was attended by myself, Gordon Lockton (PME), Simon French and Mike Potter (Watermatic).

(Continued...)

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The 'Kal-Guard' system was explained and discussed, but as a number of "guaranteed to work" systems had previously been investigated (and some tried to no avail), I was reluctant to commit the limited maintenance funds to testing yet another system.

Simon French then offered to fund the installation and to monitor the results over a short period in order to 'prove' the system and obviously to be considered for similar installations in the future.

I put this offer to Mr Terry Harris of Somerset Care, who agreed that on the grounds of 'no cost', the testing could take place.

On 5th December 2003 the Kal-Guard unit was installed and the heaters inspected, at which time the high temperature unit was seriously rocked up and the low temperature unit was 'split'. Environment Plus tried to chemically de-scale the high temperature unit, to no avail, and both units were replaced.

On 1st July 2003 after 6 months of running the 'proving' meeting was held and both heaters were drained down and opened up by Alistair Basson. In both cases, the internal surfaces were 'clean' and in the low temperature heater a small piece of scale, shaped like the inside of a pipe was found, which seemed to indicate that the system was cleaning the pipework.

All present at the meeting were impressed with the results which seems to indicate a successful test. Photographs were taken and I look forward to receiving copies, in due course, for record purposes and for onward transmission to my other maintenance colleagues.

Following the meeting, I advised Somerset Care, by e-mail of the results and have now been requested to obtain quotations for similar installations for the following sites;

Yeovil, Preston Park EPH
Castle Cary, Cary Brook EPH
Wincanton, Carrington House EPH
Street, Southlawns EPH
Shepton Mallet, Field House EPH
Wells, Fletcher House EPH

I have requested copies of the latest waster bills for each property in order for Environment Plus to assess the size of Kal-Guard required.

I will be instructing you to drain and inspect the heaters again at the beginning of December in order that I can be satisfied that the system in continuing to operate satisfactorily.

(Continued...)

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Yours sincerely



Clive Sowells
Area Building Services Engineer

Copy to: Terry Harris, Somerset Care
Simon French, Environment Plus (UK) Ltd
Mike Potter, Watermatic
John Priddle, Taunton Maintenance
Mike Tarr, Taunton Maintenance
Nigel Frost, Taunton Maintenance