

## Open Letter to Mr Ken MacIntosh MSP

27 August 2014

Dear Mr MacIntosh,

I understand you have been contacted by one of your constituents in East Renfrewshire regarding windfarm/turbine construction and the effect on private and public water supplies. I am commenting upon your response to that constituent.

This is also an open letter, which will be forwarded to all MPs, MSPs and Councillors in Scotland, as I understand some other elected representatives have also been sent the same response to their enquiries from Scottish Water.

You will have seen my presentation "Windfarms, water and the Smoking Gun", which I first gave as a lecture in July to residents concerned about wind turbine development in Clyde Muirshiel National park. <https://www.youtube.com/watch?v=BQf0hLYXd7o>

I read with interest the response from Scottish Water(SW), to your enquiries regarding public water contamination resulting from the Whitelee windfarm site.

As I stated in my video, although the conclusions and my opinions drawn from the data are my own, all the data underpinning the graphs was provided by Scottish Water and Scottish Power Renewables and I am happy to provide this raw data to others to substantiate my conclusions.

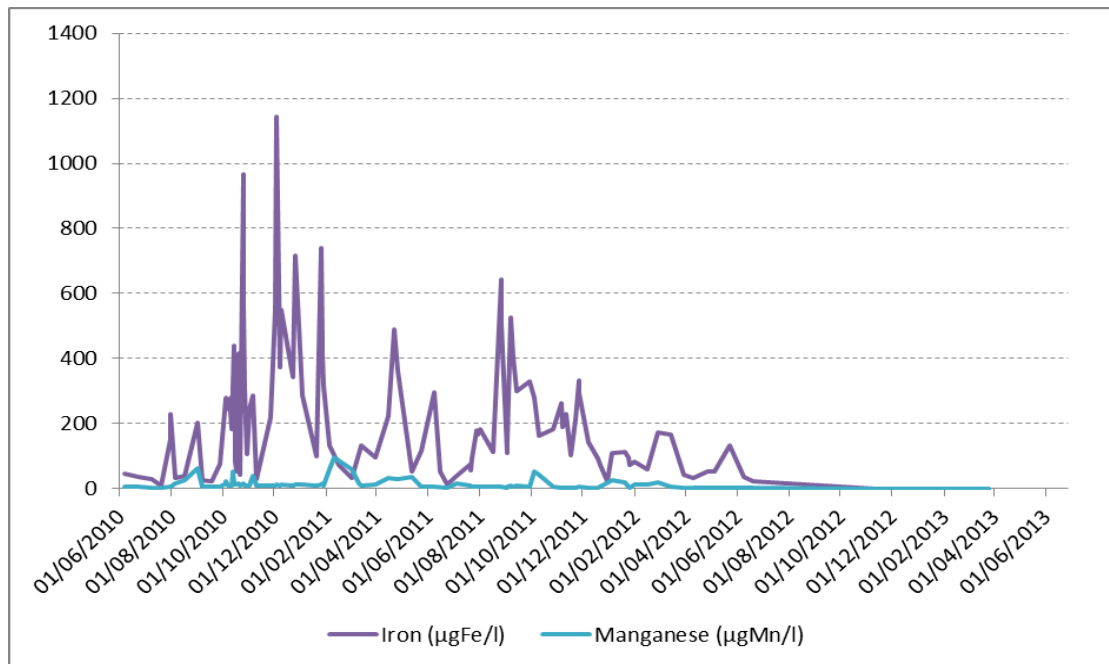
I enclose here the graphs of iron and manganese within the treated, (ie. Public) water from Amlaird water treatment works over the period 2010 to 2013 and the graph of iron in the raw water to Amlaird supplied to me by Scottish Water, for comparison.

I also provide regulatory standards for public water for iron and manganese, copied from the Drinking Water Quality Regulator (Scotland)(DWQR).

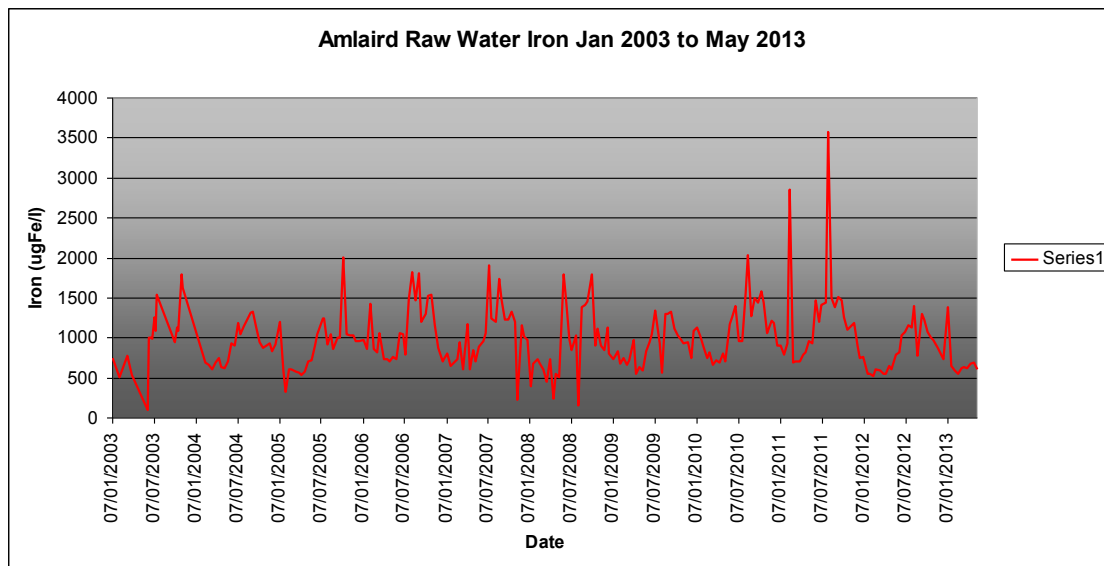
It is apparent that over late 2010 until the end of 2011, the **iron in public water was almost six times the acceptable standard** and manganese also exceeded regulatory standards in early 2011.

Whilst most normal people can tolerate increased levels of iron in their water or diet, there are individuals who are unable to tolerate even normal amounts of dietary iron, for example patients with a condition called haemochromatosis. In these people, excess iron will increase liver cirrhosis and the likelihood of liver cancer. These people deserve to know when there are such excesses in their drinking water.

## Amlaird Treated Water 2010-2013



## Amlaird Raw Water Iron 2003 to 2013



( Extract from Standards Published by the Drinking Water Quality Regulator)

*Iron*

***Iron***

***A metal that occurs naturally and is used in water treatment and for water mains***

***What is it?***

*Iron is present in many water sources, and may be used as part of the treatment process, although less commonly in Scotland. Significant amounts of iron may enter the water supply through inadequate treatment or via corrosion of iron water mains. This latter cause is a particular problem*

*in certain areas, where high concentrations can cause the water to be visually unacceptable to consumers if iron sediment in the main is disturbed.*

***What does a sample failure mean?***

*Health implications of a failure of the iron PCV of 200 microgrammes per litre are likely to be limited, but high iron concentrations will be very apparent to consumers in the form of brown discolouration. Iron failures can be quite localised, depending on water mains material. DWQR expects Scottish Water to ensure instances of discolouration due to iron are minimised through operational practices and an appropriately targeted programme of water main rehabilitation.*

***Manganese***

***A naturally occurring metal found in some water sources***

***What is it?***

*Manganese occurs naturally in some water sources, where it is dissolved from the surrounding rocks and enters the water supply. Appropriate treatment can remove it, but where this is not present manganese can cause black discolouration of supplies. Manganese deposits can coat water mains, causing problems long after the treatment process has been improved. Due to geological factors, manganese tends to be more of a problem in parts of Western Scotland, especially at certain times of year.*

***What does a sample failure mean?***

*Health implications of a failure of the PCV for manganese of 50 microgrammes per litre are likely to be limited, as the water will become unacceptable to consumers in the form of black discolouration long before concentrations reach levels that are of health concern. Where persistent failures of the PCV occur, action may be needed to upgrade the water treatment process and clean deposits from water mains.*

The 2012 DWQR report specifically mentions Amlaird WTW as having failed to meet regulatory standards in 2011.

I am therefore puzzled by Scottish Water's press release to you dated June 27<sup>th</sup> 2014:

*Between April 2006 and April 2007, we found elevated levels of colour in our raw water, consistent with disturbance of peatland, which we dealt with at the Amlaird Water Treatment Works as best we could.*

*"During this period we found no significant changes in the levels of iron and manganese at customers' taps from our network samples.*

**In my view this statement is misleading and of little relevance to 2010-12.**

The main period of construction which surrounded Craigendunton reservoir, (the main supply to Amlaird WTW) occurred during 2011/early 2012- but please see my presentation for more accurate depiction of this construction period.

The original Whitelee windfarm construction impacted on Lochgoin reservoir, but not significantly on Craigendunton, which was only surrounded by turbines in close proximity to the water's edge, by Whitelee Extensions 1 and 2.

I do not have Amlaird WTW data for the 2006/7 period and it may well be that over seven years ago it did meet all regulatory standards.

If that was the case, then it is even more alarming that the clear and overwhelming new failure to meet acceptable standards, from 2010 to 2012 as a minimum, should have raised warning signals to Scottish Water and DWQR that something had changed.

That 'new' something was almost certainly the construction of Whitelee Extension 1 and 2 windfarm.

SW describes to you the mitigation plan and testing put in place by SPR at Whitelee to prevent contamination. In view of our private water bacterial contamination, I specifically asked SPR for the surface water test data from water issues on the Whitelee Extension 1 and 2 and was told monitoring of water issues was by visual inspection. I think it would be very useful to examine any such test data if it is available, to understand the changes that occurred in the public reservoir.

Lastly, SW refer to Sneddon Law Windfarm, in their statement you. This windfarm is sited adjacent to Whitelee windfarm.

This consented development has yet to have conditions agreed by East Ayrshire Council to protect the several Private water supplies which are within or arise from the development area.

In common with most windfarm developments, no geohydrology report has been requested in the Environmental Statement to allow a proper risk assessment of industrialising a water catchment area.

Whilst Sneddon Law windfarm (CWP Ltd) will not affect any Public water reservoir, one property in particular has four quarries and three turbine bases in their water catchment area.

No plans have been made by the developer to provide an alternative water supply in the event that water supplies to this family are affected.

The Scottish Government is proud to support windfarm development in suitable areas. How can the industrialisation of water catchment areas, once protected by law, be regarded as suitable? I believe that the current lack of consideration in allowing and promoting industrialisation of either public or private water catchment areas is contrary to the whole ethos of planning law and flagrantly risks public health and amenity.

I would ask that there is a moratorium on all windfarm construction and planning which involve such areas, until this whole issue has been properly and independently investigated.

Yours Sincerely,

Dr Rachel Connor