

Leadhills and Wanlockhead environmental report: Questions and Answers

Where are the metals coming from?

Leadhills and Wanlockhead have long been known as the centre for lead mining in Scotland. Over the years, mining operations have brought the lead and other metals that occur naturally in the rocks up to the surface. The mines also contain drainage levels which continue to discharge water into local watercourses. As a result, investigations commissioned by the Scottish Environment Protection Agency (SEPA) showed increased levels of lead, cadmium and zinc in the Glengonnar and Wanlock Waters, and in the soils around them.

How much of a risk is there to health from the increased levels of these metals?

The risk to health for local residents is considered low. However, we do not have complete information on the extent of the presence of metals around Leadhills and Wanlockhead villages themselves. We do know that there is a chance of being exposed to more lead and other metals here than in other areas of the country. This might be by coming into physical contact with, swallowing, or breathing in affected material. However the information that is available, and the results of investigations in other areas with similar issues, show that the overall risk to health from living in the area is also likely to be low. Even so, if you want to reduce your exposure to these metals even further this can be done by following some simple, good household and personal hygiene measures.

Is there any danger from coming into contact with the affected water?

The levels of lead, zinc and cadmium in Glengonnar and Wanlock Waters are very unlikely to pose any risk by physical contact. Anyone who drinks these waters, as a one-off or on a few occasions while taking part in occupational or recreational activities, is also very unlikely to be harmed by it.

Are the increased levels of metals affecting public drinking-water supplies?

There is no connection between Glengonnar and Wanlock Waters and any public water supplies. Leadhills and Wanlockhead are supplied by mains drinking-water from the Daer treatment works in South Lanarkshire. Regular testing carried out by Scottish Water Data confirms that there is no excess of lead or other potentially harmful substances in this supply. The public water supply to households and commercial premises in the area is safe.

What about private water supplies?

Anyone using private drinking-water supplies in the area is unlikely to be at risk. Samples of local private supplies were recently tested by South Lanarkshire Council. None contained increased levels of lead, zinc or cadmium. Private water supplies in

Dumfries & Galloway were tested between 2003 and 2006; all were within the guideline limits for lead (zinc and cadmium were not measured). Up-to-date tests are needed to confirm the absence of increased levels of metals in the private supplies in Dumfries & Galloway. Anyone wishing to discuss testing of a private water source should contact Dumfries & Galloway Council (see details below).

Is there any risk from soil or dust in the home?

The SEPA investigation did not look at the presence of metals in the local land in detail. However, given the area's history, levels of lead and other metals in the soil and dust are expected to be higher than other places. The risk this poses to health is likely to be very limited and a few simple every-day precautions will help ensure that any risk is reduced as much as possible. This advice is about sensible, good hygiene practice, and should be adopted by anyone, not just people living in Leadhills and Wanlockhead.

Simple precautions include ideally preventing soil and other material from getting inside the house on shoes/clothing or on household pets, and regular (damp) dusting and vacuuming (e.g. using a machine with a particulate filter) in the home. Good kitchen and food hygiene is also important. Hands should always be washed before eating, especially after working or playing outdoors. Children should also be discouraged from eating soil (accidentally or deliberately) or other non-food materials.

Should I avoid eating fruit and vegetables from my garden?

Samples of vegetables grown in one garden in Leadhills were tested in 2008, and some showed increased levels of lead. The lead was probably mostly in soil left on the vegetables when they were tested. Fruit and vegetables should therefore always be washed thoroughly in tap water to get rid of any soil or dirt before eating. This applies especially to any that are grown in Leadhills or Wanlockhead. Peeling before eating, if possible, is also a good idea.

If you consume a lot of fruit or vegetables grown in your (or a neighbour's) garden, you might want to consider having some tested for lead or other metals, especially if there are young children, pregnant or breast feeding women in the household. If so, please contact your local council's environmental services, who would be happy to discuss this further with you (see details below).

Is there any risk from other types of local produce?

In 2008, an egg from a locally reared chicken was shown to contain elevated lead levels. If you (or your neighbour) rear your own chickens and you eat their eggs regularly, you might want to arrange for testing of some, especially if there are young children and pregnant or breast-feeding women in the household.

There is no information on metals in fish from the Glengonnar and Wanlock Waters. However, because of the metal levels in these rivers, as a precaution, consumption of fish caught from them should be avoided, until testing confirms what the situation is. Testing of a sample of fish from Leadhills Dam has been carried out, and all were

satisfactory for lead, zinc and cadmium, so there is no need to avoid consumption of fish from this source.

The risk related to animals that are farmed around Leadhills and Wanlockhead is low, and is being dealt with by advice issued to landowners about grazing in these areas, as well as routine surveillance of animal health. Checks are also carried out at slaughterhouses, and to ensure the levels of lead and other heavy metals in meat are safe.

Lead is known to collect in the liver, kidneys and bones of animals hunted as game. It is advised that consumption of offal from locally sourced game should be avoided, and that any visible shot be removed.

If you wish to discuss a particular type of food or local produce further, including getting samples tested, please contact your local council (see details below). They can also give you more information on sensible precautions to minimise any risk.

Is there anything else I can do to help protect myself and my family?

A common way for people to be exposed to lead is from lead plumbing (pipes and/or solder), particularly in older properties. A study carried out in Leadhills and Wanlockhead in 1989 found that contamination of household water by old lead pipes might have been a significant source of exposure to lead in the area. Scottish Water has taken steps to remove any lead “communication” pipes (those leading up to property boundaries) in the area. However, responsibility for the pipes within a property lies with the owner. Residents of older properties should check for any remaining lead plumbing or pipe work in their home. If present, these should be removed and replaced with modern lead-free substitutes.

Cadmium was also found in the Glengonnar and Wanlock Waters and nearby soils. One of the most effective things anyone who smokes can do to reduce their levels of cadmium is to quit, as smoking increases the levels of cadmium in the body.

What are the dangers of an accident due to old mine workings?

The local landowners, together with SEPA and the councils, are taking every possible step to secure and signpost old mine shafts and other workings. These hazards should be clearly marked and, where appropriate, secured, so that the chances of stumbling into something that poses any danger will be low.

Where can I go for more information?

The SEPA report on the survey of metal concentrations in the Wanlockhead / Leadhills area is available on the SEPA website, at www.sepa.org.uk/restoration. The NHS health risk assessment used to create this leaflet can be accessed at www.nhsdg.org.uk/Documents/RiskAssessment.pdf. Printed copies of these documents are also available on request, and can be obtained by calling SEPA (see **Contact Information**, below). Details of who to contact at your local council or health board for more information are also below.

If you have any questions or concerns about your own or your family's health, or the need for further health investigations, you can contact your GP as normal.

Contact information

For enquires about the information and advice contained in this leaflet, you can call one of the following numbers.

For enquiries relating to the Environmental Investigation by SEPA, contact them on 0800 80 70 60.

For enquiries relating to health matters contact the Public Health team at your local health board, or Environmental Services at the local council, on the numbers below:

NHS Lanarkshire:

01698 858 232

NHS Dumfries & Galloway:

01387 272 724

South Lanarkshire Council:

08457 406080

Dumfries & Galloway Council:

030 33 33 3000