



**ST AMBROSE HIGH SCHOOL  
BUCHANAN HIGH SCHOOL  
TOWNHEAD COMMUNITY CENTRE**



**INFORMATION FOR  
PARENTS/CARERS  
JUNE 2019**

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# Introduction

The information in this leaflet is designed to help you, as a parent or carer with a child at Buchanan High School or St Ambrose High School, understand the facts about the schools and the site on which they are built.

Some reports in the media, and some of the information repeated on social media and elsewhere, could understandably concern and upset you or your child. We know that these concerns are serious.

Nothing is more important to the council than the safety of pupils and staff. The council would not take any risks which would threaten health and safety.

All the facts presented in this leaflet are confirmed by experts in environmental health employed by the council and doctors with a specialism in public health from NHS

Lanarkshire. These experts and doctors, all very highly qualified, are not instructed by anyone else and their professional lives are dedicated to protecting members of the public from harm. They also have a legal duty to investigate and monitor any public health incidents and concerns.

We hope you find this document useful. All of this information, and the scientific reports it is based on, is available on a dedicated website at [www.northlanarkshire.gov.uk/BuchananStAmbrose](http://www.northlanarkshire.gov.uk/BuchananStAmbrose).

**Derek Brown**  
**Executive Director**  
**Education and Families**  
**North Lanarkshire Council**

## The school campus site

The first concerns relating to the schools were raised at the planning stage. These focussed on the fact that the site had previously been used as a landfill. This means that, for a period of around 30 years until 1975, domestic waste from the Coatbridge area was disposed of on the site, buried in the land.

One myth about the site is that it had also been a steelworks. **It has never been a steelworks**, but some waste from the nearby Gartsherrie iron and steelworks was disposed of at the site for an unknown period of time.

## The planning conditions

Three sites were considered for the schools. The site of the former St Ambrose High School was too small. Another site at Blair Road would have meant pupils crossing a busy road frequently to move between different parts of the campus. The Townhead Road site, where the schools now are, meant that both schools and the community centre, plus the sports pitches, could be in one easily accessible place with ample car parking.

The fact that it had been a landfill meant that the planning department of the council instructed that there would have to be a full scientific assessment carried out and a plan to deal with any issues before work could start.

**The fact is that dealing with land issues – called remediation – is not at all unusual.** Many sites across Scotland, the rest of the UK and world require remediation to be suitable for use.

## The land assessments

In fact, three assessments were carried out. Firstly, before planning permission was granted, an independent firm was engaged to carry out a full investigation. This involved digging boreholes and pits across the site, taking soil samples and having these analysed for potential pollutants.

This study was examined by pollution control experts, who work within the environmental health team of the council. These are qualified specialists whose legal duty is to examine and monitor all issues relating to pollution.

## Following planning permission

In line with the planning conditions, a full ground risk assessment was carried out by another firm of experts with a global reputation, commissioned by the main contractor responsible for building the schools.

As we would expect from a site of this nature, a number of issues were discovered which would require to be dealt with. The first was the potential for harmful ground gases, including methane and carbon dioxide, which could come from both the old landfill site and the natural peat on site.

The experts then looked at historical use of the site and identified what potential chemicals might exist, and what previous studies had found.

Following this, samples of soil were taken from across the site at different depths and submitted to independent certified laboratories for analysis.

Using relevant industry guidance, the assessment indicated that a number of chemicals would have no significant impact but that a strategy would be required to be put in place for others.

Finally, a full risk assessment was carried out using national standards. Almost all the chemicals were assessed as being low or very low, with some classed as being moderate.

### The recommendations

For chemicals to pose a risk, three things need to be present:

- A source: that is, a substance that is capable of causing pollution or harm
- A pathway: that is, a route by which the contaminant can travel
- A receptor: that is, something which could be affected by the contaminant

The assessment stated that while the land was suitable for use, some actions would be recommended. Again, this is not unusual. **Hundreds of sites across Scotland used for everything from business**

### premises to schools and from retail parks to homes are remediated in this way every year.

In terms of ground gas, an extensive system was recommended, which should include a gas resistant membrane and automatic monitoring and ventilation.

More detailed assessment was recommended for some chemicals. These were modelled on each of the potential receptors (for example pupils, teachers and other users) using national standards.

These models were very conservative. What this means is that the maximum possible usage of the building and playing fields was assumed, so the model assumed the site would be used for homes. None of the chemicals were above this very sensitive standard and so did not pose a risk to human health.

Elevated levels of phytotoxic contaminants (which affect plants) were reported across the site. To stop any problem it was recommended that 60cm of imported clean soil should be used in all planted areas and 1 metre of soil used in areas where tree planting was to happen.

The report also recommended that sampling should be required from materials cut from the site during groundworks to ensure they were suitable for re-use.

The report recommended that wrapped iron pipes be used for the water supply to the building laid in trenches to protect them from any possible chemical damage.

## The validation

All of these recommendations had to be checked to ensure they had been carried out. This is called validation.

A specialist company was commissioned to design and install a high specification, gas resistant membrane and venting system attached to outlets to allow air to circulate beneath the building.

This sophisticated system works on a number of sensors which sample the air beneath the building. Should these sensors detect ground gas, even at a low concentration, an active fan system operates to introduce more air beneath the building and dilute any gas.

The consultants responsible for the validation report checked that the membrane was sealed and that the installation was taking place in accordance with the environmental specification.

One myth that has been repeated is that the alarm on this system did go off but the school was not evacuated when it should have been. **The fact is that the alarm did sound on one occasion but this was caused by a faulty sensor, not by a build-up of ground gases.**

Iron pipes were used for the water supply to the building as recommended, inspected and approved by Scottish Water.

Some lead hotspots were identified. Two were found to be below the level of concern indicated by the legal standards, and three were covered

with sufficient materials to remove any pathway to pupils and staff at the schools or other site users. **This means that these do not pose a risk to health.**

The artificial pitches have a Pozidrain system for drainage. This forms an impermeable barrier to the ground below the pitches. This means that nothing from the ground below the pitches can reach the surface.

110 soil samples were taken during groundworks at the site. No issues were found.

56,000 tonnes of clean soil, brought onto the site from elsewhere and tested, was used to ensure that all planted areas had the recommended 60cm of clean soil.

Some asbestos was found in two parts of the site. This was removed by specialist contractors. The soil was tested and no remaining traces of asbestos were found.

All the measurements used to assess safe levels are national standards. These are legally required. **Validation demonstrates as a matter of fact the site is safe and suitable for use.**

## Copper in drinking water

Copper in drinking water, or blue water as it has been called, is not particularly uncommon in new buildings.

It is caused by corrosion in copper pipes. These are the internal pipes in a building and are not in contact with the ground. The normal way to deal

with occasional blue water is to flush the system through regularly and this is what happened at the schools.

However, blue water began to appear more regularly than we would expect. Following concerns raised by staff at the schools, the council investigated the issue further. In October 2018 water samples showed copper at higher levels than would be allowed under drinking water standards.

We decided that the best way to deal with the issue for good was to replace all drinking water pipes with plastic and we began work to do this. We also provided bottled water for drinking in both schools.

The work, with the exception of one pipe which would cause significant disruption to the school, was completed in February this year. The one pipe which still requires to be dealt with will be replaced during the summer holidays, as will all copper pipes carrying non-drinking water.

**Since December 2018, all samples show that water meets drinking water quality standards.**

The biggest myth about the blue water is that it is caused by the site of the school itself. None of the drinking water supply has ever been exposed to the earth. Scottish Water has confirmed that the water reaching the site boundary meets drinking water standards. No other pollutants, including bacteria, have been found in any sample above the levels legally set down in drinking water quality standards.

There is no evidence of increased sickness at schools as indicated by

attendance levels compared to other schools in North Lanarkshire.

We asked independent experts not previously involved with the site to examine sections of the copper which was removed so that we could find out, if possible, what had caused the pipes to corrode. They concluded that water had been allowed to sit in the pipes during the construction of the schools for a long time without moving, causing corrosion which led to the blue water.

**Site settlement**

Because the site has a lot of peat on it we would expect some site settlement. What this means is that, over time, areas of the ground settle and cause unevenness. This does not affect the building because it is built on a concrete platform supported by piles driven deep into the ground. But there is evidence of settlement on the playing fields and in the paved areas around the site.

Because the gas membrane is underneath the concrete platform, it is not affected by the settlement. The lead hotspots are at a depth which is not affected by the ground settlement.

Contractors will be at the schools over the summer holidays to deal with the areas of settlement.

## The NHS Lanarkshire public health investigations

The NHS Lanarkshire Department of Public Health carried out an investigation and assessment in relation to cancer cases which had been diagnosed among members of staff at Buchanan High School.

This investigation involved detailed interviews with those affected, as well as a review of scientific evidence.

**The investigation did not find any evidence suggesting a health risk associated with attending Buchanan High School that would have led to the development of cancer.** Cases of bladder cancer among the staff could not have been caused by any factor to do with Buchanan school. This is because of something called latency.

Latency is the period of time between exposure to a chemical or substance which can cause cancer and symptoms appearing. Typically, the latency period for bladder cancer is between 15 and 40 years. Even allowing for particular circumstances and reducing this to 10 years means that these cancers cannot have been caused by any factors at the schools, as the building has only been occupied for seven years.

There has been concern raised about arsenic levels. The fact is that there are two types of arsenic from a medical point of view; toxic, which is dangerous, and non-toxic which is not dangerous. There have been no cases with the toxic form. The non-toxic form occurs naturally in certain foods, such as, fish and shellfish, rice, and other foods and drinks. These can cause

temporary increases in blood arsenic. However, this is a natural occurrence and is unrelated to attendance at school.

Raised levels of copper were found in test results from the drinking water in October 2018. While consuming excessive amounts of copper can lead to stomach upsets, **copper from drinking water does not cause cancer.**

Public health experts have concluded that there is no increased health risk associated with attending Buchanan or St Ambrose High Schools.

NHS Lanarkshire is aware of some requests for testing by individuals because they attend Buchanan and St Ambrose High Schools. The public health advice is that testing is not required simply because of attendance at Buchanan High School or St Ambrose High schools.

## Further Review

The council, NHS Lanarkshire and the Scottish Government have agreed an independent review aimed at providing further reassurance to the local community. This review is intended to be completed as soon as possible.

## Where you can find out more

All of the information in this leaflet, and the expert reports on which it is based, is available at [www.northlanarkshire.gov.uk/BuchananStAmbrose](http://www.northlanarkshire.gov.uk/BuchananStAmbrose).

**This document can be made available in a range of languages and formats, including large print, braille, audio, electronic and accessible formats.**

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