Walleys Quarry weekly update – 07 July 2022

The Environment Agency has prepared this weekly update to help the community of Newcastle-under-Lyme and the wider area keep informed about developments concerning its regulation of Walleys Quarry Landfill.

Walleys Quarry Ltd is the operator of the landfill site and it alone is responsible for the hydrogen sulphide emissions escaping from the site.

The Environment Agency is the environmental regulator. We require Walleys Quarry Ltd to meet its environmental obligations and resolve the ongoing odour issues at the landfill as quickly as possible.

News in brief – 07 July 2022

No evidence of pollution of the Silverdale Brook
Between June 2021 and May 2022, we monitored the Silverdale Brook using two monitoring devices called sondes (see below map for locations). Our team positioned the sondes upstream and downstream of the discharge point for the site.

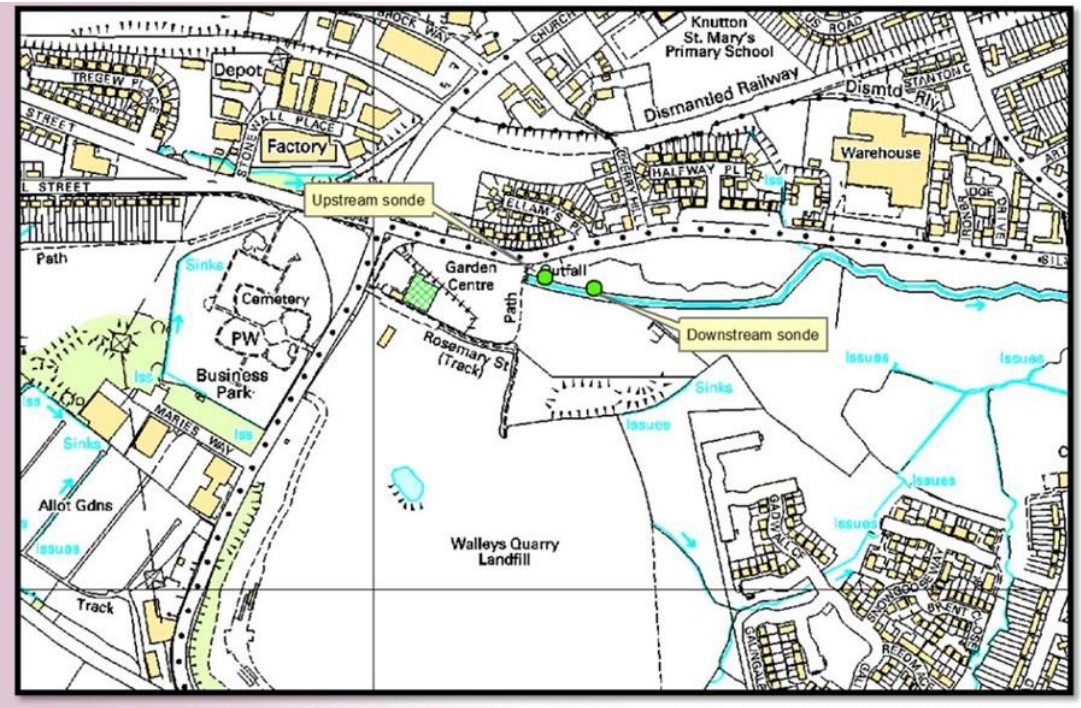


Figure 1 Locations of the two sondes deployed in the Silverdale Brook © Environment Agency copyright 2022. All rights reserved. Ordnance Survey licence number 100024198.

A sonde collects water quality data using a number of sensors. Each sensor measures its parameter via a variety of electrochemical, optical, or physical detection methods. The sondes took continuous measurements of conductivity, temperature, pH, dissolved oxygen, ammonium and turbidity once every 60 minutes.

Data we hold indicates that the Silverdale Brook is typical of an urban stream with high background conductivity, which responds quickly to rainfall. Rainfall events generally cause a decrease in conductivity and pH, but an increase in turbidity. There can also be an impact on the ammonium,

temperature and dissolved oxygen, but this can-be linked to releases from the combined sewer outfall as well.

During the monitoring period there were two occasions where a significant difference was noted on the downstream sonde. These are shown in the graphs below.

On 8 July 2021 a decrease in conductivity was noted but this did not appear to have any impact on the other parameters. One potential explanation is a release from a lagoon on the site. The drop in conductivity recorded is no more than we might expect from a rainfall event, and no impact on any of the other parameters was recorded. As a result, we do not believe it caused any environmental issues.

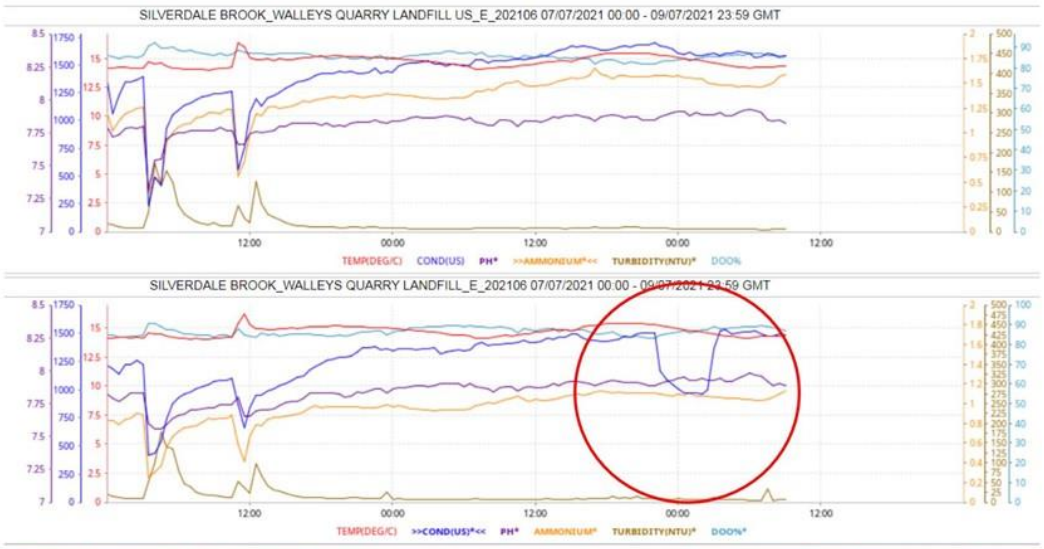


Figure 2 plot showing data collected from 07/07/21 to 09/07/21 for the sondes upstream and downstream of Walleys Quarry on Silverdale Brook. Red circle highlights drop in conductivity on downstream sonde.

On 9 November 2021 there was an increase in turbidity that was not linked to a rainfall event. This did not impact any of the other parameters and it may have been due to a release of inert material. A rainfall event is recorded on both sondes later that day, as shown by the decrease in conductivity and turbidity rise just after. This would have 'flushed' through any material, so we do not believe any environmental impact resulted.

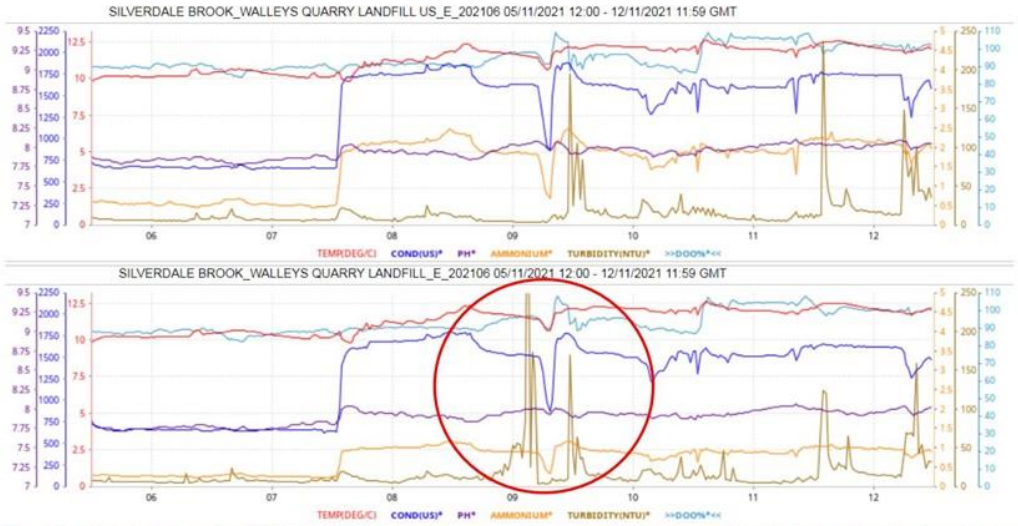


Figure 3 Plot showing data collected from 05/11/21 to 12/11/21 for the sondes upstream and downstream of Walleys Quarry on Silverdale Brook. Red circle highlights tubidity increase before and after rainfall on downstream sonde

The upstream sonde stopped taking readings on 7 May 2022 and the downstream sonde stopped taking readings on 27 May 2022.

Withdrawal of Regulation 36 Enforcement Notice dated 10 May 2022
On 10 May 2022 we served a Regulation 36 Enforcement Notice requiring Walleys Quarry Ltd to improve its waste acceptance procedures, part of its written management system, by 10 June 2022.

On 10 June 2022 we received the company's response. We were not satisfied with this submission. As a result, we required Walley Quarry Ltd to make improvements so that its waste acceptance procedures were more closely aligned with relevant guidance to ensure accurate information about the characterisation of waste, specifically trommel fines.

With effect from 04 July 2022, we have withdrawn the Regulation 36 Enforcement Notice. This is because Walley Quarry Ltd submitted revised waste acceptance procedures that mean we are satisfied that its environment management system identifies and minimises the risks of pollution from odour. The procedures reflect European and Environment Agency landfill guidance.

Walleys Quarry Ltd has indicated that it needs a short period to embed these revised ways of working. We will continue to robustly regulate and monitor progress in the coming weeks to ensure that it remains on track to deliver the specified improvements. We will also continue to routinely regulate the site to ensure the improvements have been implemented after 31 July 2022.

The actions to be taken by Walleys Quarry Ltd should lead to lower emissions of landfill gas to ambient air and reduce the negative experience of odour in the community.

Regulatory activity
Officers have continued to carry out regulatory work at Walleys Quarry to ensure effective delivery of our plan to contain, capture, and destroy landfill gas from the site.

The temporary (clay) capping work on Phase 2 on the north-west corner of the site is now complete. The permanent capping work in Phase 1 is ongoing.

The average gas collection value for the last ten weeks remains steady at approximately 3000 m^3/hr. There have been only small fluctuations in extraction rates as the extraction is balanced.

Facebook live session
As you may have read, we had to conduct last week's Facebook Live event slightly differently due to staff illness. We did so by using recorded responses to your questions in multiple short sessions. We are keen to know whether you find this more useful than having one long session, so will conduct a poll on Facebook to seek your views. If you haven't yet had a chance to views the videos you can join the Facebook group and watch the recordings here

Some of you have expressed dissatisfaction with our responses. However, we have always been open with you and explained that there may be some questions that fall outside our remit, such as the management of the highways outside Walleys Quarry. There are others that we cannot answer for good reason, such as associated legal proceedings. That doesn't mean that we don't want to hear your views or see your pictures and videos on a wide range of issues. Thank you to everyone who takes the time to get in touch.

This month's questions thread remains open until 5pm on Friday 8 July 2022.

You can read more about how we as the Environment Agency, use social media as a tool for communication here

Reporting odour
It is important that you continue to report odour to us. Reports from local people, along with our regulatory visits and monitoring from our mobile monitoring facilities help to create a picture which informs our enforcement and regulatory approach.

The easiest and quickest way to make a report is via GOV.UK at: https://report-walleys-quarry-smell.service.gov.uk/

If you do report odour to us via our incident hotline, please be courteous to our staff. They are working to deal with your reports as efficiently as possible.

Latest hydrogen sulphide levels
Our Ambient Air Monitoring Team continues to check air quality around Walleys Quarry landfill. It does this through a network of mobile monitoring stations (MMFs) that are positioned in communities around the site. These check for levels of hydrogen sulphide and methane, which are indicators of odour pollution.

The chart below contains a summary of the raw data collected from our ambient air mobile monitoring facilities (MMFs) in the period 27 June to 3 July 2022. They were the same or lower than last week at all four locations.

MMF ID & Location	% of time the monitoring location recorded H_2S above the WHO annoyance guideline level %	Change
MMF1 Silverdale Cemetery	**0.0**	**— on previous week**
MMF2 Silverdale PS	**0.0**	**▼ on previous week**
MMF6 Fire Station	**0.0**	**▼ on previous week**
MMF9 Galingale View	**0.0**	**▼ on previous week**

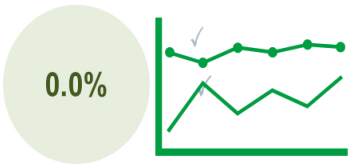
It is important to note that this is raw data and may change slightly as results are verified.

It's important to note that there will be short term fluctuations in the concentrations of hydrogen sulphide leaving the site. The causes can include factors such as the impact of improvement works being carried out on site and changes in the weather. Concentrations of landfill gas emissions generally increase during colder weather and still wind conditions. With less ability for the landfill gas emissions to disperse, there is a greater potential for these emissions to cause an odour nuisance on the local community.

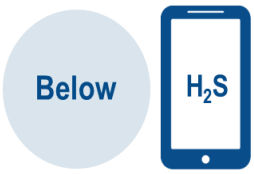
By contrast, in warmer weather the gases are naturally more diluted due to higher temperatures and rising air. This means improvements from measures implemented at Walleys Quarry Landfill to reduce odour could be less noticeable around this time of year. However, it is important to note that despite temporary increases, the overall trend in the levels of hydrogen sulphide concentrations in the ambient air continues to reduce.

Odour Reports
In the week 27 June to 3 July 2022, the Environment Agency received a total of 54 odour reports from local people. This is a decrease compared to the previous week. The peak day was on Thursday 30 June, when we received 14 reports.

Number of odour reports/complaints to the Environment Agency
27 June – 3 July 2022



Hydrogen Sulphide 30 minute average odour annoyance: % of time above WHO guideline level
27 June – 3 July 2022



Hydrogen Sulphide Level. 24 hour World Health Organisation guideline to protect against short term health effects

Correspondence
Other than by means of the Facebook Group mentioned above, we are unable to answer questions through social media. If you have a question you can email us.

Other sources of information
UK Health Security Agency public health messages and advice about the effects of odours from Walleys Quarry landfill are available online via Staffordshire County Council's website: Frequently asked questions about the health effects of odours and emissions from Walleys Quarry: - Staffordshire County Council

Walleys Quarry Ltd website: https://walleysquarry.co.uk