



EXPECT...SOLUTIONS NOT ONLY PRODUCTS

## AVK UK SMART AIR VALVES ON TRIAL WITH YORKSHIRE WATER



Kilnsey is a picturesque village in Wharfedale, North Yorkshire. It is located 14 miles north of Skipton and lies just across the River Wharfe from the even smaller settlement of Conistone. A sewage rising main runs between Kilnsey, where there is a pumping station, and the waste water treatment works at Conistone.

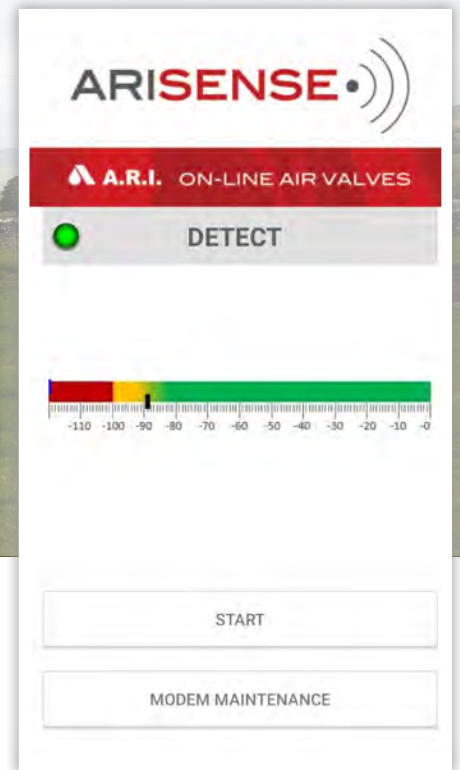
The treatment works is designated as 'small' by Yorkshire Water meaning it serves a population of under 2,000. The main crosses the River Wharfe and subsequently runs alongside it for about half a mile.

The undulating nature of the terrain means there are three air valves on the rising main between Kilnsey and Conistone. Two of these air valves are located either side of the river crossing. It is vital that these air valves function effectively. Any faults could lead to the pollution of the River Wharfe, leading to both an ecological problem and the possibility of a fine.

The critical nature of these valves made them an ideal trial location for AVK UK's smart air valves. The specified valves, installed by Mott Macdonald Bentley (MMB), included both internal sensors to track the performance, alert on any faults and record the pressure of the valve and an external sensor to monitor the water level in the chamber. The chamber was potentially prone to flooding in the event of high rainfall.

The smart air valves provide feedback on a range of key operational parameters. These parameters include: overflow, leakage, blockage, pressure, tampering, tilt/shock, low battery and, with the addition of the external sensor, chamber flooding.

When smart air valves are installed in remote locations where communications infrastructure may be limited a multi-SIM card is an option. If chamber lids are particularly thick and risk blocking GSM coverage an external antenna can be installed.



For further details on AVK Smart Water Solutions please contact:

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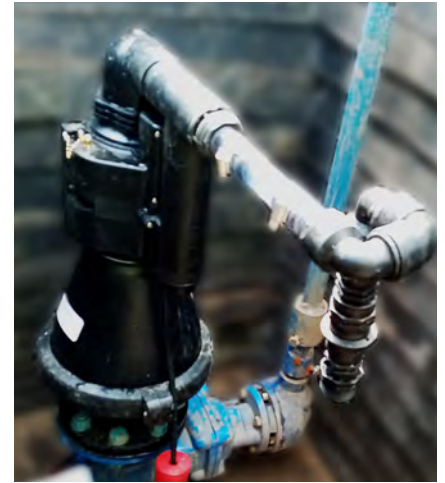
AVK UK's Smart Water team worked alongside Yorkshire Water and MMB to ensure the smart air valves met the requirements of all parties:

'The AVK UK smart air valves are, we believe, the first to be available in the UK. The sensor and communications aspects of smart air valves means there are far more boxes that have to be ticked before a water company is willing to trial them. Covid-19 meant the product demonstration had to be delivered online in a 'classroom-based' format.


If any of the sensors, internal or external, is activated, email and text messages are sent to all interested parties. As digital communications are involved, we worked closely with Yorkshire Water to ensure they were confident the smart air valves met their cyber-security protocols.

As it is a trial installation, we received notification of all the alerts alongside Yorkshire Water's engineers. The recent heavy rainfall meant the external sensor registered a flooded chamber alert. The internal sensors however did not register any faults, so it was clear the issue was high river level not a leaking air valve. It was really good to know the smart air valve was doing its job and enabling Yorkshire Water to monitor and react correctly to the problem well before there was any danger to the River Wharfe.

We would like to thank both Ian Jowitt and Dave Athersmith from MMB and Pamela Ajayi at Yorkshire Water, with their assistance in making this trial a success.'




AriSense - Alert



**AriSense**

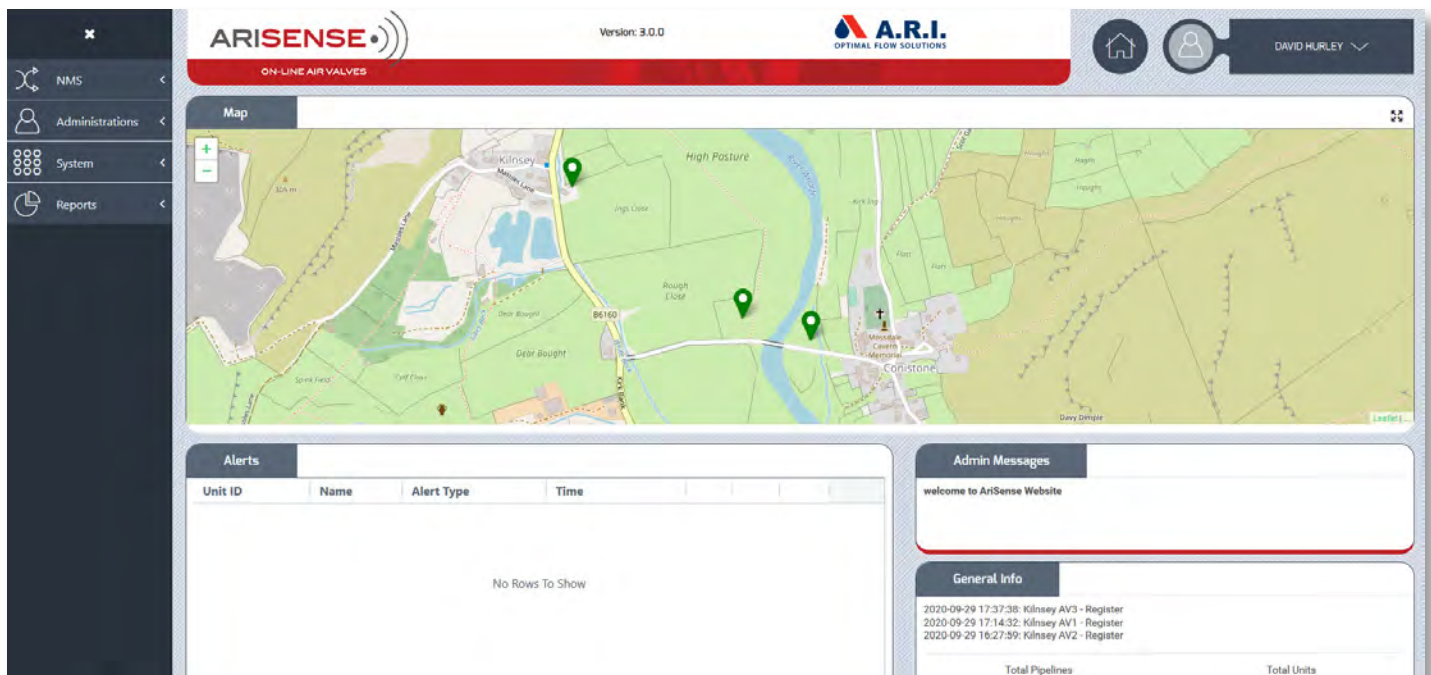
Pit Flood alert was activated in Unit Kilnsey AV2 on 03/10/2020 20:42:17

AriSense - Alert



**AriSense**

Pit Flood alert was deactivated in Unit Kilnsey AV2 on 05/10/2020 12:37:40



**ARISENSE** ON-LINE AIR VALVES Version: 3.0.0 A.R.I. OPTIMAL FLOW SOLUTIONS

DAVID HURLEY

**Map**

Unit ID	Name	Alert Type	Time
No Rows To Show			

**Admin Messages**

welcome to AriSense Website

**General Info**

2020-09-29 17:37:38: Kilnsey AV3 - Register  
 2020-09-29 17:14:32: Kilnsey AV1 - Register  
 2020-09-29 16:27:59: Kilnsey AV2 - Register

Total Pipelines      Total Units

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