

RECENT INFORMATION, since 2019, ABOUT THE VARIOUS ASPECTS OF THE SUPPLY, TREATMENT AND DISTRIBUTION OF WATER TO CARLTON

Introduction

Government legislation regarding private water supplies to more than one property increases regularly.

It is currently under the Private Water Supplies (England) Regulations 2016, as amended, and the local enforcement is now from North Yorkshire Council (formerly Richmondshire District Council).

Environmental Health Regulations

The Environmental Health Officer from North Yorkshire Council visits Carlton every six months and calls randomly on a house in the village to collect a sample of water from the house tap. This is sent for analysis, and the results are posted on the Carlton Parish Council website. The water analysis has always passed the safety requirements, although it has sometimes been discoloured and with a raised iron level, but these levels are set for mainly aesthetic reasons and do not present a risk to health at the levels found in Carlton water.

This Environmental Health Officer also visits the site of our Private Water Supply and Treatment Plant every 5 years to perform a Risk Assessment as required by Government legislation. The latest Risk Assessment was performed in September 2023, and the report is available on the Carlton Parish Council website. Following this report, the Parish Council met with the Officer and another member of the Environmental Health Department from North Yorkshire Council to discuss the findings and to seek advice about possible options and their recommendations.

Volunteers

The day-to-day running, monitoring, and maintenance of the Private Water Supply to Carlton village, which was developed in 1891, has been performed by volunteers from the village, apart from 1998-2004 when a local man was paid by Carlton Parish Council.

Professional maintenance and servicing

Insurance of the risks of Private Water Supplies now requires the equipment to be serviced annually. Culligan installed the initial equipment in the Water Hut when it was built in 1998, they have maintained it for all the years since, and Culligan have performed an annual service for over 10 years.

Culligan indicated in 2019 that the Filters that had been installed in 1998 were becoming obsolete, and many replacement parts needed would be unavailable when all their stock had been used, probably within a few years.

The Parish Council asked one of the members of the water committee to investigate other companies regarding the service of our water plant and to ask their advice and any recommendations for the future management of the Private Water Supply to Carlton.

Six alternative suitable companies, as well as Culligan, were approached. They all visited the site in early/mid 2020, with some delays due to interference from Covid.

Unfortunately, none of these companies, apart from Culligan, would offer to service our current equipment, or to install any new equipment of their own to be serviced by them. Two alternative Borehole specialists were also invited for opinions and they visited the site, but they were also not interested in providing Carlton with alternative borehole advice.

Culligan were also asked in 2019/2020 to investigate different/more modern methods that might prove to be better than the usual Filtration and disinfection system. Culligan sent us plans and quotes for two alternative types - reverse osmosis, and ozone - and the service of these methods. They also quoted for a new Filtration and disinfection system. This latter was in fact the cheapest option, and is the method Culligan recommends for our water. The Culligan Service Manager came to a meeting with Carlton Parish Council in October 2020 to present this new Filtration system and to answer queries. He sent an updated quotation in December 2020 to include additional requests from Councillors, including a small generator to use in times of a power failure.

Supply of water from Melbecks spring

In order to investigate whether the supply of water from behind the Quarry Face at Melbecks could be improved, some cavers were invited to investigate, and they came to visit in August 2020. At that time, they found that the pipes were in a good position within the water behind the quarry face.

The cavers commented on the instability of the ground both around and above the area.

There was a rockfall in late 2020 next to the Quarry face which damaged the underground earthenware pipe carrying water towards the Treatment Hut.

Since then the water has been carried away from Melbecks initially in one, and now two blue pipes on top of the ground to the top small reservoir on its way to the Treatment Hut.

The supply of water to the Filtration and chlorination equipment in the Treatment Hut can be blocked in several ways which requires urgent correction. The blue pipes carrying water from Melbecks get blocked with silt as they are narrow, and on several occasions in 2023 the water supply to the Treatment Hut, and potentially to the village, has been affected until the blue pipes have been cleared. A larger black pipe is available next to Melbecks to be connected when the weather allows.

The pipework within the Hut before the Filters has also been blocked on occasions, including in 2023, requiring urgent attention.

It has so far been possible to relieve the blockages without the village running out of water.

Borehole supply

The supply of water from Melbecks has been supplemented by water from the Borehole, which was drilled in 2011. Initially it was hoped that the Borehole would produce enough

water to supply Carlton without using Melbecks water when Melbecks spring water is very discoloured, but the Borehole has never been able to do that, even when first installed.

Over the years the volume of water produced by the Borehole has steadily fallen, despite servicing and cleaning, last fully performed in May 2021 when two men from Cumbria Pumps came. They cleaned the pipes thoroughly and tested the pump which they reported was working fully. They explained that the aquifer has dropped over time and less water is now available to our Borehole, which is at a depth of 90 metres. The maximum volume produced by our Borehole, even now after all this rain, is only 30-32 cubes/day.

This dropping of the aquifer level has been observed in many places locally and elsewhere in the UK, even in boreholes supplying individual properties.

Treatment of water within Water Hut

Daily volunteer visits to the Treatment Hut at the top of Melbecks check that the supply of water is maintained, and that the equipment within the Hut is functioning. Daily water usage by the village is recorded as well as other parameters to ensure that everything is working appropriately. A sample from the home tap water and the water leaving the Treatment Hut are tested daily to monitor the levels of chlorine dosing. This is the method used for disinfection of the water, and makes the water safe to drink.

If the filtration and chlorination system within the Treatment Hut fails, it is necessary to bypass the equipment until it is corrected, which can sometimes take a few days or longer. When the equipment in the Hut is bypassed, the water is not being disinfected at all, and the residents of Carlton are advised to Boil their Water – as has happened a few times in the last few years, last in January 2023.

Water usage and leaks

Water usage in the village averaged 35-40 cubes per day in 2022, but it does fluctuate due to various factors. Currently it is over 60 cubes/day which it has been for some months now and is higher than expected for the weather and the time of year.

When the water usage by the village becomes very high, it is usually due to a leakage. Unless the site of the leak is visible, and water is observed coming upwards out of the road or near a house, it can be some time before the leak is located.

The Mains pipe was found to have a leak in the autumn 2022, at the Bridge near the Chapel. Due to the complexities of arranging the repair, it was finally repaired in early 2023.

Water leaks are more usually in the pipe carrying water from the Carlton Mains pipe to the householder as some of these pipes are very old, and can take unusual routes to the various properties and cottages.

There was a very serious leak which produced very high water usage in late 2022, but it was not until early 2023 that the leak was located inside a second home, which was eventually switched off by the Emergency services who had to break an entry for access.

Alternative supplies of water to Carlton

Yorkshire Water has been asked by the Parish Council in 2002 and in 2007 about providing water to supply Carlton, and information was obtained, but this was not pursued.

Yorkshire Water were installing a water supply to Horsehouse in 2011, and the residents of Carlton were invited to indicate if they were interested to join this scheme, but they did not.

Yorkshire Water were asked again in 2020 to reconsider providing the water for Carlton. Their engineers visited the site in 2020/2021 and produced some 'guesstimates' of what may be possible, but a fuller assessment would be needed.

Their engineer came to a meeting with Carlton Parish Council in June 2021. He gave a presentation of the various options with 'guesstimated costs' and answered questions.

Yorkshire Water was asked in 2023 to review their figures, and to perform a more formal assessment, following which they have provided an updated quotation.

Information from the regular water servicing company - Culligan

Culligan have continued to service the Plant and attend for repairs and maintenance issues when required since the installation in 1998, and have performed the annual service.

After the last service in March 2023, they expressed their concern that the Plant is near the time when further servicing will not be possible due to the lack of parts for some of the oldest equipment – namely the Filters - and the system should be replaced.

Culligan were asked in the summer of 2023 to review their 2020 quotation for a new treatment plant using Filters and chlorination.

A new review of options for the supply of drinking water to Carlton

The Parish Council asked Mr Andrew Morson in May 2023 to review all the information that was available from the last 3 years, and to seek other alternative options from as many sources and companies and specialists as were prepared to offer quotations.

The results of the investigations and his report is available to read on the Parish Council website.