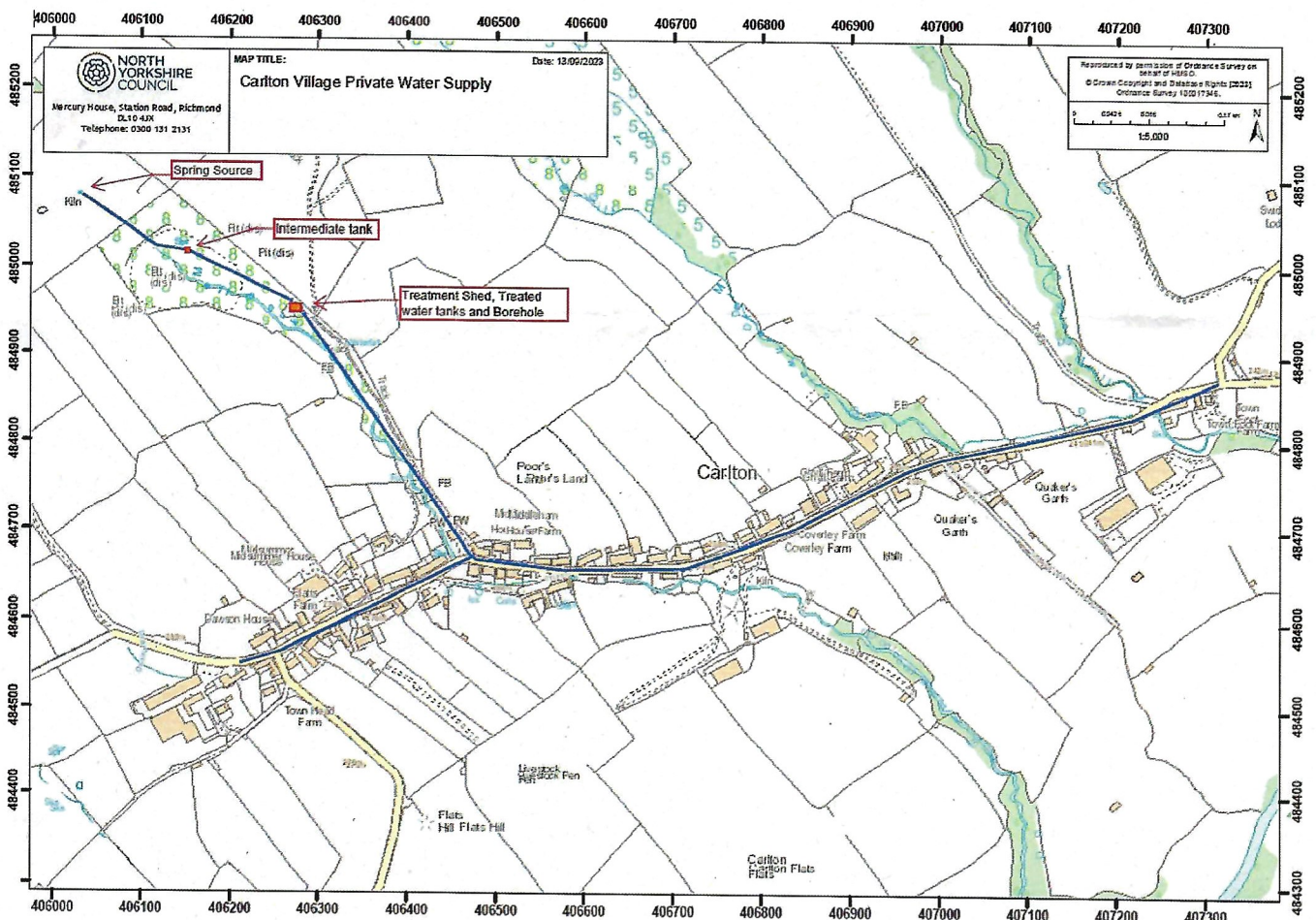


Supply Name	Carlton Village Water Supply
Risk Assessment Date	6 September 2023

Regulatory Requirement

The Private Water Supplies (England) Regulations 2016 as amended (The Regulations) require that a risk assessment be carried out for all private water supplies at least once every 5 years. This does not apply to a single domestic property.

Site Plan



Supply Details

Supply Reference	PWS 203	
Supply Category	Ground water influenced by surface water	
Supply Type	Spring and Borehole	
Grid Reference of source	403948, 487590	
Max Number of persons supplied	Approx 250 people	
Daily volume of water used from supply (Approx)	60-70 m ³ /day	
Supply Usage	Commercial	
Person(s) responsible for the supply	Carlton Parish Council	
Other relevant person(s) in relation to supply	Carlton Village Water Committee Individual property owner/occupiers	
Details of Properties served by the Supply	Property Name	Supply Purpose
	96 Properties	Mixed – domestic, commercial and public
Details of any water treatment processes associated with the supply	Type	
	Intermediate tank – coarse particle filter	
	Treatment shed – media filters and chlorine dosing	

Result of previous risk assessment (if applicable)	High Risk
Is there a water safety plan/emergency action plan available for the supply?	Yes – requires some additional information

Risk Assessment Summary:

The result of the risk assessment carried out on 6 September 2023 is that the supply is classed as High Risk because of the following main criteria:

- History of Livestock production (rearing, housing, grazing)
- Evidence of wildlife
- Noticeable change in the appearance of the water (colour, turbidity- cloudiness) after heavy rain
- Water pipes and joins lying above ground

Frequency of sampling

The water supply is classified as a Regulation 9 large or commercial supply under The Regulations. As such the supply is to be monitored twice a year for group A and B parameters.

Description of the Supply

The original risk assessment was carried out on 30 June 2010 and reviewed in 2015



Two blue alkathene pipes, carrying water from the underground pool in the hillside, no longer converge in the covered collection chamber. Instead, they are connected to further lengths of blue pipe laid on the ground to the intermediate tank. This pipe and the joins connecting the lengths are vulnerable to damage and weathering.

The original underground pipe to the intermediate tank was damaged by a rockfall/landslip in recent years.

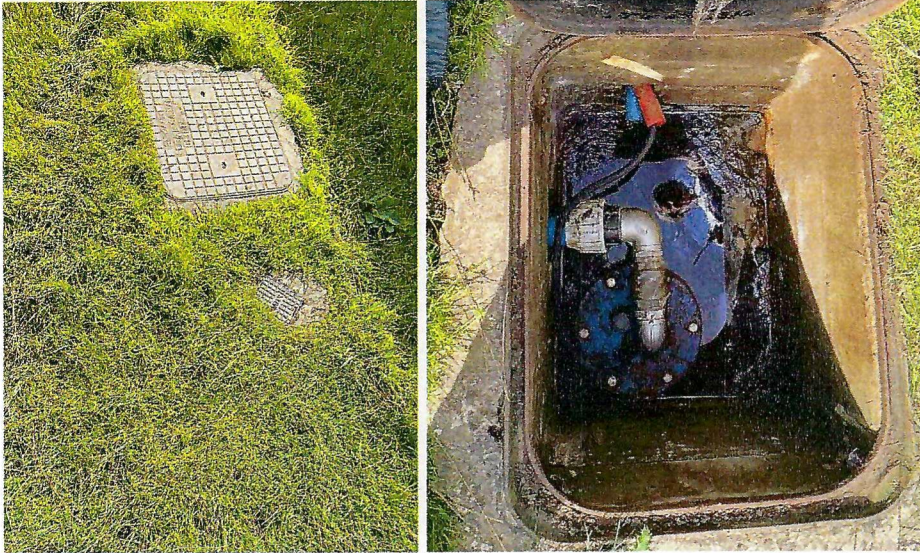
The pipe on the left of this picture shows signs of scoring or cracking near the joint.

The wider bore black plastic pipe coiled nearby is intended to replace the two lengths of blue pipe.



The stone built intermediate tank has a locked metal inspection cover and is surrounded by a fence. However, the fence is neither stock proof nor rabbit proof.

At the time of assessment, there was a good volume of water passing through this tank and it wasn't possible to see the coarse filter.



The borehole was drilled in 2011 and is positioned adjacent to the treatment shed in an area where vehicular access is required. Thus, the chamber is below ground. It is a concrete structure with a metal inspection cover and the headworks are sealed.

Soil/stones in the collar for the inspection cover prevented it from being seated fully. Water and sludge were present in the base of the chamber and around the outlet pipe.

The chamber should be regularly checked and cleared, particularly around the outlet pipe, to prevent water building up in the chamber to the point where it could compromise the borehole.

This was done the following day.

The intention was for the borehole to supplement the supply from Melbecks and, on those occasions after heavy rains when the water from Melbecks was discoloured, Melbecks would be turned off and only the borehole water would be used.

Experience has since shown that the volume of water from the borehole is not sufficient to supply the village on its own and the main reliance is on the supply from Melbecks.

Some alternate springs have been identified as potentially being able to supplement the supply.

The area around the treatment shed and treated water tanks is fenced off and there are plans in place to replace parts of it that are in disrepair. *The repairs to the fence have since been completed.*



Inside the treatment shed the equipment is the same as in the original assessment with the addition of the pressure vessel and pump for the borehole and changes to the pipework to allow

switching between sources etc. The main dosing system was not in use at the time of inspection. The back up was in use. 2 of the filters are automatically backwashed while the 3rd is manually backwashed.

Attempts have been made to source replacement of the aging treatment system, but no decisions have been made to date.

The levels of free and total chlorine are physically checked and logged each day along with a record of the volume of water used etc.

The treated water tanks have had locks installed and the concrete covers repaired.

Outstanding actions from previous assessment:

- Measures to reduce the risk from Cryptosporidium potentially being present in the supply
- Water safety plan. Additional information required – for example, the plan does not have to be a complex document but it should have sufficient detail that someone without prior experience of monitoring/maintaining the supply can see what they need to do, how they need to do it, what constitutes a problem and who to report that problem to.

Further actions required:

- The pipe (or pipes) from the Melbecks source to the intermediate tank should be dug in underground wherever possible to prevent damage and potential loss of supply. This should be done as soon as possible and before the end of the year when the potential for severe frosts increases. The hanging joints in the line of the waterfall are particularly vulnerable as the hose clips rust and decay and a more permanent solution should be found.

It should be noted that any alterations to the water supply are required to comply with Regulation 31 of the Water Supply (Water Quality) Regulations 2000 in that only construction products, materials and chemicals approved for use with drinking water are to be used.

- Fences need to be in sound condition, stock and rabbit proof
- Keep a regular check on the borehole chamber for water/soil ingress and ensure the outlet pipe is kept clear
- The long dry periods over the last couple of years and changing weather patterns are causing managers and users of private water supplies to look at the long-term sustainability of their supplies and put in measures to ensure a sufficient supply of potable water.

Carlton has several challenges ahead. It has a plentiful but problematic supply in Melbecks, and a borehole supply that is not sufficient on its own. It is also reliant on volunteers to monitor the treatment system.

Contact Details

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General Information can also be found on the DWI website at www.dwi.gov.uk/private-water-supplies/

Appendix 1

Minimising Health Risks

Even well maintained and treated private water supplies may pose increased risks to health at certain times. Some such instances are highlighted below, together with advice on what steps to take at such times. Never use water for drinking or cooking from the hot water tap.

Known Bacteriological Failure	
	<ul style="list-style-type: none">• Water used for drinking and cooking purposes should be boiled. Generally vigorous boiling for up to one minute should be adequate. Once the water has been boiled, it should be allowed to cool and settle and, if necessary, be decanted or filtered through coffee filter paper.• Sterilising tablets may be added to water in glass containers, but only if the water is clear, odourless and free from suspended matter/solids. Manufacturers' instructions must be closely followed.• Alternatively bottled water should be used for drinking, washing of ready to eat foods, brushing of teeth, etc.
Known Chemical Failure	
Suspended Solids	<ul style="list-style-type: none">• Boiling, cooling, settling and decanting or filtering through a coffee filter paper should improve water quality.• It is recommended that a suitable permanent filter be installed.
Lead	<ul style="list-style-type: none">• Run the cold water tap for a minimum of 2 mins after long periods without use e.g. first thing in the morning, after being out at work all day. This should flush out any water that has been lying in the pipe work. Always do this before making up babies bottles.
Other	<ul style="list-style-type: none">• An alternative source of drinking and cooking water requires to be provided pending implementation of a permanent solution.
Periods of Heavy Rainfall	
	<ul style="list-style-type: none">• During periods of heavy rainfall, surface water run off can increase the risk of contamination of catchment areas and tanks.• Water supply systems should be checked for damage and leaks.• Water used for drinking and cooking should be treated as if it had failed bacteriologically (see above) and if necessary for suspended solids.

Highly Coloured Water

- Water that is highly coloured may not be adequately treated by existing UV systems and should be treated as for bacteriological failure.
- If high colour is a persistent problem then further treatment should be sought.

Lambing/Calving Time

- During lambing/calving periods there is an increased risk of supplies being affected by *Cryptosporidium* and *Giardia*.
- If lambing sheep or lambs are present in the area around your catchment then all water for drinking, cooking etc should be treated as for bacteriological failure.
- Source protection is of paramount importance when considering the risks posed.

Should you have any concerns with regard to your private water supply please contact your local environmental health office.

Appendix 2

General Recommendations for Basic Maintenance of a Private Water Supply

- Carry out regular maintenance of any equipment used in the treatment system according to manufacturers' instructions e.g. change and/or clean filters, replace UV tube at stated frequencies.
- Regularly check treatment system is functioning e.g. ensure bulb has not gone/blown.
- Regularly check the abstraction point/s to ensure that it is in good condition and that any filter is free from debris.
- Regularly check all pipe work and connections along the supply to ensure that they are in good condition.
- Be aware of any changes to the supply e.g. changes to flow or colour. Take appropriate action to investigate and rectify problems as soon as possible after they have been noticed. (see appendix 1 for further specific advice.)
- Ground levels should be below the top of the collection chamber/holding tank (minimum 150mm.6") to prevent water flowing over the ground into the tank and to prevent the overgrowth of vegetation into the tank. Remedial works may be required to clear ground vegetation; however, **WEED KILLER MUST NOT BE USED.**
- The collection chamber/ holding tank(s) and lid(s) should be in a good state of repair and in place. Any damaged tanks require repairing or replacing. The lining should be smooth to inhibit colonisation by insects, vegetation etc. Lids/covers should be tightly fitting and designed to overhang the chamber/tank.
- Any animal/plant/insect debris should be removed if present in tanks, followed by disinfection with a suitable disinfectant – the tank and system should be flushed out several times to ensure that all residual traces of disinfectant are removed.
- Ancillary components – including coarse filters (roses)/filters, valves, ballcocks, stopcocks, pumps etc should be checked to ensure they are in good working order.
- A rose/coarse filter should be fitted to the outlet pipe of the collecting chamber/holding tank(s) to reduce the potential accumulation of debris (peat, soil, etc.) within the pipe work/distribution system. These should be checked regularly to ensure they have not been dislodged during periods of high rain fall. Please note: Debris may also damage hot water/heating systems.
- Inlet, outlets and overflow pipes should be vermin proofed where appropriate and sealed at their entry and exit points to/from their tank(s). Vermin proofing to prevent the entry of small animals, frogs, toads and insects can be achieved by securing a piece of fine mesh screen over vulnerable outlet points.
- Inlet, outlet and overflowing pipes should be positioned so as to prevent the level of water within the tank(s) breaking over the top of the tank and flooding the surrounding area.
- Existing fencing around the collection chamber/holding tank(s) should be checked to ensure that it is in good state of repair, preventing access by animals.
- Holding/water tanks within individual domestic premises should also be checked to ensure that lids are intact and in place and the tanks are in a good state of repair.

Should you require any further assistance with regard to your private water supply please contact your local Environmental Health Officer.

Appendix 3

Carlton Properties

PROPERTY	USE	PROPERTY	USE
Lane House	Domestic	Rover View Cottage	Domestic
Town Head Farm	Farm	Brookside	Domestic
Town Head Cottage	Domestic	Barn Cottage	Holiday Let
Heathlands	Domestic	Hill Crest	Holiday Let
Dale Cottage	Domestic	Rose Cottage	Holiday Let
Bidstone	Domestic	Crag View	Holiday Let
High Barn	Domestic	Seaton House	Domestic
East View Cottage	Domestic	Seaton Cottage	Domestic
Elm Tree Cottage	Domestic	Abbots Thorn	B & B
Elm Tree Farm	Domestic	Simes Yard	Holiday Let
Hazely Cottage	Holiday Let	South View	Domestic
Apple Tree House	Domestic	Pinfold	Domestic
Howden Cottage	Holiday Cottage	Highfields	Holiday Let
West End House	Domestic	Melbeck Studio	Domestic
Barnacre	Domestic	Melbeck	Domestic
Acre House	Domestic	Middleham House	B & B
Prospect House	Domestic	The Forresters Arms	Public House
Carder Cottage	Domestic	Windrush Cottage	Domestic
Lamblea	Holiday Let	Hayden Carr	Domestic
Dawson House	Domestic	Coverley House	Domestic
Midsummer House	Domestic	Dale View	Domestic
Flatts Farm	Domestic	Springfield House	Domestic
Avonlea	Domestic	Greenlea	Domestic
Thirdale House	Domestic	Low Barn	Holiday Let
The Hermitage	Domestic	Game Croft	Game Dealer
Old Hall Farm	Domestic	Ghyll Farm	Domestic
The Mount	Domestic	Coverley Dene	Domestic
Lyndhurst	Domestic	Gilders Green	Domestic
Fairfield	Domestic	Rosemary Cottage	Domestic
Moorcock House	Domestic	Pear Tree House	Domestic
Harlen	Domestic	Thistle Cottage	Domestic
Brewhouse	Domestic	Hollinside	Holiday Let
The Granary	Domestic	Beech Cottage	Holiday Let
Waterforth Flats 1,2,3,4	Domestic	Quakers Garth	Domestic
Old Post Office	Domestic	Coverdale Lodge	Domestic
Gildhurst	Domestic	Coverdale Cottage	Holiday Let
Glencoe	Domestic	Ivy Cottage	Domestic
Park View	Domestic	Falshaw House	Holiday Let
Brooklyn	Holiday Let	Gable End	Domestic
Middleham House Farm	Farm	Town Foot Farm	Farm
Orchard Cottage	Holiday Let	Converted Garage	Domestic
Beck House	Domestic	Coverlea	Domestic
Lillteside House	Domestic	Kilbernie	Domestic
Littleside Cottage	Domestic	Memorial Hall	Public Building
Beech Grove	Domestic	Little Hollin	Holiday Let
Old Joiners Shop	Domestic		
Forge Cottage	Domestic		
Rover View	Domestic		