

**Type B - Risk Assessment Report
Private Water Supplies (Scotland) Regulations 2006**

RA / Supply Number:	RA/13/0108 Supply 50171	Date(s) of Assessment:	07/06/2023
Name of Supply:	The Old School	Description:	Domestic
Officer:	Stuart Aiken		

REQUIREMENTS

Item	Issue	Works Required	Reason
1	There is no bacteriological treatment system on the supply.	Thoroughly cleanse and sterilise the supply system and install a point of entry UV treatment unit with appropriate prefilters (or other suitable treatment system as agreed in writing with the Environmental Health Section). If a UV is to be fitted then the maximum flow rate and bulb output should be set so that the water supply is exposed to a continuous UV dose of 40 mJ cm ⁻² .	To provide a wholesome water supply to your property.
2	The concrete chambers should be further protected from contamination.	a) Raise height of chamber to 150mm above ground level. b) Provide vermin proof, water tight and lockable lid.	To provide the most suitable conditions for the provision of a wholesome water supply at its source.
3	Ph is acidic.	Install ph treatment.	To minimise corrosion of metal surfaces in contact with supply.

Details of all Premises served by the source**Domestic (owner)**

Address of Property	Treatment	UPRN
The Old School, Glen Gairn, Ballater. AB35 5UR	Prefilter, uv and ph.	000151104897
Gairnshiel Schoolhouse, Glen Gairn, Ballater. AB35 5UR	Prefilter, uv and ph.	000151104891
The Glengairn Church, Glen Gairn, Ballater. AB35 5UR	Not known.	000151104889

Other Relevant Persons

Address	Reason for Relevance
Invercauld Estate Office, 4 Keiloch Invercauld, Braemar. AB35 5TW	Landowner.

Supply Type
Spring.

Where is the nearest public mains connection?
Ballater approx. 7km SE.

Total number of Domestic Properties on supply:	3
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Total volume and persons served by supply	
Estimated daily volume of water supplied by the supply	1.5m ³ per day
Number of persons served by the supply (at maximum occupancy):	12
(Assume 2.5 persons per household if not known and usage 0.2m ³ per person per day)	

Details of supply system and associated water treatment (include sketch plan in Additional Notes section)	
Source	
Detail:	Spring feeds concrete ring with concrete lid.
Location Description:	Approx. 300m W of properties near pond
National Grid Reference:	329787 801189
Intermediate Storage Tank	
Detail:	Concrete ring acts as sand trap
Location Description:	A few metres from source.
National Grid Reference:	As above
Communal Treatment Type and its location	
Detail:	None.
Distribution Pipework Material	
Detail:	Alkathene.

Details of sample results for previous 12 months or last available		
Sample Number	08466	
Date Sample taken	07/06/2023	
Sample results		
Results highlighted in bold have failed to meet the prescribed parameters		
<u>Test</u>	<u>Result</u>	<u>Prescribed Concentration or Value</u>
Total Coliforms	<1	<1 MPN/100ml
E.coli	<1	<1 MPN/100ml
Enterococci	0	0 cfu per 100ml
pH	9.5	6.5 – 9.5
Conductivity	140	Not more than 2500 µS/cm
Turbidity	<0.1	Not more than 4.0 NTU
Nitrate	<3	Not more than 50 mg/l
Manganese	<1	Not more than 50 µg/l
Iron	7	Not more than 200 µg/l
Lead	<2	Not more than 10 µg/l

Details of previous investigations and actions taken including any enforcement notices served
None

What arrangements are in place to deal with failure of the supply?
Use bottled water

Is there a Water Safety Plan / Emergency Action Plan available?
No

General Site Survey

Are any of the following “risks” likely to influence water quality at the source?

ALL SITES		RISK EVALUATION		
		HIGH	MOD	LOW
1	History of livestock production (rearing, housing, grazing) – including poultry.			X
2	Remediation of land using sludge or slurry.			X
3	Sewage effluent lagoons.			X
4	Sewage effluent discharge to adjacent watercourse.			X
5	Unsewered human sanitation including septic tanks and soakaways.			X
6	Sewage pipes, mains or domestic (e.g. leading to/from septic tank).			X
7	Soil cultivation with waste water irrigation or sludge/slurry/manure application.			X
8	Surface run-off from agricultural activity diverted to flow into the source/supply.			X
9	Disposal of organic wastes to land.			X
10	Farm wastes and/or silage stored on the ground (not in tanks or containers).			X
11	Waste disposal sites (including scrap yard, rubbish and hazardous waste disposal, landfill or incinerator including on-farm incineration).			X
12	Disposal sites for animal remains.			X
13	Evidence of use of pesticides (including sheep dip) near source.			X
14	Evidence of industrial activity likely to present a contamination threat.			X
15	Forestry activity.			X
16	Evidence of wildlife.		X	
17	Awareness of the presence of drinking water supply/source by agricultural workers.			X
SPRINGS, WELLS AND BOREHOLES		RISK EVALUATION		
		HIGH	MOD	LOW
18	Evidence of poor drainage causing stagnant/standing water.			X
19	Supplies or wells not in current use.			X

Risk Evaluation

The aim of this evaluation is to ascertain both the severity of the risk and the likely frequency of exposure to that risk.

Risk Characterisation

Tick the appropriate box for each question

If any evaluation is High Risk (H) then the Risk Characterisation is **High**

If no evaluation is High Risk but there are Moderate Risks (M) identified then the Risk Characterisation is **Moderate**

If no evaluation is High Risk (H) or Moderate Risk (M) then the Risk Characterisation is **Low**

X

Supply Survey

Are any of the following known to occur at the head works site in relation to the supply?

BOREHOLES		RISK EVALUATION		
		HIGH	MOD	LOW
20	No suitable barrier present to prevent ingress of surface flows into the chamber (e.g. cut-off ditch lined with impermeable material, steep incline/decline such as embankments, appropriate walls, etc).			
21	No concrete apron sloping away from borehole lining			
22	No reinforced concrete cover slab, or equivalent, in satisfactory condition with a watertight, vermin-proof inspection cover present to BS 497 (lockable, steel type or equivalent) with or without ventilation?			
23	If headworks below ground then top of the chamber not 150 mm above ground level?			
24	Housing covering headworks not watertight and/or vermin proof and/or secure.			
25	Borehole lining (casing) does not extend at least 150 mm above level of floor.			
26	Watertight lining cap not fitted.			
27	The housing construction in an unsatisfactory state-of-repair?			
WELL AND SPRING SOURCES (WITH COLLECTION CHAMBERS)		RISK EVALUATION		
		HIGH	MOD	LOW
28	No suitable barrier present to prevent ingress of surface flows into the well/chamber (e.g. cut-off ditch lined with impermeable material, steep incline/decline such as embankments, appropriate walls etc).		X	
29	The top of the well/chamber not 150 mm above concrete apron or surrounding ground.	X		
30	No reinforced concrete cover slab, or equivalent, in satisfactory condition with a watertight, vermin-proof inspection cover present to BS 497 (lockable steel type or equivalent) with or without ventilation?	X		
31	Inlet pipe not fitted with course filter or screen.	X		
32	No stock proof fence (to BS 1722 or equivalent) at a minimum of 4 m around the source?			X
33	No concrete apron, a minimum of 1200 mm, sloping away from the well/chamber and in good repair?			X
34	The well/chamber construction is in an unsatisfactory state-of-repair?		X	
35	Overflow/washout pipe not fitted with vermin proof cap.		X	

Supply Survey (continued)

Are any of the following known to occur in relation to the supply?

ALL SITES		RISK EVALUATION		
		HIGH	MOD	LOW
36	A suitably sized and located fully operational UV treatment unit is not present?	X		
37	Intermediate tanks (e.g. collection chamber holding tanks, break-pressure tanks) are not adequately protected from contamination (see 28 to 33 above).		X	
38	The chamber/s in an unsatisfactory state-of-repair		X	
39	Supply network constructed from material liable to fracture e.g. asbestos-concrete, clay etc?			X
40	Junctions present in the supply network, particularly supplying animal watering systems, have no back-siphon protection?			X
41	No maintenance (including chlorination) has been undertaken in the previous 12 months?		X	
42	If present, header tank within the property(s) does not have a vermin-proof cover?			X
43	Header tank has not been cleaned in the last 12 months?			X
44	Any point of entry/point of use treatment equipment has not been serviced in accordance with the manufacturer's instructions in the last 12 months?			
45	Is there a noticeable change in the level and flow of water throughout the year?			X
46	Is there a noticeable change in the appearance of the water (colour, turbidity – cloudiness) after heavy rainfall or snow melt?			X

Risk Evaluation

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Risk Characterisation

Tick the appropriate box for each question

If any evaluation is High Risk (H) then the Risk Characterisation is **High**

If no evaluation is High Risk but there are Moderate Risks (M) identified then the Risk Characterisation is **Moderate**

If no evaluation is High Risk (H) or Moderate Risk (M) then the Risk Characterisation is **Low**

X

Soil Leaching Risk Survey – for Wells and Springs only

Using the National Grid Reference determine and record below the soil leaching potential from the appropriate soil leaching potential map covering the geographic area of interest for the location of the source.

National Grid Reference

329787 801189

Soil Leaching Risk Classification Assigned

HIGH

Table D1 – Soil leaching risk characterisation

Soil Leaching Risk Classification	Risk Characterisation
Low	Low
Intermediate 1	Moderate
Intermediate 2	Moderate
High 1	High
High 2	High
High 3	High
Built Up	High

Overall Risk Assessment

The overall risk assessment for the source is taken as the highest individual risk category identified from each of the three surveys.

Survey Section	Risk Characterisation Category
General Site Survey	MODERATE
Supply Survey	HIGH
Soil Leaching Risk Survey	HIGH
Overall Risk	HIGH

Additional Notes

Please note that the water sample was taken from a property equipped with ph treatment. A previous sample taken in 2013 had a ph of 6.2.

Source



Diagram of Supply

