

Our Ref: McLane-Burg-Mull BBR/GV/AM

20th May 2026

FAO: Brian Reffin

Sent by email to: brian@wilsondesigns.co.uk

Dear Brian,

REVISED Borehole Installation Proposal and Quotation
New Plot, Burg, Isle of Mull

Further to our recent drilling report of 1st September 2025, I am pleased to provide you with our proposal and quotation for the installation of the borehole recently drilled at the above location.

The borehole was drilled to an overall depth of 195m bgl (including 6m of steel casing) and the sustainable yield from the borehole was measured to be approximately 40 litres per hour.

Sample Analysis Results

On completion of yield testing, a water sample was collected and sent to an independent (UKAS accredited) laboratory for analysis. A copy of the laboratory's test report is attached for your information.

The water quality is generally good, however it should be noted that the pH is on the limit of the allowable range. At this stage it is recommended that the water supply be installed without treatment initially to see if the pH lowers towards a more neutral figure. The installation works will be configured in a way whereby any future water treatment can be installed with ease.

	Max. Allowable or Permissible Range	Result
Hydrogen Ion (pH)	6.5 – 9.5	9.5

Water Supply Requirements

It is understood that the borehole is to be the primary supply of water to the property. The main house is understood to comprise of 3 bedrooms and a study (2 people) and is therefore assumed that the total maximum occupancy is 8 people.

The combined total maximum daily water demand is therefore estimated to be approximately 1,200 litres based on an average water usage of 150 litres of water per person per day.

NOTE: For the avoidance of doubt, the borehole has a daily yield of approximately 960 litres. This output is insufficient to meet the typical water demand for a property occupied by eight people.

However, it is understood from the client that the property will not be occupied at full capacity on a regular basis. To accommodate occasional periods of higher occupancy, the proposal includes the provision of larger storage tanks to act as a contingency during such times.

Overview of Proposed Borehole Installation Arrangements

It is understood that the borehole will act as the primary water supply for the property.

A garage will be constructed by the client, that will act as a plant room and provide protection to the borehole pump control equipment, water storage tank and water treatment equipment.

The submersible borehole pump will deliver water to a 4,000litre tank via borehole pump control equipment and sediment filtration.

The borehole pump control equipment will consist of a 60-litre pressure vessel, pressure switch and pressure gauge.

A surface-mounted booster pump installed on the outlet of the storage tank will provide a pressurised supply of water to the property via an ultraviolet disinfection unit and sediment pre-filters. Additionally, a flow meter will also be installed on the outlet of the UV to aid in leak detection.

A low water level warning float switch will be installed in the water storage tanks. The float switch will activate a warning beacon fitted on the outer wall of the outbuilding to alert users if the water level in the water storage tanks falls below 50% capacity.

Details of Installation and Cost Summary

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>COST £</u>
1 BOREHOLE HEADWORKS CHAMBER	Supply and installation of borehole protective Headworks Chamber formed using partially buried length of 600mm diameter twin-walled plastic culvert with poured & ducted concrete base, frost protection, and lockable watertight lid. To also include the installation of an artesian drain.	£2,260
2 BOREHOLE PUMP	Installation of submersible borehole pump capable of 1m ³ /hr flow rate. Stainless-steel wire for suspending the pump, 25mm HDPE and a sealed well cap including fittings and glands.	£5,495

3 BOREHOLE PUMP CONTROL EQUIPMENT	Supply and install 60 litre pressure vessel and pressure switch in plant room. 1 x 10" 50-micron sediment pre-filter	£1,050
4 INTERMEDIATE STORAGE AND SECONDARY PUMPING	Supply and installation of 4,000 litre above-ground potable water storage tanks in Plant Room. Supply and installation of booster pump capable of providing a flow rate of 2,000 litres/hour at 3Bar. Supply and installation of suitably rated pulsed flow meter.	£5,495
5 ULTRAVIOLET DISINFECTION AND SEDIMENT FILTER	Supply and install 10" duplex sediment pre-filter fitted with 20-micron & 5-micron disposable filters. Installation of suitably rated UV disinfection unit.	£3,195
6 LOW LEVEL WARNING AND UV FAILURE WARNING	Supply and install low level warning system. Float switch-controlled warning strobe light fitted in a visible location to flash if tank level falls below 50% capacity. Supply and install UV failure warning.	£1,200
7 COMMISSIONING & USER MANUAL	System Commissioning. Provision of user manual and user training. Chlorination of new equipment. To include water sampling.	£900
TOTAL (Exc. VAT)		£19,595

Timescales: It is estimated that works will commence within 4-8 weeks on receiving acceptance. This timescale will be subject to sub-contractor availability.

Payment Terms: Deposit payment of £6,000 (Exc. VAT) following quote acceptance. Final stage payment within 28 days following completion of commissioning works.

Optional Items

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>COST £</u>
1 SOLENOID BASED DUMP VALVE	Supply and install of solenoid based dump valve to ensure water is refreshed periodically.	£960
TOTAL (Exc. VAT)		£960

Electrical Requirements

The following electrical equipment will be installed in the new plant room (by HighWater):

- 1 x 1.1kW submersible borehole pump (soft-start)



HighWater

Private Water Supplies

- 1 x 0.12kW frost heater
- 1 x 1kW booster pump
- 1 x 0.5kW UV
- 1kW Provision for lighting, treatment filters and other small appliances

Total load assuming all appliances running concurrently: 3.72 kW (allow for 4.5 kW).

Works by Others

The following works should be completed by the clients preferred contractor.

- Allocation of suitable space to act as a plant room within the garage (2390mm (w) x 2990mm (l)).
- Suitable location for the dump valve to discharge to.
- Trenching and installation of suitably rated SWA cables between the garage and borehole headworks chamber.
- Trenching and installation of 25mm MDPE pipe between the garage and headworks chamber.
- Trenching and installation of 32mm MDPE pipe from the garage to the property's rising main.
- Electrical installation of garage to include the following
 - 1 x fused spur
 - 4 x double sockets.
 - 1 x consumer unit to power installation, to be suitably rated to carry the electrical load as stated above.
 - Supply and installation of lighting and switch as required.

Additional Comments

A start-up meeting will be required with electrical and groundwork sub-contractors to confirm arrangements before works can commence.

Please note that due to the remote location of the property, a further cost will be incurred to cover mobilisation and time to visit for any start-up meetings.

Important Notes

- 1) Quotation is valid for 14 days.



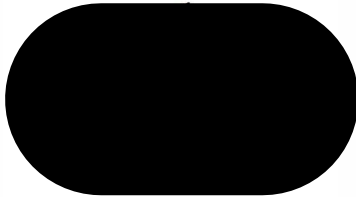
HighWater

Private Water Supplies

- 2) Quotation includes all travel and subsistence expenses.
- 3) Costs given above include first year warranty for all labour and materials.
- 4) Notwithstanding the warranty provided above it should be noted that water quality can change, and it may become necessary to install additional water filtration equipment (at additional cost) in order to ensure compliance with the requirements of The Regulations†.
- 5) It is the client's responsibility to secure any planning permission, building warrant, or similar consents that may be required for the above works and any associated works.
- 6) Quotation above assumes that the existing supply will be abandoned. Additional costs will be incurred should you wish to incorporate the existing supply into the borehole installation arrangements.

We trust that this quotation is an accurate reflection of your requirements. We are happy to discuss any aspect with you and look forward to hearing from you at your convenience.

Yours sincerely



Greg Vears
Project Manager
For **HighWater**

† The Regulations:

For commercial supplies in Scotland, The Water Intended for Human Consumption (Private Supplies) (Scotland) Regulations 2017.

For non-commercial supplies in Scotland, The Private Water Supplies (Scotland) Regulations 2006.



Test Report

Edinburgh Laboratory
Juniper House
Heriot Watt Research Park
Avenue North
Edinburgh
EH14 4AP
Email: ScientificServicesProjects@scottishwater.co.uk

Inverness Laboratory
31 Henderson Drive
Longman North
Inverness
IV1 1TR

Scottish Water
Trusted to serve Scotland

Report Version : 1
Report Date : 19-Aug-2025
Report No. : 1294996

Customer: High Water(Scotland) Ltd
Unit 10
Grigorhill Industrial Estate
Nairn
IV12 5HX

Matrix: Potable Water
Date Sampled: 30-Jul-2025 Time: 10:00 am
Date Received: 01-Aug-2025 Time: 5:37 pm
Laboratory Ref.: 20221284
Sampler ID: Customer

F.A.O.:

Sampling Location: HW FULL SUITE

Customer Ref. No.: McLane-Burg-Mull-BH

Method	Determinand	Result Value	Test Started	Out of Spec	Specification
E/IC078	Alkalinity	68 mgHCO ₃ /l	04-Aug-2025		
E/IC009	Ammonium	<0.04 mgNH ₄ /l	04-Aug-2025		
Comment: Nitrogen balance analysed outwith stability time; result may not represent the level at time of sampling.					
E/IC009	Chloride	26 mgCl/l	04-Aug-2025		
I/IC062/IIN32/IC002	Colour	<2 mg/l Pt/Co	04-Aug-2025		
I/IC062/IIN 38	Conductivity	190 µS/cm at 20°C	04-Aug-2025		
E/IC009	Nitrite	<0.020 mgNO ₂ /l	04-Aug-2025		
Comment: Nitrite analysed outwith stability time; result may not represent the level at time of sampling.					
I/IC062/IIN 37	Hydrogen ion	9.5 pH value	04-Aug-2025		
E/ICPOES2	Sulphate	5.3 mgSO ₄ /l	04-Aug-2025		
E/IC009	Total oxidised nitrogen	<0.50 mgNO ₃ /l	04-Aug-2025		
E/IC009	Nitrate	<0.50 mgNO ₃ /l	04-Aug-2025		
E/IC009	TON ratio	0.00	04-Aug-2025		
Comment: Total Oxidised Nitrogen analysed outwith stability time; result may not represent the level at time of sampling.					
I/IC062/IIN 33	Turbidity	1.2 NTU	04-Aug-2025		
E/IC016 (#)	UV Transmittance	99.0 %	04-Aug-2025		
E/ICPOES2	Total hardness	7.3 mgCa/l	04-Aug-2025		
E/ICPOES1/GIC001	Aluminium	100 µgAl/l	05-Aug-2025		
E/ICPOES1/GIC001	Dissolved Aluminium	36 µgAl/l	05-Aug-2025		
E/GIC001	Arsenic	<0.2 µgAs/l	05-Aug-2025		
E/ICPOES2	Boron	0.085 mgB/l	04-Aug-2025		
E/ICPOES2	Calcium	6.6 mgCa/l	04-Aug-2025		
E/GIC001	Cadmium	<0.02 µgCd/l	05-Aug-2025		
E/GIC001	Chromium	<0.6 µgCr/l	05-Aug-2025		
E/GIC001	Copper	<0.002 mgCu/l	05-Aug-2025		
E/ICPOES1/GIC001	Iron	123 µgFe/l	05-Aug-2025		
E/ICPOES2	Potassium	<0.4 mgK/l	04-Aug-2025		
E/ICPOES2	Magnesium	0.4 mgMg/l	04-Aug-2025		
E/ICPOES1/GIC001	Manganese	3.5 µgMn/l	05-Aug-2025		
E/ICPOES2	Sodium	36.9 mgNa/l	04-Aug-2025		
E/GIC001	Nickel	<0.8 µgNi/l	05-Aug-2025		
E/GIC001	Lead	<0.3 µgPb/l	05-Aug-2025		
E/GIC001	Antimony	<0.4 µgSb/l	05-Aug-2025		
E/GIC001	Selenium	<1.2 µgSe/l	05-Aug-2025		
E/GIC001	Zinc	<7 µgZn/l	05-Aug-2025		
E/O019	Fluoride	<0.116 mgF/l	05-Aug-2025		
E/O019 (#)	Chlorite	<0.018 mg/l	05-Aug-2025		
E/O019 (#)	Bromate	<0.9 µgBrO ₃ /l	05-Aug-2025		
E/O019	Chlorate	<0.008 mg/l	05-Aug-2025		
E/O019	Bromide	155.2 µgBr/l	05-Aug-2025		
Comment: Anions_O019A: Accreditation removed due to matrix interference. Chlorite/Bromate low AQC failure. Treat results as indicative.					

Details of the test method(s) used and performance characteristics of the method(s) are available on request.

KEYS Method :- Testing laboratory - E = EDINBURGH I = INVERNESS

(#) = Non UKAS Accredited (^) = Accredited under flexible scope (*) = Sub Contracted (~) = Sampling / On- Site Testing

Specification :- PCV = Prescribed Concentration Value. Values taken from The Public Water Supplies (Scotland) Amendment Regulations 2022.



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Test Report

Edinburgh Laboratory
Juniper House
Heriot Watt Research Park
Avenue North
Edinburgh
EH14 4AP

Email: ScientificServicesProjects@scottishwater.co.uk

Inverness Laboratory
31 Henderson Drive
Longman North
Inverness
IV1 1TR

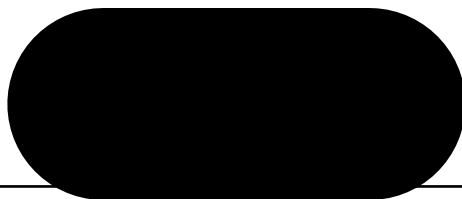
Scottish Water

Trusted to serve Scotland

Report Version : 1
Report Date : 19-Aug-2025
Report No. : 1294996

Laboratory Ref.: 20221284

Authorising Signature:



David Jolley - Laboratory Manager

DISCLAIMER(S)

All microbiological parameters are confirmed results unless stated otherwise.
Opinions, interpretations and comments expressed herein are outwith the scope of UKAS accreditation.
Unless otherwise stated - condition of the sample on receipt was satisfactory
Results relate only to the items tested.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.
Sample matrix information and date and time of sampling provided by customer. Incorrect information can affect the validity of the results. The results quoted apply to the sample as received.

Uncertainty of Measurement information relating to UKAS accredited sample results can be supplied upon request. Uncertainty is an estimation that is based on the principle described in ISO 11352:2012 Water quality - Estimation of measurement uncertainty based on validation and quality control data.

END OF TEST REPORT

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