

FIRE FLO

Case study – Brimscombe Port Mill



Figure 1: main flow and return manifolds for the FireFlo collector system with FireFlo panels submerged below

Site location	Brimscombe Port, Stroud
Year of install	2021
Heat pump maximum thermal output	180 kW
Number of FireFlo panels	35
Installation arrangement	15 x wall mounted panels (5 x 3 panel assemblies with flow and return to each panel) 20 x non-standard vertical bed mounted (10 x 2 panel assemblies connected in two banks of 5)

Table 1: Brimscombe port installation details

As part of the local council's commitment to net zero carbon emissions, the existing gas boiler system was removed at Brimscombe Port Mill and a heat pump system utilising FireFlo collectors was installed.

The FireFlo assemblies are installed directly in the flow of the river. A combination of panels mounted directly to the masonry wall and panels mounted to the river bed has been used.

The various collector loops have been connected to flow and return manifolds with commissioning valves used to balance the flow through each loop.



Figure 2: vertical bed mounted FireFlo panels (centre) alongside wall mounted panels (left)

The bed mounted assemblies were connected in reverse return configuration using stainless steel manifolds manufactured by Renewables First (see Figure 3).



Figure 3: vertical bed mounted panels connected in reverse return configuration

As the installation area was submerged during installation, the flow and the return pipework was partially assembled prior to installation to prevent contaminated water entering the system (see Figure 4).

Figure 4 also shows how the assembly was slung from both ends during the lifting process, in line with the FireFlo Installation and Maintenance Guide.



Figure 4: 3 panel FireFlo assembly being lowered into the watercourse

Figure 4



Figure 5: 20 off bed-mounted vertical FireFlo heat collectors after one year of operation



Figure 6: 2 rows of 3-panel FireFlo wall-mounted assemblies after one year of operation