Derwent Dam wall showing the 2 towers

The Reservoirs

There are 3 reservoirs in the Upper Derwent Valley (UDV).

Howden is the highest. Construction commenced in 1901 and was completed 11 years later in 1912. When full, it holds 20% of the water in the valley. The wall was designed in the Victorian period in the Gothic style and is constructed of gritstone. It has the largest watershed, collecting water from the surrounding moorland. The water contains peat so

Howden is effectively used as a settling pond before passing it into Derwent Reservoir.

Derwent is the middle reservoir. It was completed in 1916 after 14 years of construction. It is almost identical to Howden in design, materials and capacity. Derwent's immediate watershed are the valley sides and so is limited. Later in the winter when Howden Reservoir is full, it overflows into Derwent. However, in the autumn when the water level is at its lowest, a pipe from the River Ashop in the next valley is important in refilling the reservoir and this emerges next to the west tower. This was completed in 1930 and increased water availability by 30 million litres per day. The pipe and outlet are only just above Derwent Reservoir's top water line so any increase in wall height would mean that water would flow in the opposite direction. Severn Trent Water (STW) have admitted that the pipe would have to be sealed depriving Derwent Reservoir of an essential supply when it was most needed. Derwent Reservoir is the start of the aqueduct which takes water to the Bamford filtration works and on to the East Midlands including cities such as Derby, Nottingham and Leicester. When full, water from Derwent Reservoir cascades over the wall into Ladybower Reservoir.

Howden and Derwent Dam walls necessitated the use of 1.25 million tons of gritstone from Bole Hill Quarry at Grindleford which was brought in by a mini railway.

Ladybower is by far the largest reservoir holding 60% of the water in the valley by means of an earth dam wall. It was constructed between 1935 and 1943 using 100,000 tons of concrete, 100,000 tons of clay and 1,000,000 tons of earth. It serves 3 purposes:

1) Due to a longstanding agreement, it supplies Yorkshire Water (YW) with water for its Rivelin treatment plant via a pipe through the hillside. STW have the option to opt out in 2035.

2) It keeps the River Derwent flowing within parameters set by the Environment Agency (EA)

3) Should Derwent and Howden be too low, water can be pumped up to the Bamford filtration works. STW are reluctant to

use this option due to the cost of electricity