The tour will take in three Earth embankment retained reservoirs with two, Rhymney Bridge 1 and 2, being at the head of the Rhymney valley and Shon Sheffrey at the head of the Sirhowy valley, South Wales. The reservoirs are interlinked as a raw water resource by pipelines and can also receive waters indirectly from the Carno reservoirs further along the A465 Heads of the Valleys road. The tour will leave the university at 13:00 and return by 17:00.

**Shon Sheffrey** reservoir, completed in 1896 with an overflow level 1.8m lower than the present level, was built to supply the Tredegar area. The dam crest and overflow level were raised in 1945–48. The reservoir is impounded by an earthfill embankment dam about 260m long, with puddle clay core. Most of the dam is straight, but a short length at either end is angled upstream. The overflow weir, together with an auxiliary spillway, are located at the right (south) abutment. The wet-well valve shaft is located within the upstream shoulder just upstream of the crest towards the right end of the main section of the embankment and discharges via pipework passing through a tunnel that is plugged in line with the core of the dam. The longest axis of the reservoir, which is about 500m long and 250m wide, is oriented approximately northwest to southeast, with the dam at the southeast end.

Recent improvement works at the reservoir have consisted of a new RC concrete spillway with Labyrinth weir to accommodate the PMF. Renewal of the draw-off pipework and valves within the wet-well shaft. Pressure grout curtain along the line of the core of the dam to tackle seepage through the core and along the side of the spillway interface.
Rhymney Bridge 1 and 2 reservoirs are Pennine type dams that are in cascade along the river valley of the Rhymney sitting just north of the A465 Heads of the Valleys road. The N° 1 reservoir was built by the Rhymney Coal and Iron Company in about 1860. In 1901, the company completed construction of the N° 2 reservoir a short distance downstream. Following this the direct supply from the N° 1 reservoir was taken out of service with flows being released down the stream to the N° 2 reservoir instead. In 1921 the reservoirs were transferred to the Rhymney Valley Water Board and later on to Dwr Cymru Welsh Water.

In 2013 the spillway at Rhymney Bridge 2 reservoir failed due to uplift pressures following a storm event. Emergency repairs were carried out at the time and more recently permanent repairs have been undertaken. These have included a new reinforced concrete spillway at and grouting works to stem seepage, as well as the refurbishment of the batter valve (Penstock) at Rhymney N° 1.

![Figure 3. Ariel Photo of Rhymney Bridge No.1 & 2](image)

![Figure 4. New Spillway at Rhymney Bridge No2](image)

![Figure 5. Refurbished Batter Valve at Rhymney Bridge No1](image)