

Royal Glamorgan Burst

Overview:

Site Location:	>> Royal Glamorgan, Llantrisant
Client:	>> Welsh Water



The existing 500mm pumping water main runs from Cefn Hengoed in the Bridgend Valley to tanks located in the hills of Llantrisant. The main is constructed out of steel and was laid in the 1970's. In the 1990's a section of main was diverted to allow the Royal Glamorgan Hospital to be built. The pipe material for the diversion was GRP. It is a DCWW strategic main which serves all the retail and residential properties within the Llantrisant catchment area. It also serves all the major industries in the area, e.g. BA, The Royal Mint, Glamorgan Hospital and The Blood Bank. As a result of the burst, 1000m³ / Hr (1m³ = 220 Gallons) was being lost.

Ynysmaerdy Section— The burst was situated in the River Ely. Access to the site was extremely difficult due to the terrain being heavily wooded. The River Ely was diverted to create a working area with the use of block stone and puddle clay. Temporary works were installed in the form of trench boxes and Larsen piles. The existing main was covered in concrete which had to be carefully hammered off. The volume of water was kept down by using 4no 4" pumps and 2no 2" pumps. Repair fittings in the form of an encapsulating collar were fabricated by UTS and installed over the leaking pipe.



BA SECTION—The location of the burst main on the 500mm GRP main was situated in the grounds of the BA site within a lawned area. A bogmat road was constructed over the lawn area to gain access to the burst. The GRP main had ruptured on a 33' bend covered in concrete. All concrete had to be carefully removed from the GRP main without damaging the remaining pipe.



Works were completed within 24 hours.



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