

Crai Water Supply Refurbishment Project

major rehabilitation of supply network in Swansea Valley

The rehabilitation of 100 year-old Crai water network trunk main in the Swansea Valley area is the cornerstone of Dwr Cymru Welsh Water's commitment to improving the quality of water supply in the area during AMP3. Water carried by 64km of twinned 17" and 24" pipeline from the Crai storage reservoir in the Brecon Beacons National park to the Swansea Valleys suffers from high levels of iron, which a programme of sampling has attributed to internal corrosion of the mains.

It was recognised from the outset, that the level of iron deposition in the main would restrict the operation of valves and changes of flow. These operational difficulties would make re-zoning of the supply, in a manner that did not impose a significant risk of introducing discoloured water into supply, a defining factor in deciding the rehabilitation strategy.

Team

A team made up of people from *Dwr Cymru Welsh Water*, *United Utilities* and *Laing Utilities* have developed a programme of improvements to the network that incorporates the Crai and Townhill Trunk Main AMP3 rehabilitation schemes, as well as allowing for the abandonment of Bryncoch Water Treatment Works. It permits the rehabilitation of long sections of the Crai trunk main with the least risk of creating and supplying discoloured water to customers.

Delivery of the entire project is co-ordinated by a team that represents all of the parties in the Water Network Team, with elements of work including pipe, pumping station and reservoir refurbishment carried out by both *Laing Utilities* and *United Utilities* working to a single integrated programme.

A new operating protocol has been developed to allow construction activities to continue alongside the day to day operation of the existing mains without compromising water quality, day to day operations and production was signed up to by all parties involved and has been continually refined and improved as the contract progresses and the new works are incorporated into the existing network.

A customer liaison plan is in place to ensure that as work progresses, the 29,000 customers who are directly fed from the main are kept informed of any changes, ranging from short-term supply interruptions to local traffic management, which may affect them personally.

Focusing on customers

From day 1 the project has been about teamwork. All of the partners involved have key parts to play, ranging from planning and carrying out construction (*Laing Utilities*), to managing the mailing of over 30,000 customers letters (*Logica CMG*) to handling customer calls and enquiries (*Thames Water*) to running the water network whilst the refurbishment is underway (*United Utilities*). Key to the success of the project has been, and will continue to be the way in which all parties have worked together,

The overall scheme comprises 45km of new mains, 28km of relined mains and a pumping station refurbishment. The route passes through some of the region's most environmentally and archaeologically sensitive areas but through consultation with the relevant bodies, the integration of liaison officers into the site teams and developing sympathetic working methods, work to minimise the effect of the



Rehabilitation 100 year old twinned water network trunk main (courtesy Welsh Water Alliance).

new main on the environment has been very successful.

Completion of the scheme is programmed for early 2004 and will restore flexibility to the Crai mains network, enhance security of supply and improve water quality to the customer for many years to come. ■

Note: *The Editor & Publishers thank Dwr Cymru/Welsh Water & the Water Network Team for providing the above article.*