

Talking point

Collaboration is the key to breaking new ground in the water industry, according to Malcolm Eddleston



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The water industry is going through a major change in focus that will have a significant impact on water companies and the supply chain. It is now almost 25 years since the water industry was privatised and in that time more than £100bn has been spent on upgrades, with much of that money going on capital investment.

In the next Water Asset Management Plan for 2015-2020 (AMP6) it will be increasingly important to work with all project stakeholders to identify joint solutions that really meet the underlying customer need. The emphasis will be on outcomes rather than outputs in the form of major capital works.

Collaboration will be key to success in AMP6 and the ground engineering sector will benefit from this approach. Geotechnical innovation has been the cornerstone of many new developments, but this is especially true in the water sector, where many of the structures are below ground.

The ground engineering industry doesn't lack the drive to innovate, but sometimes its position in the supply chain limits the opportunities.

This is a particular issue on water projects where delivery programmes are more compressed compared to other sectors. The AMP6 arrangements will provide the opportunity to have influential input earlier in the project life cycle.

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In many instances water projects will be looking to make the most of their existing assets. As the call to construct new underground structures such as large deep tanks or tunnels for wastewater or water treatment has now largely passed, clients will be looking to geotechnical engineers to help improve or enlarge existing assets.



Abberton Reservoir

**Photograph Courtesy of Essex & Suffolk Water*

A good example is the major dam raising at Abberton in Essex by Essex and Suffolk Water to increase capacity by 58%. The stabilising of the Thirlmere Aqueduct on the hillside at Nabscar, which won a GE Award in 2011, is another example as the work allowed United Utilities to extend the life of the 110-year-old asset to ensure water supplied for Manchester.

Geoenvironmental inputs can also lead to considerable cost savings and benefits. At Fleetwood Wastewater Treatment Works construction costs were cut by 20% through diversion of over 75,000m³ of excavated soil landfill and 577t of carbon emissions were avoided through excavated soil reuse. The skills of geotechnical and geoenvironmental engineers will need to be directed towards outcomes rather than outputs through evaluation and reuse of existing infrastructure, such as reuse of piled foundations of existing tanks. The skills once used to identify and manage ground risk in constructing complex underground assets will be required to assess the current performance of existing assets.

This knowledge will allow asset life to be extended or identification of the potential to reuse the asset for a different purpose to provide an optimal totex – a balance between capital and operational expenditure – outcome to the benefit of the water rate payers.

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