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Teamwork

A Dual Approach at Lamesley

With two different types of reeds planted across an eight-hectare wetland site, the Authority's minewater treatment scheme at Lamesley in Gateshead is the largest it has built to date.

Lamesley is also a ground-breaking scheme for the Authority as it is the first to deal with the treatment of polluted minewater and sewage effluent on the same site.

A tributary of the River Tyne, the River Team is an urban river that until recently was one of the most polluted rivers in Britain. Now the water quality of the water has improved thanks to the joint scheme, which has significant benefits for the environment.

Under the watchful eye of the Environment Agency, the Authority worked in partnership with Northumbrian Water to solve the issue of improving their separate discharges into the River Team by collaborating on the development of the wetland scheme.

The project is part of the River Team Revival Project, a partnership initiative supported by the European Regional Development Fund. Its main aim is environmental improvement of the whole of the River Team catchment area through partnership with stakeholders such as the Environment Agency, local authorities, the Coal Authority and Northumbrian Water.

Working jointly, the Authority and Northumbrian Water devised a sustainable solution through passive treatment of the two discharges using a man-made wetland scheme. A series of attractively designed reedbeds have generated a substantial area of beneficial

habitat, as well as offering economical advantages in terms of land requirements and enhanced pollutant removal.

Minewater and final sewage effluent are combined in a mixing chamber before being distributed evenly to the reedbed cells. The reeds then gradually clean the combined flow as it travels through the cells.

Featuring more than five hectares of reedbeds over the eight hectare site, the wetlands have been designed to provide beneficial habitat for wildlife while fulfilling their original purpose of improving the quality of the discharge into the local river.

Measures taken to enhance the habitat for wildlife at Lamesley include islands, further areas of open water around the edge of the reedbeds, as well as areas of marginal planting. Raised viewing areas have also been provided to enable members of the public to have unrestricted views across the site.

The story of how the reedbed scheme has been achieved is illustrated on two information boards which will be put in place towards the end of 2005 when this exemplary project is complete.

Says Alex Norton, Assistant Development Manager in the Authority's Estates and Environmental Department: "Combining the minewater and final effluent streams in a reedbed treatment system is a unique method of pollution removal that has not been used before. This approach provides a greater level of contaminant removal than can be achieved treating the flows separately and manages to achieve this in an environmentally sustainable way."

"This sustainable solution to a water treatment problem not only cleans up the River Team but also provides wider landscape and biodiversity benefits for the local community to enjoy."

Reedbeds support a wealth of wildlife, including several of Britain's rarest bird species. In addition to wildlife relying specifically on reedbeds, water voles, otters and many other animal species, typical of more general wetland habitats, use reedbeds from time to time. Over 700 invertebrate species are associated with reedbeds in the UK, and they are also ideal locations for native British amphibians, which in turn attract grass snakes.