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CURRENT TRENDS IN THE IMPROVEMENT OF DISCHARGE QUALITY IN SCOTLAND

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EXTENDED ABSTRACT

The improvement of the quality of aqueous discharges is a key criterion in Scotland for meeting a number of European Directives which relate to surface and ground water quality. The Urban Wastewater Treatment Directive (UWWTD) has been implemented in all of the major conurbations in Scotland and the current focus is on smaller communities. The Water Framework Directive (WFD) requires a radical examination of water bodies of all types, particularly with regard to supporting habitats; and the Integrated Pollution Prevention and Control regulations (IPPC) are forcing industrial dischargers to examine in detail their historical discharge practices.

This paper reviews some of the approaches being implemented in Scotland to meet these directives and regulations, drawing on specific examples from around the country. •Coastal issues are addressed using the principles of coastal partnerships in which strong area groups are formed between polluter, regulator and local interest organisations in a way that the needs of all stakeholders are met. •Of particular interest currently are the problems caused by diffuse pollution from both agricultural and urban areas. A broadly based programme of measures generically known as Sustainable Drainage Systems are being applied to address these problems. •Private capital is being brought in to address the point source problems of the larger conurbations, particularly on the coast. •In complete contrast, the rural nature of much of Scotland means that many houses and small communities either have no sewage treatment or it is entirely inadequate. In reaction, a range of very small packaged treatment plants have been developed to comply with ever more stringent emission requirements. •The final example is an example of an high rate industrial treatment process which has been developed for the brewing and distillery industries.

All of these examples are relevant to the different conditions found in Scotland, and the authors give examples from specific studies in which they have been involved in order to give an overview of the range of approached to the control of aqueous discharge quality currently in use throughour Scotland.

Key words Discharge quality, Scotland, SUDS, Distillery Effluent, Brewery Effluent, Grabbr, Sequencing Batch Reactor