

THE GREATER DUBLIN STRATEGIC DRAINAGE STUDY: PART 2 - INTRODUCING REGIONAL POLICIES

Sellers, E.¹, Grant, J.¹ & McEntee, D.²

¹*GDSDS (, at National Management Centre, Clonard, Sandymount Road, Dublin 16, a joint venture between PH McCarthy & Partners, Hyder Consulting Ltd, M C O'Sullivan & Co. Ltd and H R Wallingford Ltd.)*

²*Design Division (Drainage), Dublin City Council, Block 1, Floor 2, Civic Offices, Fishamble Street, Dublin 8.*

A key outcome of the Greater Dublin Strategic Drainage Study (GDSDS) will be a set of integrated policies covering various aspects of drainage, including environmental management. The objective of the environmental management policy is focussed on the development of sustainable drainage systems. To this end, current best practices in sustainable urban drainage systems (SUDS), combined sewer overflow (CSO) operation and overall water resource management, both in Ireland and internationally were examined for their applicability to the Greater Dublin region.

Sustainable drainage systems have been utilised worldwide where technical criteria for improving water quality are reasonably well established. In contrast, SUDS are only just being implemented in Dublin and technical feasibility, land-take, maintenance and legal responsibility are considered the main constraints. Whilst future Irish criteria for SUDS is recommended to be of at least CIRIA standard, further research is required into Irish conditions, with particular regard to the first flush, regional attenuation and applicability to different types of development. Moreover, to be fully effective, sustainable drainage in Ireland must be integrated into the larger frameworks of integrated water management, site based management and river catchment management.

Integrated water management is evolving as a means of improving on conventional drainage practice by managing the entire life cycle of water in urban areas. Stormwater, greywater and blackwater are being re-evaluated as resources to be utilised through the use of retention ponds, underground tanks and reed beds. The feasibility of achieving integrated water management needs to be further examined in the Greater Dublin region.

Environmental impact assessment (EIA) will play an important role in sustainable drainage at both strategic and local levels. At the local level, site-based management plans are suggested as a way for planning authorities to gain confidence that all stakeholders understand and can manage the water quality impacts of a proposed development. Sediment erosion control plans, river rehabilitation and landscape conservation will also form important elements of both EIA and Strategic Environmental Assessment (SEA).

Water quality management could be subsumed under local catchment management plans, which in turn could be nested within the Eastern River Basin District (RBD) project. This framework should encompass hydraulic modelling of the storm and foul drainage systems with particular emphasis on CSOs and the use of the UK Urban Pollution Management Procedure (UPM). With greater legal power, better opportunity for community involvement and more integrated hydrological / hydraulic / water quality assessments, local catchment plans could become a preferred tool for environmental management.

Local Development Plans are considered the key planning instrument in implementing policy initiatives, although existing legislation must be examined to ensure that sustainable drainage is adequately covered. Finally, leadership and funding from national government and active participation from the community and the private sector are key elements in delivering sustainable development in full.

Keywords: Environmental policy, sustainable drainage, integrated water management, environmental impact assessment, catchment management.

Note: At the time of going to press, the final report on this study had not yet been issued so a full paper could not be included here. It is expected that the full paper will be distributed by the authors at the Conference.