

THE GREATER DUBLIN STRATEGIC DRAINAGE STUDY: PART 1 – THE SITUATION NOW

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With recent strong economic growth and high rates of urbanisation, the Greater Dublin Area is experiencing both increasing pressure on its sewerage system and ongoing deterioration in water quality. Extensive studies into water quality in urban river and coastal environments confirm the polluting effects of urban drainage associated with discharges from urban stormwater and foul networks.

Local authorities recognise that traditional drainage practices and aging infrastructure have led to much two way flow between the foul and storm networks. Moreover, the increase in paved area and reduction in river base flow due to less direct infiltration has led to higher pollutant loadings and greater stress on the aquatic environment.

Latest EPA water quality monitoring data now indicates that currently 70% of river sites monitored in Greater Dublin are polluted, representing a deterioration from the previous monitoring period. Based on this data, it is estimated that currently only 9% of river waters are likely to comply with EU Water Framework Directive (WFD) requirements.

Significant steps have been taken in recent years to quantify and address these problems. Many local authorities are undertaking infrastructure surveys, hydraulic modelling and sewer cleaning/remediation, while others have developed stormwater management policies that incorporate best management practice (BMP). Environmental monitoring and the preparation of Water Quality Management Plans (WQMPs) have also been undertaken for various rivers. The success of current pilot catchment management projects in Ireland has highlighted the advantages of continual water quality monitoring, stakeholder consultation and a catchment based approach.

Further work is now needed. It is recognised that the need for a more consistent approach to drainage involving all stakeholders and increased action is required to implement WQMPs and BMP 'on the ground'.

Consequently, the seven local authorities in the Greater Dublin Area have commissioned the Greater Dublin Strategic Drainage Study to identify policies, strategies and works for developing a sustainable drainage system across the region. This study involves the hydraulic modelling of over 50 drainage catchments and the preparation of regional policies. These policies aim to facilitate a uniform and consistent approach to the provision of urban drainage infrastructure and to help Local Authorities comply with their legal responsibilities, their planning and development objectives and to conform to good international practice. The establishment of an Eastern River Basin District under the WFD will be of paramount importance in driving the future implementation of the policies.

This paper examines the existing water quality in the Greater Dublin Area, discusses existing drainage practices and policies and highlights why new policies are required in order to achieve legislative compliance.

Key words: Water Framework Directive, good water quality status, sustainable drainage systems, best management practice.

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.