

## Research and Development in Urban Storm Drainage (Related to the Wallingford Procedure) - The WRc Perspective

### Synopsis

It is argued that the circumstances and purposes for which WASSP is now generally employed are rather different to those envisaged at the time of its inception. The present emphasis on rehabilitation of existing, large, complex and frequently irrational sewer systems is identified as the principal underlying factor dictating future development needs for the Wallingford Procedure. Consequently, three fundamental areas for development are suggested:-

- (1) sewer flow quality modelling
- (2) enhanced existing modelling capabilities
- (3) making the procedure easier to use

The first of these capabilities is highlighted by the need, as set out in the Sewerage Rehabilitation Manual, to look in an integrated fashion at all aspects of sewerage performance, including pollution. The second need comes from the wide ranging and complex nature of the catchments to which the procedure is now applied. Whilst the third requirement is dictated by the volume of work which is envisaged to be undertaken in the near future, which will require non-specialist staff to be able to do work of this type.

The second part of the paper refers to the development activities which are currently in hand in respect of these requirements. Reference is made to the MOSQUITO quality model, but discussion is restricted to the basic nature of the model (pollutograph output) and its mode of application (need for liaison with water quality planners). In respect of the other two development areas, forthcoming software developments are identified and the potential role of expert systems is briefly discussed.