

Points Raised at Workshop on Simplification

- 1 It is important to consider the purpose of the simplifications. Work may range from planning, which may need a macro-system to detailed analysis which may require a much lower level of simplification.
- 2 There is a wide range in the amount of detailed data available at the start of a project.

Simplification may be used to reduce the number of pipes for convenience or to reduce the amount of data to be collected.
- 3 Simplification is time consuming and there was some questioning as to the need for simplification if the data was available and the computer could handle the system. The general feeling was that it is advantageous to simplify.
- 4 Simplification is mainly by pruning or merging.
 - a) Merging involves the averaging of slopes, increasing lengths, selecting an appropriate diameter and roughness. The Wallingford Procedure advice (e.g. 10% difference for slopes) may be used as a first stage but ranges outside these limits are often used. Precise ranges have not yet been defined and decisions are generally based on engineering judgement.
 - b) Pruning of pipes leads to loss of storage and larger connected areas. Some concern was expressed about the reduction in flow times. Storage may be allowed for by additional manholes but this only helps the surcharged condition.
- 5 Allowance for storage loss caused by neglecting private drainage is allowed for by providing an additional storage volume per property or use could be made of the method proposed by Ron Chapman of WRC.
- 6 The group was unanimous in its support of the work being done by WRC and Surrey University. A process which at least semi-automates simplification and takes away time consuming calculation would be very useful.
- 7 Members of the group had run WASSP with the full catchment data and then with the simplified data. Reduction in the number of pipes to between 1/3 and 1/10 had given good results.
- 8 A model to replace the sewered sub-area model - mentioned earlier by Roland Price - would be of considerable help particularly with the planning models.
- 9 Reinforced or dual pipes have caused problems. Simplifications have appeared to work with typical design storms but then failed to give good results with verification.
- 10 Advice on simplifying pumping stations would be welcome and hopefully will be available when user note 11 is produced.