

**Review of Procedures for Operation and Maintenance of the Distribution Network  
The Use of Computer Modelling and other Techniques to Assess Potential  
Discolouration Problems from Pre Planned Operations  
Checklist for Assessment**

Water Company:

**SCOPE**

The document is expected to cover the Company's approach to the use of computer modelling and other techniques to identify any potential discolouration problems prior to undertaking pre planned operations on the distribution network.

**GENERAL**

Does the Company give documented guidance on the use of computer modelling or other techniques to assess the impact of pre planned works on distribution performance (Yes or No)?

If not, go straight to BBV Assessment of Company procedure at the end of the checklist

Company document title:

Company document reference

Date when the document came into force

**NETWORK MODEL COVERAGE**

Does the Company construct and maintain models of their distribution network (Yes or No)?

If so, what is the approximate percentage coverage of the Company supply area (tick in box).





Is the level of detail of the individual models such that most of the mains in the distribution system that each covers are included in the model (Yes or No)?

**NETWORK MODEL APPLICATION**

Does the Company use its network models for performance assessment of some or all of its pre planned works (Yes or No)?

Does the Company classify its pre planned works into those that require performance assessment by network modelling and those that do not (Yes or No)?

If there is some form of classification (e.g. minor works that will have no impact, major works involving the rerouting of supplies), describe it below.

Does any requirement for performance assessment of pre planned works include temporary as well as permanent changes to the distribution network (Yes or No)?

Does the assessment of pre planned works include hydrant flushing operations (Yes or No)?

Does the assessment of pre planned works include other mains cleaning operations including mains rehabilitation (Yes or No)?

Does the performance assessment include assessing the risk of a discolouration of supplies (Yes or No)?

If so, does this include:

Identification of those parts of the network that are vulnerable to discolouration of supply problems (Yes or No)?

Those mains that will experience a change in flow direction (Yes or No)?

Those mains where velocities will increase (Yes or No)?

Guidance on the maximum velocities for a range of pipe diameters above which discolouration of supplies could occur (Yes or No)?

Criteria to judge whether the operation should be carried out at times of low demand to minimise the potential risk of discolouration of supply problems (Yes or No)?

**OTHER TECHNIQUES**

Does the Company employ other techniques to assess performance of pre planned works on the distribution network (Yes or No)?

If so, describe these below.

Do these techniques consider the impact of the pre planned works on the potential risk of discolouration of supply problems (Yes or No)?

**BBV ASSESSMENT OF COMPANY APPROACH**

Does the Company have a documented approach for modelling pre planned operations to identify any potential discolouration of supplies problems (Yes or No)?

If not, the recommendation is that where the Company has network models, an approach should be drafted and the further assessment below is not required.

**Network model coverage** - Does the Company have adequate model coverage and detail to use network modelling for performance assessment (Yes or No)?

**Network model application** - Does the Company approach provide sufficient guidance to assess the potential risk of discolouration of supply problems from pre planned works and does the guidance extend to all activities that might cause problems (Yes or No)?

If not, identify those areas where the approach is considered deficient.

**Other techniques** - Where other techniques are used for performance assessment, is the associated guidance on the potential risk of discolouration of supplies considered sufficient (Yes or No)?

If not, identify those areas where the procedure is considered deficient.

**BBV Quality Assurance**

Checklist completed by  Date

Checklist checked by  Date