

## B4 QUALITY ENHANCEMENTS

### Outline

Scottish Water should set out in section B4 a detailed overview of its proposed quality enhancement programmes for the water and sewerage services. Detailed scheme-specific information must be provided in the accompanying draft investment programme submission, and this must reconcile with the commentaries in this section and to the output of Quality & Standards III work packages. Scottish Water should not repeat these commentaries in other parts of its business plan either in part or in full, but should cross reference to section B4 where necessary.

In the accompanying commentary, Scottish Water should set out its strategy for dealing with any additional quality requirements placed on it. The strategy must explain Scottish Water’s interpretation of the new requirements, particularly new legal obligations and guidance from ministers.

We suggest that this part of Scottish Water’s submission is divided into three sections covering the water service and three sections covering the sewerage service. This structure provides a framework for Scottish Water to explain its strategy for delivering the quality enhancement programmes.

<b>Part B4 – Quality enhancements</b>	
<b>Water service</b>	
Section 1	The quality enhancement obligations (water service). New standards/requirements placed on Scottish Water.
Section 2	The quality enhancement programme (water service). Scottish Water’s explanation on how to meet the standards.
Section 3	The expenditure implications of the quality enhancement programme (water service).
<b>Sewerage service</b>	
Section 4	The quality enhancement obligations (sewerage service). New standards/requirements placed on Scottish Water.
Section 6	The quality enhancement programme (sewerage service). Scottish Water’s explanation on how to meet the standards.
Section 7	The expenditure implications of the quality enhancement programme (sewerage service).

### Sections 1 to 3 – Quality enhancements (water service)

Scottish Water should provide a strategic view of the enhancements to be carried out at water treatment works and in the distribution system. This must highlight the key issues, and explain why the proposed solutions have been chosen.

Scottish Water must demonstrate that the impact of any new quality requirements as a whole has been considered, and that the chosen programme is the most appropriate whole life solution for dealing with all the quality obligations. These explanations should be at a strategic level, the details of the work will be provided in the accompanying investment plan submission.

Scottish Water should explain its strategy for dealing with the key issues affecting the business in particular those arising as a result of the Quality & Standards III process. This strategic information should detail Scottish Water's proposals for dealing with the following issues. Should Scottish Water feel that there are areas of concern that are not specified below, it should state these along with any proposed strategies it has relating to them.

- **Deteriorating raw water quality/water treatment**

Schemes included in this programme must be supported by the DWQR. Proposals should include measures to deal with deteriorating raw water quality, such as nitrate, and work to meet the new standards in the 2001 regulations.

- **Distribution system s19 renovation**

Work in this programme must be covered by a s19 authorisation (defined within The Water Supply (Water Quality)(Scotland) Regulations 2001).

Scottish Water should explain its policy for relining or renewing with reference to the condition grade of the mains. The length and indicative costs attributed to relining and renewal must be included. The grounds upon which these costs are based should also be justified.

- **Water Treatment Improvement**

Scottish Water should give details of work to meet the new standards in the 2001 regulations). This should include the number and size of any schemes and the proportion of the distribution system affected. The need for the work must have been justified to the DWQR. Scottish Water should also explain how much of the total costs of the schemes has been allocated elsewhere, especially to supply/demand.

- **Lead communication pipe replacement**

Scottish Water should provide details of numbers and costs within actual or notional programmes of lead pipe replacement agreed with the DWQR. The grounds upon which the assessment of numbers and costs are based should also be specified.

Scottish Water should give details of further work needed to comply with the new lead standard. Where Scottish Water are replacing lead communication pipes under infrastructure renewals as part of a long-term plan, the number and the costs attributed to this must also be clearly set out.

- **Consumer acceptability**

Work in this programme must be supported by the DWQR. Amongst other measures, water treatment works improvements and mains renovation programmes to improve the acceptability of drinking water must be included here.

- **Environmental impact of water abstractions**

Scottish Water should give details of the measures proposed to deal with the environmental impact of water abstractions, and explain how the proposals satisfy the requirements of SEPA and any other interested parties (such as Scottish Natural Heritage for example).

- **Security and Emergency Measures Direction**

Details of proposals to comply with the requirements of the Direction should be set out, and an explanation given of how the proposals satisfy the requirements.

- **Other issues**

Scottish Water should set out any other important quality issues and how any new legislation and guidance has been translated into a compliance programme.

## **Sections 4 to 7 – Quality enhancements (sewerage service)**

Scottish Water should explain its overall strategy for meeting legal obligations affecting the sewerage service, and explain the phasing of planned compliance in relation to legally required compliance dates. The impact of both European legislation and national requirements on Scottish Water assets must be explained.

Scottish Water should explain how it is implementing the guidance given by ministers and SEPA. For example:

- **Improvements to intermittent discharges**

Scottish Water should explain its plans and timescales for dealing with unsatisfactory intermittent discharges. This must include a commentary on progress with the programme set out as part of Quality & Standards II. Scottish Water should explain how the guidance given by ministers has been interpreted, and the progress made with SEPA on setting priorities.

- **Improvements to sewage treatment works**

Scottish Water's interpretation of ministerial guidance and the timescale for carrying out the work on improvements, and to prevent deterioration in river water quality needs to be set out. Scottish Water should explain how any new designations and interpretation of standards affects its assets. Scottish Water

should give the number of works and the combined equivalent population of the discharges affected. An indication and justification should be given to any forecasted changes of sewage loads to be treated over the forthcoming period. Scottish Water should also explain how much of the total costs of schemes has been allocated elsewhere, especially to supply/demand and capital maintenance.

- **Disposal of sewage sludge**

Quality & Standards II provided for Scottish Water to meet new statutory requirements for the recycling of sludge to agricultural land, and to deal with increased volumes of sludge anticipated in consequence of improved wastewater treatment standards.

Scottish Water should set out its sludge management strategy in a self-contained section suitable for sharing with Scottish Ministers and SEPA.

Scottish Water should set out its sewage sludge management with reference to the various obligations and other factors that have shaped it. Scottish Water should explain why the strategy is being adopted in preference to alternative approaches. It is invited to provide evidence that other strategies have been considered and that the strategy chosen provides the optimal balance between cost-effectiveness, environmental sustainability, flexibility and economic/business risk. We seek confirmation that the chosen strategy is in line with government policy and an explanation as to how the

requirements and constraints of legislation and codes of practice, both current and anticipated have been taken into account.

Scottish Water should highlight and explain changes in the strategy from that set out and undertaken previously for Quality & Standards II.

The strategy should include a profile of how the quantity (tonnes dry solids) of sludge produced is forecast to change over the Quality & Standards III period and justify, by reference to the capacities of the companies sludge treatment centres, any increase in capacity proposed in Scottish Water's plan. Scottish Water should indicate the proportions of the forecast change in quantities that are attributable to growth and enhanced sewage treatment.

Scottish Water should provide a forecast of the proportion of its sludge production going to different recycling and disposal routes. Any significant change anticipated in the proportion going to various management routes over the period of the plan (and beyond, if appropriate) should be explained. In particular, justification is sought for:

- a) any increase in the proportion of sludge going to land being subjected to enhanced treatment, and
- b) any decrease in the proportion of sludge directed to the agricultural route

With regard to the latter, Scottish Water should explain how recent NVZ designations, changes in market sentiment and other factors (eg the P Index of soils) have impacted on the land bank available to Scottish Water, transportation and its strategy as a whole.

### **Sludge costs allocation guidance**

The net additional costs associated with the provision of on-site sludge treatment and disposal operations should be incorporated in the costs of the STW enhancement scheme being reported under sewage treatment in the quality and major capital projects database. These will include costs of providing and operating additional storage and thickening capacity and changes to the inter-process pipework and pumping arrangements. These costs should be reported in lines

The net additional costs associated with the transportation to, reception, treatment and storage at, and disposal from sludge treatment centres, of additional volumes of sludge produced by enhanced sewage treatment processes at satellite STWs should be reported in lines

The net additional costs associated with the enhanced treatment and different storage and disposal arrangements of existing sludge volumes should be reported in lines

Scottish Water should comment on the proportional allocation of expenditure between quality and supply/demand to dispose of increased quantities of sludge.

- **Measures to meet the Freshwater Fish Directive**

Scottish Water must explain the timescale for carrying out any work to meet mandatory standards for rivers designated under the Freshwater Fish Directive. As well as giving the number of works and the combined equivalent population of the discharges affected, Scottish Water should explain the proportion of the costs allocated to supply/demand.

- **Measures to meet the Bathing Waters Directive**

Scottish Water must explain the timescale for carrying out any work to meet mandatory or guideline standards for bathing waters under the Bathing Waters Directive. Scottish Water should give the number of works and the combined equivalent population of the discharges affected, and explain the proportion of the costs allocated to supply/demand.

- **Other issues**

Scottish Water should set out any other important quality issues and how any new legislation and guidance has been translated into a compliance programme. The number of works, timescale and costs of the work must be summarised.