SECTION H

ASSET INVENTORY

Reporting Requirements

Edition 7

ANNUAL RETURN 2008-09

EDITION CHANGES – SECTION H

Edition	Description of Change
7.0	**Guidance** The Guidance for splitting the Gross MEAV by condition and performance grade has been removed, especially the complete removal of Appendices 2 & 3, and references *to Asset Condition* and *Performance* and *system performance* in Appendix 1 have also been removed where necessary i.e.: under: "Purpose; Guidance; Condition and Performance; Commentary; and, Guidance to the Reporter".
7.0	**Table H1** **Columns removed** Col 4; Col 5 **Definitions amended** H1.1; H1.2; H1.3; H1.4; H1.5; H1.6; H1.7; H1.8; H1.9; H1.10; H1.11; H1.12
7.0	**Table H2** **Columns removed** Col 2; Col 3
7.0	**Table H3** **Columns removed** Col 2; Col 3
7.0	**Table H4** **Columns removed** Col 2; Col 3
7.0	**Table H5** **Columns removed** Col 2; Col 3
7.0	**Table H6** **Columns removed** Col 2; Col 3

ASSET INVENTORY

Purpose

The purpose of this section is to enable SW to summarise its surveys of its existing asset stock in terms of asset value, life categories and summary age profiles as at 31 March 2009.

The format of the Asset Inventory is based on Ofwat's Asset Inventory, Submission H, adapted for Scotland. This information will form a record of the asset stock as at 31 March 2009.

Guidance

SW shall submit a summary of its asset stock arising from its asset surveys, in terms of asset value, life categories and summary age profiles as at 31 March 2009, as set out in Tables H1 through H6 of these requirements.

SW shall update asset information annually through the Annual Return. This update shall be based on new information collected during the year and where appropriate grossed up on a statistical basis.

Inputs

Each line of Tables H2 through H6 requires some or all of the following data to be input. The Summary Table H1 is partly calculated from the other tables.

On completion of Tables H2 through to H6 SW should ensure that no input cell is left blank. If the information is unknown or not applicable, then a zero should be entered in the cell with an appropriate CG. This is true apart from in column block 2 (Summary age profiles) where if no defined code is applicable then the cell should be left blank.

Summary of Asset Stock

Except where stated, the number, length or area, depending on the units indicated by the Tables, of each asset type shall be allocated by size bands as defined in Tables H7 for the water service, H8 for the wastewater service and H9 for support services;

Gross and Net Modern Equivalent Asset Value (MEAV)

SW is required to confirm that the basis for the derivation of the unit costs for the purpose of calculating the gross Modern Equivalent Asset Value (MEAV) shall be the same as those used by SW to estimate the standard costs required from time to time in the Cost Base, and those used to prepare estimates of future expenditure requirements. Costs shall include land.

- The gross MEAV represents the equivalent replacement cost of the asset and should reflect both the most technically up to date new asset and the most technically up-to-date method of constructing that asset.

  It is apparent that the development of new technologies may cause the overall replacement costs of some assets to fall in real terms. For example the development of no-dig techniques in pipeline construction have, in addition to the lower costs associated with the use of modern pipeline materials, caused the cost of replacing some pipelines to fall. In such cases, the gross MEAV of existing assets should be reassessed to reflect both the up-to-date method of construction and lower material costs. SW should state in the commentary how they determined where the reassessment of an MEAV of a particular asset was appropriate because of the development of new technologies and materials.

- The net MEAV, for non-infrastructure assets shall be calculated on an asset-by-asset basis using the following relationship:

$$\text{Net MEAV} = \text{Gross MEAV} \times \frac{\text{Asset remaining life}}{\text{Expected overall asset life}}$$

- Where decommissioned (and "mothballed") assets or sub-assets have been included in tables the value and type of those decommissioned assets must be stated in the commentary. SW is required to confirm that the values of decommissioned assets are included in both the gross and net MEAV.

- The MEAV on all buildings owned and maintained by SW should be based on market value.

- Where land values exceed £100,000 or are greater than 15% of the value of the asset, the average unit price of land included in the gross MEAV valuations for each type of asset should be stated in the commentary. The value assigned to any land included in gross MEAVs should be identified separately in the commentary, along with the basis for this valuation. It is anticipated that existing use valuation will be the basis for the majority of land.

- The price indexation used to bring the MEAVs up to. SW is required to confirm that MEAVs have been indexed using the index as given in the Annual Return Reporting Requirements and Definitions Manual. Average 2008-09 (from 2007-08) financial year prices should be used.

Asset life categories

SW should disaggregate Gross MEAV by asset life categories on all tables (H1 to H6). Net should also be provided by asset life categories on H1.

Assets are categorised in terms of very short, short, medium, medium long and long life, non-depreciable, land and decommissioned as set out below:

Very short: assets having a life of up to 5 years, e.g. vehicles and computer equipment.

Short: assets having a life of 6 to 15 years, e.g. some ICA plant, telemetry, heavy vehicles and plant.

Medium: generally mechanical assets having a life of 16 to 30 years, e.g. pumping units and associated electrical plant, process plant, filter bed media, glass coated steel storage tanks.

Med/long: generally mechanical assets having a life of 31 to 50 years, e.g. filter bed structures, site fencing, GRP covers and kiosks.

Long: generally operational structures including service reservoirs, treatment work structures, inter-process pipe work and filter bed structures. Such assets will have a life exceeding 50 years.

Non-Depr: infrastructure assets (non-depreciable).

Dcm: decommissioned assets, which are not being used operationally, but are mothballed and are being maintained for future usage. This category does not include redundant assets, which are also out of operational service, but are not being maintained for future usage and are available for disposal.

Land: the land on which the asset type is situated and any surplus land.

Confidence grades

For Tables H1 through H6, the reliability and accuracy of information submitted shall be assessed and assigned a confidence grade in the columns headed CG.

Where SW is unable to follow or comply with the confidence grading structure outlined in the Manual above, it shall consult with the Commission.

Commentary

The report submitted by SW to the Commission shall state on a line-by-line basis:

- A commentary.
- All material assumptions made in deriving Table data.
- An outline of the methodologies used to derive the Table data.

Material in this context shall be taken as any assumption that singly or in combination with others, has a significant effect on the Table information.

This information, taken together with the relevant confidence grading, will give the Commission a clearer understanding of the robustness of the figures in the Tables.

For example, *material assumptions* shall include*:*

- Assumptions made in determining the allocations to size band, asset life category, for poorly understood assets such as communication pipes or non-critical sewers, etc;

- Assumptions made in establishing unit costs to determine the equivalent asset replacement cost.

- Assumptions made in determining the asset lives and the summary age profile descriptors.

And examples on *methodologies* shall include:

- Estimation of data to fill gaps by engineering judgement

- Data resulting from distribution zone studies or drainage area plans;

SW is required to provide a statement of the quality assurance procedures used in relation to the production of the submission.

Guidance for the Reporter

The Reporter should assess the consistency of Scottish Water's asset inventory with previous submissions and how the necessary data capture and storage is implemented across its business. Specifically, the Reporter should check that Scottish Water has provided clear reasons for any significant fluctuations in the total Modern Equivalent Asset Value (MEAV).

The Reporter should verify any similar 'additions' to the assessed inventory in Scottish Water's revision of its total MEAV. The Reporter should note any information provided by Scottish Water as to the refinement of estimated asset numbers, units or lengths. Any such information and/or justification should be presented in a manner consistent with the data and commentary in Section D.

The Reporter should note changes to the associated confidence grades, both in terms of accuracy and reliability, and examine the reasons attached to any movement in these assessments themselves.

The Reporter should ensure that Scottish Water has sufficient processes in place to ensure consistency of assessment across its business and asset base, and to limit the subjectivity of judgments.

The Reporter should highlight any commentary relating to asset 'serviceability' and Scottish Water's assessment of the capacity of asset groups to fulfil their specified role regardless of relative condition or performance.

The Reporter should comment on any observed change in the proportion of redundant and decommissioned assets, and how these contribute to Scottish Water's overall valuations.

The Reporter is asked to consider the potential for reporting the asset inventory for Support Services on a water/wastewater basis. The Reporter should seek to establish the code changes needed to facilitate such a split under the existing reporting mechanism.

Overall, the Reporter should make some judgement of the suitability of the MEAV measure for assessing the asset base. The Reporter should consider this methodology in relation to those used in other utility businesses, specifically the water industry in England and Wales.

APPENDIX 1

DEFINITIONS USED WITHIN THE ASSET INVENTORIES

These definitions are grouped into three categories: (a) Asset & Process, (b) Operation and Impact of the asset, (c) Cost of the Asset.

a) Asset & Process

"**Process**"
A series of operations performed in the collection, treatment or distribution of water or wastewater. The key process areas are:
- Water abstraction
- Water treatment
- Water distribution
- Sewage collection (via sewers)
- Sewage treatment and disposal
- Sludge treatment facilities and disposal
- Support Services – the provision of a management process to support the processes above

"**Sub-process**"
A discrete stage within a process that performs a defined key function. A sub-process is delivered by a sub-asset. Examples of sub-processes:
- Primary settlement
- Chlorination
- Sludge stabilisation (e.g. digestion).

"**Asset Category**"
The set of assets that provide the same type of process. For example:
- For water treatment works "SW1 treatment works" is an asset category.
- For sewage treatment works "Tertiary treatment only" is an asset category.

"**Asset**"
The set of one or more sub-assets designed to provide a particular type of process. Examples of this would include:
- Within the Water Service: A water treatment works; a distribution main; etc.
- Within the Wastewater Service: A sewage treatment works; a CSO; etc.
- Within Support Services: A computer; a vehicle.
Each asset will fall into a particular Asset Category, depending on the type of process.

"**Sub-Asset**"
A physical item, which has a cash value in terms of EARC, that enables a sub-process to be carried out. For example:
- A slow sand-filter on a water treatment works.

- An in-line sewage pumping station on the sewerage network.
- A personal computer, within Information Systems in Support Services

"*Sub-Asset Type*"
A major component part of a sub-asset. For example in a pumping station on a water works, the sub-assets could typically be:
- The control building.
- The civil substructure and internal pipework.
- The M&E components such as pumps and switchgear.
- The ICA equipment

b) *Operation and Impact of the Asset*

"*Capacity*"
The ability of an asset or sub-asset to meet the required quality or standard and/or throughput, during normal operation. An example of capacity would be:
- The ability of a settlement tank to operate within design limits at peak flow.

"*Collateral Effects*"
The ability of a sub-asset to avoid causing inadvertent nuisance or hazard, such as health and safety problems, noise, odour problems, fly nuisance, etc.

 "*Reliability*"
The ability of a sub-asset to continuously deliver normal operation without breakdown.