

## **Investment Programme Submission**

Scottish Water is required to submit information to support and justify its proposal for investment. This information will be collected in a spreadsheet format. Detailed column definitions for this spreadsheet are given below. Information submitted should relate to individual, discreet projects, which should carry discreet outputs.

All financial values comprising this submission should be in £m correct to 3 decimal places.

It is important that wherever proportional allocation has taken place, that the methods for doing so are summarised in the associated commentary. These methods will be scrutinised by the Reporter during his review of the submission

### **Column Definitions**

#### **Section 1. General Project Information**

Col 1  
Project Autocode

This is the project code allocated to the project within the Scottish Water investment programme database. All codes should be mutually exclusive and relate to discreet projects. All projects that have been disaggregated from other projects or schemes should have an auditable audit trail that may, from time to time, be scrutinised by the Reporter. Any projects

contained in the Quality & Standards II project list and also (for whatever reason) in the list of projects for Quality & Standards III must have the same project autocode in both submissions.

Col 2  
Project Title

This is the project title as used within the Scottish Water investment programme database. The project title should be mutually exclusive of all others within the list and where possible indicate the scope of work being undertaken. Any projects contained in the Quality & Standards II project list and also (for whatever reason) in the list of projects for Quality & Standards III must have the same project title in both submissions.

Col 3  
Water/Wastewater Project

One of the above primary purposes should be entered and relate to whether the project falls under the water or wastewater function.

Col 4  
Project Classification 1

This column relates to the secondary purpose of the project. One only from the below list should be applied to each project.

- Capital Maintenance

- Quality
- Supply/Demand
- Enhanced services
- Other

Col 5  
Project Classification 2

One only of the secondary classifications shown below should be entered for each project in the format that is presented

- Infra – IRE
- Infra – Non-IRE
- Non-infra

Col 6  
Q&S III Scenario from which project was taken

During the establishment of the investment priorities for the Quality & Standards III period, a range of scenarios was considered relating to the scope of outputs to be achieved by each project. **One** of the scenarios shown below should be entered as a single number (e.g. if project has been selected from scenario 2, enter 2 into cell).

- |            |                          |
|------------|--------------------------|
| Scenario 1 | Do nothing option        |
| Scenario 2 | Legislative “do minimum” |
| Scenario 3 | Enhanced option          |
| Scenario 4 | Aspirational option      |

Col 7  
Current Project Status Code

One of the following codes should be entered relating to the current status of the project.

- |     |  |
|-----|--|
| S0  | Investment need has been recognised but specific project not yet identified          |
| S1  | Inception: project has been identified but no detailed appraisal currently completed |
| S2  | Appraisal: initial detailed appraisal has been completed                             |
| S3  | Project appraised and under development before construction                          |
| S4  | Planning Approved  |
| S5  | SEPA consent granted   |
| S6  | Design and contract documentation completed  |
| S8  | Works under construction   |
| S9  | Works under commission   |
| S10 | Works completed and commissioned   |

Col 8  
Forecasted/Actual Date of Completion

This is the month and year in which the project is forecasted to reach beneficial use.

## Section 2. Financial Information

Col 9  
Total Q&S III Project Cost

This is the total cost that will be incurred on each mutually exclusive project within the Quality & Standards III period 2006 – 2014. Costs incurred in the periods prior to and post this review period should **not** be included in this column.

Col 10  
Project Expenditure Pre 2006/07

This is **any** expenditure incurred on an individual project prior to the start of the Quality & Standards III period (31 March 2006).

Col 11  
Project Expenditure Profile 2006/07

Forecasted project expenditure to be incurred 2006/07

Col 12  
Project Expenditure Profile 2007/08

Forecasted project expenditure to be incurred 2007/08

Col 13  
Project Expenditure Profile 2008/09

Forecasted project expenditure to be incurred 2008/09

Col 14  
Project Expenditure Profile 2009/10

Forecasted project expenditure to be incurred 2009/10

Col 15  
Project Expenditure Profile 2010/11

Forecasted project expenditure to be incurred 2010/11

Col 16  
Project Expenditure Profile 2011/12

Forecasted project expenditure to be incurred 2011/12

Col 17  
Project Expenditure Profile 2012/13

Forecasted project expenditure to be incurred 2012/13

Col 18  
Project Expenditure Profile 2013/14

Forecasted project expenditure to be incurred 2013/14

Col 19  
Project Expenditure Post 2013/14

This is **any** expenditure that will be incurred by an individual project after the Quality & Standards III period comes to an end. (31 March 2014).

Col 20  
Total Project Cost

This is the total cost of the project. All expenditure should be taken into account without consideration to which investment period it may fall within.  
Calculated field – Addition of cols 10-19 inclusive.

**Section 3 Asset and Cost Information**

Col 21  
Impact of Project on SW GEARC

This is the forecasted impact that the project will have on Scottish Water's total asset base valuation. This should be measured by the impact that the individual project will have on the Gross Equivalent Asset Replacement Cost (GEARC) of the total asset base. The reason for gathering such information is to enable WICS to monitor changes made within the asset inventory and reconcile these to the developments in the investment programme as the period moves forward. This impact should be entered as £m

Col 22  
Impact of Project on OPEX

This is the impact that the project will have on the operating expenditure incurred by Scottish Water. This figure should include both estimated additional costs arising from new assets as well as savings from, for example, reductions in maintenance costs resulting from the operation of new/improved assets.

#### Section 4. Capital Maintenance

This section relates to the proportion of the individual projects that deal with capital maintenance issues. It re-iterates the fact that some quality driven obligations may be successfully satisfied within an effective capital maintenance programme.

##### Col 22

Proportion of Capital Maintenance Element of Project £m

This is the proportion of the individual project that is ascribed to a capital maintenance driver. The amount should be expressed financially as £m.

##### Col 23

Proportion of Capital Maintenance Element of Project %

This is the proportion of the individual project that is ascribed to a capital maintenance driver. The proportion should be expressed as a percentage of the total project budget.

#### Section 5. Driver Information

This section (cols 25 to 34 inclusive) requires drivers (after capital maintenance) to be proportionally allocated to individual projects. Where possible, drivers specified by stakeholders as part of the Quality & Standards III process have been used. Below are the lists of drivers that are to be used. These are the drivers upon which Quality & Standards III investment proposals were based (apart from capital maintenance). Drivers not included in the lists below should **not** be used.

Within the accompanying commentary, Scottish Water should give details of the methods used to proportionally allocate expenditure to drivers. WICS will instruct the Reporter to review and give comment on the methods employed.

**Capital Maintenance Drivers**

Driver Code		Summary of Requirements
<b>WSI</b>	Water Service Infrastructure	Maintain operational capability and performance of the asset as designed so that it achieves its original purpose.
<b>WSNI</b>	Water Service Non-Infrastructure	Maintain operational capability and performance of the asset as designed so that it achieves its original purpose.
<b>WWI</b>	Wastewater Service Infrastructure	Maintain operational capability and performance of the asset as designed so that it achieves its original purpose.
<b>WWNI</b>	Wastewater Service Non-Infrastructure	Maintain operational capability and performance of the asset as designed so that it achieves its original purpose.
<b>SS</b>	Support Services	Maintain operational capability and performance of the asset as designed so that it achieves its original purpose.

### Drinking Water Quality Drivers

Driver Code	Summary of Requirements	Date of Compliance
DW1	Compliance with lead standard of 10µg/l set in EC Directive 98/83 on the quality of water intended for human consumption	2013
DW2	Compliance with trihalomethane standard of 100mg/l.	2008
DW3	<p>Compliance with all other standards contained in the Drinking Water Directive, including those below that may have been tightened under Directive 98/83/EC</p> <p><b>Arsenic:</b> tighter standard introduced which may result in local breaches</p> <p><b>Bromate:</b> tighter standard introduced which may result in local breaches</p> <p><b>Copper:</b> tighter standard introduced which may result in local breaches.</p> <p><b>pH:</b> tighter standard introduced which may result in local breaches</p> <p><b>Nitrate/Nitrite:</b> the introduction of chlorination to meet the THM standard is likely to result in exceedences of the standard for nitrate/nitrite</p>	2013
DW4	<p>Compliance with the Cryptosporidium (Scottish Water) Directions 2003 and any subsequent revisions including</p> <ul style="list-style-type: none"> <li>i) annual risk assessments for all water supplies for the presence of Cryptosporidium</li> <li>ii) installation of turbidity meters on all filters</li> <li>iii) continuous monitoring of specific water supplies for Cryptosporidium</li> </ul>	

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<b>DW5</b>	<p>The quality of water put into supply must not be downgraded by the condition of the water mains through which it is supplied. In particular, the condition of a water main must not result in exceedences of the iron and manganese standards set in Directive 98/83/EC</p> <p>Unplanned operational activity and maintenance work disrupt the flow in water mains and put water quality at risk</p> <p>SE policy is that there should be no deterioration in the infrastructure asset stock</p>	2013
<b>DW6</b>	The Abstraction Directive	
<b>DW7</b>	The Birds Directive/The Habitats Directive	
<b>DW8</b>	Security of Supply	
<b>DW9</b>	Additional physical security arrangements to protect drinking water quality in accordance with guidance issued by Security Services	
<b>DW10</b>	All public water supplies to meet standards set in Directive. Supplies to properties from raw water aqueducts and raw water mains are public supplies and must meet Directive standards.	
<b>DW11</b>	Investment necessary on SW assets to ensure SW compliance with Water Fittings Byelaws. (Note that this driver does not include the cost of ensuring third party Byelaw compliance)	
<b>DW12</b>	Article 11 of the EC Directive 98/83 provides for a review of the annexes to the Directive every 5 years. The first such review commenced during 2003. There are strong indications that the standards for THMs, disinfection by-products will tighten.	2013
<b>DW13</b>	Improvements in aesthetic quality of drinking water	

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<b>DW14</b>	Extend provision of telemetry at water treatment works and service reservoirs	
<b>DW15</b>	Compliance with recommendations made as a result of investigations into drinking water quality incidents in Scotland	
<b>DW16</b>	Standards in the EC Directives are derived from World Health Organisation Guideline Values. The WHO is now promoting Water Safety Plans as a means of ensuring drinking water quality. Such plans are already in use in many countries. It is likely that Water Safety Plans will feature in any revision of the Directive	
<b>DW17</b>	The report into the Torry incident 1991 recommended that removal of all cross-connections between water mains and sewers. However, this recommendation was not fully implemented across Scotland and many unsatisfactory arrangements remain. The risk posed by cross-connections is significant and any such arrangements remaining must be removed.	
<b>DW18</b>	Extend public water distribution network at "unreasonable cost" to provide a water supply to these areas because the level of return is not considered economic in relation to the capital investment required.	
<b>DW19</b>	The Water (Scotland) Act 1980 requires that SW shall provide a wholesome supply of water sufficient for the domestic purposes of all owners and occupiers of premises within their limit of supply	
<b>DW20</b>	The Flood Estimation Handbook published by the Institute of Hydrology introduced a new method of calculating rainfall depth	
<b>DW21</b>	Duplication of critical mains to provide security of supply	

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<b>DW22</b>	Provide treatment to address algae problems in raw water sources	
<b>WR1</b>	UKTAG guideline abstraction thresholds (All SW surface and groundwater abstractions).	
<b>WR2</b>	Will require a site-specific review of operational practice at all SW reservoirs to compare with agreed best practice. (All SW impoundments)	
<b>WR3</b>	Protect water quality in Drinking Water Protected Areas so as to avoid the need to increase the level of treatment needed to meet standards set in EC Directive 98/83. All SW drinking water sources supplying more than 10m <sup>3</sup> /day or 50 people).	2013
<b>WR4</b>	Compliance with hydro-morphological standards in order to meet WFD ecological objective. (All obsolete engineering works associated with abandoned water supply operations).	
<b>WR5</b>	To demonstrate compliance with water quality licences. (All SW abstractions and impoundments).	

## Environmental Drivers

Driver Code	UK Act/EC Directive
WQ01	Water Environment and Water Services Act 2002 (Secondary legislation to replace Control of Pollution Act 1974, Section 34)
WQ02	Environment Act 1995, Section 34
ON01	Town and Country Planning (Scotland) Act 1997
ON02	Environment Protection Act 1990, Part III
LA01	Environmental Protection Act 1990, Part IIA (Contaminated Land)
NH01	Water Industry (Scotland) Act 2002, Section 54
SD01	Water Industry (Scotland) Act 2002, Section 51
WA01	Definition of Waste (Hazardous Waste Directive)
EC01	Urban Waste Water Treatment Directive (91/271/EEC)
EC02	Bathing Water Directive (76/160/EEC)
EC03	Shellfish Waters Directive (70/923/EEC)
EC04	Freshwater for Fish Directive (78/659/EEC)
EC05	Surface Water for Drinking Directive (75/440/EEC)
EC06	Sludge Use in Agriculture Directive (86/278/EEC)
EC07	Birds Directive (79/409/EEC)
EC08	Habitats Directive (92/43/EEC)
EC09	Dangerous Substances Directive (76/464/EEC)
EC10	Water Framework Directive (2000/60/EC)
EC11	Landfill Directive (99/31/EC)
EC12	Integrated Pollution Prevention & Control Directive (96/61/EC)
EC13	Waste Incineration Directive (2000/76/EC)
EC14	National Emissions Ceiling Directive (2001/81/EC)

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<b>EC15</b>	Strategic Environmental Assessment Directive (2001/42/EC)
<b>pEC16</b>	Revised Bathing Water Directive (proposed)
<b>pEC17</b>	EU Marine Strategy (proposed COM/2002/539)
<b>pEC18</b>	Sludge Directive (proposed) & EC Soils Strategy
<b>pEC20</b>	Environmental Liability Directive (proposed)
<b>IN01</b>	OSPAR Convention 1992
<b>XF01</b>	Climate Change (Cross-functional)
<b>XF02</b>	Flooding (Cross-functional)

**Customer Service Drivers**

Driver Code	Driver Description
CS1	Pressure. Removal of properties from the register of properties at risk from poor pressure.
CS2	Odour Management. Compliance with odour management standards.
CS4	Business Metering. Compliance with business metering standards
CS5	Household Metering. Compliance with household metering standards
CS6	Emergency Planning. Provision of improved emergency planning standards.
CS7	Business Billing. Provision of improved business billing facilities.
CS8	Household Billing. Provision of improved household billing services.
CS9	Customer Experience. Provision of improved customer service facilities.
CS11	Sewer Flooding. Removal of properties from at risk register.

## Section 6. Output Information

This section (cols 35 to 49 inclusive) requires output information to be included for individual projects. For simplicity, outputs have been assigned to the set of driver codes provided above. For each line of the programme, the primary output should be identified with up to 4 other outputs. Below are the lists of outputs that are to be used. Outputs not included in the list below should **not** be used.

### Capital Maintenance Outputs

Driver Code	Description of Output	Output Unit
WSI	Length of Infrastructure relined/replaced	km
WSNI	Throughput of works subject to maintenance	MI/day
WWI	Length of infrastructure relined/replaced	Km
WWNI	Population equivalent of works subject to maintenance work	Number
SS	GEARC of assets subject to maintenance work	£

### Drinking Water Quality Outputs

Driver Code	Definition of Output	Output Unit
<b>DW1</b>	Volume of Water delivered to customers made compliant with the required standard	Megalitres/day
<b>DW2</b>	Volume of Water delivered to customers made compliant with the required standard	Megalitres/day
<b>DW3</b>	Volume of Water delivered to customers made compliant with the required standard	Megalitres/day
<b>DW4</b>	Volume of Water delivered to customers made compliant with the required standard	Megalitres/day
<b>DW5</b>	Volume of Water delivered to customers made compliant with the required standard	Megalitres/day
<b>DW6</b>	Number of sites made compliant with standard	Number
<b>DW7</b>	Number of sites made compliant with standard	Number
<b>DW8</b>	Number of sites made compliant with standard	Number
<b>DW9</b>	Number of sites made compliant with standard	Number

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<b>DW10</b>	Volume of Water delivered to customers made compliant with the required standard	Megalitres/day
<b>DW11</b>	Number of sites made compliant with standard	Number
<b>DW12</b>	Volume of Water delivered to customers made compliant with the required standard	Megalitres/day
<b>DW13</b>	Volume of Water delivered to customers made compliant with the required standard	Megalitres/day
<b>DW14</b>	Number of sites made compliant with standard	Number
<b>DW15</b>	Number of sites made compliant with standard	Number
<b>DW16</b>	Number of sites made compliant with standard	Number
<b>DW17</b>	Number of sites made compliant with standard	Number
<b>DW18</b>	Population equivalent benefiting from work	Population Equivalent
<b>DW19</b>	Population equivalent benefiting from work	Population Equivalent

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<b>DW20</b>	Number of sites made compliant with standard	Number
<b>DW21</b>	Km of critical mains duplicated	km
<b>DW22</b>	Number of sites made compliant with standard	Number
<b>WR1</b>	Number of sites made compliant with standard	Number
<b>WR2</b>	Number of sites made compliant with standard	Number
<b>WR3</b>	Number of sites made compliant with standard	Number
<b>WR4</b>	Number of sites made compliant with standard	Number
<b>WR5</b>	Number of sites made compliant with standard	Number

### Environmental Outputs

<b>Driver Code</b>	<b>Definition of Output</b>	<b>Output Unit</b>
<b>WQ01</b>	Population equivalent benefiting from work	Population Equivalent
<b>WQ02</b>	Population equivalent benefiting from work	Population Equivalent
<b>ON01</b>	Number of sites made compliant with standard	Number
<b>ON02</b>	Number of sites made compliant with standard	Number
<b>LA01</b>	Number of sites made compliant with standard	Number
<b>NH01</b>	Number of sites made compliant with standard	Number
<b>SD01</b>	Number of sites made compliant with standard	Number
<b>WA01</b>	Number of sites made compliant with standard	Number
<b>EC01</b>	Population equivalent benefiting from work	Population Equivalent
<b>EC02</b>	Population equivalent benefiting from work	Population Equivalent
<b>EC03</b>	Population equivalent benefiting from work	Population Equivalent
<b>EC04</b>	Population equivalent benefiting from work	Population Equivalent
<b>EC05</b>	Number of sites made compliant with standard	Number
<b>EC06</b>	Population equivalent benefiting from work	Population Equivalent
<b>EC07</b>	Population equivalent benefiting from work	Population Equivalent

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<b>EC08</b>	Population equivalent benefiting from work	Population Equivalent
<b>EC09</b>	Number of sites made compliant with standard	Number
<b>EC10</b>	Population equivalent benefiting from work	Population Equivalent
<b>EC11</b>	Population equivalent benefiting from work	Population Equivalent
<b>EC12</b>	Number of sites made compliant with standard	Number
<b>EC13</b>	Population equivalent benefiting from work	Population Equivalent
<b>EC14</b>	Population equivalent benefiting from work	Population Equivalent
<b>EC15</b>	Number of sites made compliant with standard	Number
<b>pEC16</b>	Population equivalent benefiting from work	Population Equivalent
<b>pEC17</b>	Population equivalent benefiting from work	Population Equivalent
<b>pEC18</b>	Population equivalent benefiting from work	Population Equivalent
<b>pEC20</b>	Number of sites made compliant with standard	Number
<b>IN01</b>	Number of sites made compliant with standard	Number
<b>XF01</b>	Number of sites made compliant with standard	Number
<b>XF02</b>	Number of sites made compliant with standard	Number

### Customer Service Outputs

Driver Code	Definition of Output	Output Unit
<b>CS1</b>	Removal of properties from the register of properties at risk from poor pressure.	Number of properties
<b>CS2</b>	Number of WWTW made compliant with odour management standards.	Number of works
<b>CS4</b>	Number of meters made compliant with business metering standards	Number of meters
<b>CS5</b>	Number of meters made compliant with household metering standards	Number of meters
<b>CS6</b>	Customers subject to improved emergency planning standards.	Number of customers
<b>CS7</b>	Businesses subject to improved billing facilities	Number of businesses
<b>CS8</b>	Households subject to improved billing services.	Number of households
<b>CS9</b>	Customers subject to improved customer service facilities.	Number of Customers
<b>CS11</b>	Sewer Flooding. Removal of properties from at risk register.	Number of properties