

# Chapter 16

## Non financial measures

### Sewerage service activities

Covering:

- Asset balance at year beginning
- Changes during report year
- Asset balance at year end
- Drainage area plans
- Sewerage Service Outputs

# Non financial measures

## Chapter 16

### Sewerage service activities

One table has been provided for NI Water data only. The company shall provide additional data on sewerage activities relating to PPP works in the commentary on an exception basis.

These tables have six blocks and a total of 25 lines.

Network activities provide a good measure of work achieved provided they could be related to associated investment. The investment breakdowns included in these reporting requirements provide this linkage, with the separation of base service expenditure from that related to enhancements on table 36.

#### Guidance

The six blocks cover:

- **Asset balance at April 1**

This includes a breakdown of sewer lengths defined as "critical". This is downloaded from previous returns.

- **Changes during report year**

This records additions and maintenance of sewers and the number of sewer collapses.

- **Asset balance at March 31**

The aggregate length of sewers shows the cumulative effect of the changes during the report year.

- **Intermittent discharges**

This block covers the total number of intermittent discharges and those which are unsatisfactory.

- **Drainage area plans**

The Information and commentary supplied under this indicator should provide confirmation of the company's approach to the development, evolution and ongoing continued commitment to asset management planning, and demonstrate the currency of its programme of undertaking detailed Drainage Area Plans.

- **Sewerage service outputs**

The Information and commentary provided in this section should confirm the company's approach and commitment to the delivery of sewerage outputs for PC10.

- **Nominated sewerage service outputs**

The Information and commentary provided in this section should confirm the company's approach and commitment to the delivery of nominated water outputs for PC10.

#### Company commentary

The company should:

- report how it is targeting investment to maintain or achieve and maintain stable serviceability;

- for line 13, describe its approach to identifying, counting and dealing with sewer blockage events;
- set down the causes of sewer blockages experienced together with their approximate proportions and confidence grade. For example (not exhaustive):
  - sewer misuse – fats, oils and greases;
  - natural – roots and silting;
  - structural - laterals and sewer deformation; and/or
  - weather pattern - first flush after dry period.
- The company commentary should identify the number of collapses and blockages attributable to defects on main sewers and the number attributable to laterals.
- report the policy on recording the number of repeat sewer blockages;
- comment on the number of floodings with no apparent cause which are excluded from blockages cleared data;
- comment on what failure mode events are included under the category of unusable sanitation (for example restricted toilet use or other impediment to drainage from premises);
- comment on the number of blockages that are associated with flooding incidents reported in tables 3 and 3a respectively.
- Detail in the commentary the percentage split between customer reported blockages and those identified by NI Water.
- Report in line 13a, 13b and 13c against the number of sewer blockage clearances taking in excess of 6 hours, 12 hours and 24 hours respectively.

A 'reportable problem' in line 13 means a problem reported in line with company policy.

The company should also:

- where the performance of an intermittent discharge is considered unsatisfactory this information is to be reported in the commentary for Changes during report year (lines 3-13), using a separate sub-heading, Intermittent discharges, in that commentary box;
- where there is a difference between the number of unsatisfactory intermittent discharges given for the report year and for the previous year and this difference cannot be wholly accounted for by improvement works (either capital schemes or operational changes) (e.g. where the change is partly or completely due to better information or where the change is partly or completely due to reclassification of intermittent discharges by the Environment Agency), then a breakdown detailing how the difference is made up should be given;
- report on methods and procedures adopted where these differ from the standards specified in the definitions, or from the procedures used in the compilation of the PC10 business plan;
- provide a method statement which explains fully how the company identifies and reports on sewer collapses in line 12 including an explanation of how the company distinguishes collapses from other essential repairs to sewers, and the context of the number sewer collapses in relation to all sewer repairs;
- identify rising main failures within line 12 and report them in table 16a;
- report on the proportion of sewers repaired as a result of planned CCTV surveys, as opposed to a more reactive approach; and
- comment on the extent of sewer cleaning carried out; and,
- complete the following table in the commentary to provide a history of drainage area plan studies to date, as follows (note additional columns should be added if further updates were carried out):

DAP Description	Population/properties (choose as appropriate)	Initial Study		1 <sup>st</sup> Update of Initial Study (if applicable)	
		Start Date (actual or proposed)	Completion Date (actual or proposed)	Start Date (actual or proposed)	Completion Date (actual or proposed)

- report on methods and procedures for carrying out drainage area plans and explain any differences from the standards specified in the definitions, or from the procedures used previously. The company should report on:
  - any changes to the scope (i.e. how much of the network is covered and the frequency of reviews/updates) of its infrastructure asset studies.
  - any developments (e.g. innovations or improvements) in the information being collected and analysed (e.g. has the amount of CCTV investigations increased during the report year)
  - any changes to the way asset and customer data is combined and used to target and plan capital maintenance on infrastructure assets.

A number of lines in this table report on levels of activity which have been forecast. The company should:

- confirm whether PC10 outputs have either been met or are on target to meet due dates;
- provide commentary to explain any variances between forecast and actual activity during the report year including, where appropriate, any amendments and additional outputs agreed by stakeholders through the PC10 Change Control Protocol. The company should also provide an indication of the effect any delays may have on the delivery of its overall environmental programme.

Commentary is required on significant revisions to previous data (e.g. as a result of better information from GIS).

In respect of the PPP schemes, the company should report in its commentary by exception on any sewerage activity in the report year covering the categories of new, renovated, and replaced sewers and other activities including abandoned sewers. The company should clarify whether the activity relates to critical or non-critical sewers.

NI Water should provide an updated copy of Table N1 which sets out the PC10 nominated outputs as amended by the 1<sup>st</sup> Change Control process identifying the PC10 outputs which have been delivered in 2010-11, 2011-12 and 2012-13. The reported outputs should be consistent with the total number of nominated outputs reported in Table 16 for each year. This information should be submitted in excel format. The structure of this submission is largely a matter for NI Water to decide, but as a minimum should include:

- The capital investment project ID reference code and project name to allow the information provided to be cross referenced to that in Table 40 of the AIR and the CIM.
- The PC10 reference code where appropriate.
- The date that beneficial use was achieved.
- A separate line should be provided for each output delivered.

## Guidance to the Reporter

The reporter should:

- confirm that the Drainage Area Plans studied conform with the guidance in the definitions, and that if procedures have changed, that revised procedures are adequate for the purpose set out in the definitions;
- comment on the company's commentary in relation to sewerage activity on PPP schemes; assess Confidence Grades on data in the context of the magnitude of adjustments made to data in the past;

- review the consistency of activity with any policy statements made on network activity (and in subsequent years, on changes in policy);
- comment on company activity rates in the context of wide variations of sewer activity rates across the industry and how effectively the company is targeting this activity;
- comment on the accuracy of the proportion of rising main failures within line 12;
- confirm that the activity and outputs reported in the table and commentary have been achieved and comment on the company's explanation for any variances between forecasts and actuals during the report year.
- comment on the company's approach to reporting of blockages and collapses, the accuracy and reliability of the numbers reported and the proportional allocation between main sewer defects and those on laterals.

## Table 16 line definitions

### A ASSET BALANCE AT APRIL 1

<b>1</b>	Total length of sewers	km	2dp
<b>Definition</b>	Total length of sewers. Include gravity sewers, rising mains.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Copied: from line 14 (previous year)		
<b>Responsibility</b>	Network Regulation Team		

<b>2</b>	Total length of "critical" sewers	km	2dp
<b>Definition</b>	Total length of "critical" sewers.  Definition of "critical" comes from WRc Sewerage Rehabilitation Manual. Critical sewers are those, whose collapse repairs will be expensive or disruptive or those, which are considered to be strategically important. The principal structural criterion is that if a sewer should fail, the subsequent costs would be significantly higher than if rehabilitated before failure [more precise definition will be found in the WRc Manual].		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Copied: from line 15 (previous year)		
<b>Responsibility</b>	Network Regulation Team		

### B CHANGES DURING REPORT YEAR

<b>3</b>	New "critical" sewers	km	2dp
<b>Definition</b>	Length of new "critical" sewers constructed or adopted in report year.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input		
<b>Responsibility</b>	Network Regulation Team		

<b>4</b>	"Critical" sewers – inspection by CCTV/man entry	km	2dp
<b>Definition</b>	Length of "critical" sewers inspected by CCTV/man entry in report year. This includes re-inspection activity.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input		
<b>Responsibility</b>	Network Regulation Team		

<b>5</b>	"Critical" sewers – renovated	km	2dp
<b>Definition</b>	Length of "critical" sewer renovated in report year.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input		
<b>Responsibility</b>	Network Regulation Team		

<b>6</b>	"Critical" sewers – replaced	km	2dp
<b>Definition</b>	Length of "critical" sewers replaced in report year.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input		
<b>Responsibility</b>	Network Regulation Team		

<b>7</b>	Abandoned "critical" sewers and other changes	km	2dp
<b>Definition</b>	Length of "critical" sewers abandoned in report year, plus other changes to the reported length of "critical" sewers. Include length of all sewers re-classified as "non-critical" during the report year. Also include corrections of previous data errors or digitising records improvements.  Note: Reductions in length should be treated as positive changes (in the same way as abandoned lengths) and increases in length should be treated as negative changes.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input		
<b>Responsibility</b>	Network Regulation Team		

<b>8</b>	New "non-critical" sewers	km	2dp
<b>Definition</b>	Length of "non-critical" sewers constructed or adopted in report year.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input		
<b>Responsibility</b>	Network Regulation Team		

<b>9</b>	"Non-critical" sewers – renovated	km	2dp
<b>Definition</b>	Length of "non-critical" sewers renovated in the report year.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input		
<b>Responsibility</b>	Network Regulation Team		

<b>10</b>	"Non-critical" sewers – replaced	km	2dp
<b>Definition</b>	Length of "non-critical" sewers replaced in the report year.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input		
<b>Responsibility</b>	Network Regulation Team		

<b>11</b>	Abandoned "non-critical" sewers and other changes	km	2dp
<b>Definition</b>	Length of "non-critical" sewers abandoned in the report year plus other changes to the reported length of "non-critical" sewers. Include length of all sewers re-classified as "critical" during the report year. Also include corrections of previous data errors or digitising records improvements.  Note: Reductions in length should be treated as positive changes (in the same way as abandoned lengths) and increases in length should be treated as negative changes.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input		
<b>Responsibility</b>	Network Regulation Team		

<b>12</b>	Sewer collapses per 1,000km	nr	1dp
<b>Definition</b>	Number of sewer collapses per thousand kilometres of all sewers. Include bursts to rising mains, even where failures are accidental rather than weakness in pipe condition. All third party damage should be excluded where costs are potentially (rather than actually) recovered from a third party. If the incidents are significant, they should be reported in the commentary.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input		
<b>Responsibility</b>	Network Regulation Team		

<b>13</b>	Sewer blockages per 1,000km	nr	1dp
<b>Definition</b>	Number of sewer blockage events that required clearing per thousand kilometres of all sewers. Exclude blockages cleared as good will on private sewers and private drains. A blockage is an obstruction in a sewer which causes a reportable problem (not caused by hydraulic overload), such as flooding or discharge to a watercourse, unusable sanitation, surcharged sewers or odour.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input		
<b>Responsibility</b>	Network Regulation Team		

<b>13a</b>	Number of sewer blockage clearance which exceeds 6 hours.	nr	0dp
<b>Definition</b>	Number of sewer blockage events that required clearing which took in excess of 6 hours to complete. Exclude blockages cleared as good will on private sewers and private drains. The time taken to clear the blockage is from the time the event is first notified to NIW to the time the blockage is confirmed as cleared.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input		
<b>Responsibility</b>	Network Regulation Team		

<b>13b</b>	Number of sewer blockage clearance which exceeds 12 hours.	nr	0dp
<b>Definition</b>	Number of sewer blockage events that required clearing which took in excess of 12 hours to complete. Exclude blockages cleared as good will on private sewers and private drains. The time taken to clear the blockage is from the time the event is first notified to NIW to the time the blockage is confirmed as cleared.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input		
<b>Responsibility</b>	Network Regulation Team		



<b>13c</b>	Number of sewer blockage clearance which exceeds 24 hours.	nr	0dp
<b>Definition</b>	Number of sewer blockage events that required clearing which took in excess of 24 hours to complete. Exclude blockages cleared as good will on private sewers and private drains. The time taken to clear the blockage is from the time the event is first notified to NIW to the time the blockage is confirmed as cleared.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input		
<b>Responsibility</b>	Network Regulation Team		

## C ASSET BALANCE AT MARCH 31

<b>14</b>	Total length of sewers	km	2dp
<b>Definition</b>	Total length of sewers. Include gravity sewers, rising mains.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Calculated: sum of lines 1, 3 and 8 less lines 7 and 11		
<b>Responsibility</b>	Network Regulation Team		

<b>15</b>	Total length of "critical" sewers	km	2dp
<b>Definition</b>	Total length of "critical" sewers		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Calculated: The sum of lines 2 and 3 less line 7.		
<b>Responsibility</b>	Network Regulation Team		

## D INTERMITTENT DISCHARGES

<b>16a</b>	Number of unsatisfactory intermittent discharges excluding CSOs (NI Environment Agency)	nr	0dp
<b>Definition</b>	<p>The number at the end of the report year. This number should include emergency overflows at pumping stations, storm overflows at inlets to works and storm tank discharges but exclude combined sewer overflows. This comprises those identified by the NI Environment Agency for improvement and not yet improved.</p> <p>Do not include new unsatisfactory intermittent discharges (excluding CSOs) identified by the NI Environment Agency after the production of the PC10 Final Determination. This number should be provided in the commentary accompanying the table.</p>		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input		
<b>Responsibility</b>	Network Regulation Team		

<b>16b</b>	Number of unsatisfactory intermittent discharges - CSOs (NI Environment Agency)	nr	0dp
<b>Definition</b>	<p>The number of unsatisfactory CSOs at the end of the report year. This number should exclude emergency overflows at pumping stations, storm overflows at inlets to works and storm tank discharges. This comprises those identified by the NI Environment Agency for improvement and not yet improved.</p> <p>Do not include new unsatisfactory CSOs identified by the NI Environment Agency after the production of the PC10 Final Determination. This number should be provided in the commentary accompanying the table.</p>		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input		
<b>Responsibility</b>	Network Regulation Team		

<b>17a</b>	Number of intermittent discharges excluding CSOs	nr	0dp
<b>Definition</b>	<p>The total number of intermittent discharges (excluding CSOs) on the sewerage system at the end of the report year. This number should include emergency overflows at pumping stations, storm overflows at inlets to works and storm tank discharges but exclude combined sewer overflows.</p>		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input		
<b>Responsibility</b>	Network Regulation Team		

<b>17b</b>	Number of CSOs	nr	0dp
<b>Definition</b>	<p>The total number of CSOs on the sewerage system at the end of the report year. This number should exclude emergency overflows at pumping stations, storm overflows at inlets to works and storm tank discharges.</p>		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input		
<b>Responsibility</b>	Network Regulation Team		

**E DRAINAGE AREA PLANS**

<b>18</b>	Cumulative number of drainage area plans completed	nr	0dp
<b>Definition</b>	Cumulative number of drainage area plan studies completed and maintained by the end of the report year since the start of the programme.  Studies are defined as: Drainage area plan studies are expected to use the full investigation procedure set out in the Sewerage Rehabilitation Manual (WRc). Maintenance of studies means a review of study area changes and update of models.  Abbreviated investigations may be substituted where it is clear that there are no hydraulic problems with the sewers in the relevant drainage area (see SRM vol 1 para 2.5).		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input		
<b>Responsibility</b>	Network Regulation Team		

<b>19</b>	Drainage area plans ongoing	nr	0dp
<b>Definition</b>	Number of drainage area plan studies in progress at the report end of the report year.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input		
<b>Responsibility</b>	Network Regulation Team		

<b>20</b>	Total sewerage drainage areas	nr	0dp
<b>Definition</b>	Total number of sewerage drainage areas within the undertakers area. Where separate models cover several drainage areas (such as for modelling interceptor sewers) then these can be included as part of the total number of plans.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input		
<b>Responsibility</b>	Network Regulation Team		

<b>21</b>	Cumulative % drainage area plan studies completed	%	1dp
<b>Definition</b>	Cumulative percentage of drainage area plan studies completed by the end of the current report year since the start of the programme.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Calculated: Line 18 ÷ Line 20 x 100		
<b>Responsibility</b>	Network Regulation Team		

<b>22</b>	% population/properties covered by completed studies	%	1dp
<b>Definition</b>	Percentage of population/properties in undertaker's area covered by completed drainage area studies.  Company estimate is required for either population or properties (whichever is considered most representative by company, based on models) covered by detailed completed and maintained drainage area plan studies.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input		
<b>Responsibility</b>	Network Regulation Team		

## F SEWERAGE SERVICE OUTPUTS

<b>23</b>	Delivery of improvements to nominated UIDs as part of a defined programme of work.	nr	0dp
<b>Definition</b>	The number of nominated unsatisfactory intermittent discharges having achieved the beneficial use milestone as defined for the Capital Investment Monitoring submission in the period. Only report the nominated outputs schemes included in the PC10 FD Annex N1 02.00 subject to any amendments agreed by stakeholders through the PC10 Change Control Protocol.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input field		
<b>Responsibility</b>	Network Regulation Team		

<b>24</b>	Delivery of improvements to WwTW through nominated schemes as part of a defined programme of work.	nr	0dp
<b>Definition</b>	The number of nominated wastewater treatment works schemes having achieved the beneficial use milestone as defined for the Capital Investment Monitoring submission in the period. Only report the nominated outputs schemes included in the PC10 FD Annex N1 02.00 subject to any amendments and additional outputs agreed by stakeholders through the PC10 Change Control Protocol.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input field		
<b>Responsibility</b>	Network Regulation Team		

<b>25</b>	Investment in improvements to small wastewater treatment works as part of the rural wastewater investment programme.	£m	1dp
<b>Definition</b>	Expenditure in the period on improvements to small wastewater treatment works carried out under the Rural Wastewater Investment Programme agreed with NIEA. Expenditure at 2007-08 prices using COPI as a deflator.		
<b>Primary Purpose</b>	Confirming delivery of key outputs and service.		
<b>Processing rule</b>	Input field		
<b>Responsibility</b>	Network Regulation Team		

## CHANGE CONTROL SHEET

### CHAPTER 16

2008/1.0	First issue of chapter for the SBP period.
2009/1.0	Second issue of chapter for the SBP period. - block F reporting requirements removed - EHS references changed to EA - Tables amended for PPP and NIW+PPP reporting
2010/1.0	Third issue of chapter for the SBP period. - Tables reduced to a single table for NI Water only report. - PPP sewerage activities to be reported in the commentary by exception.
2011/1.0	First issue of chapter for the PC10 period. - Block F amended to collect information on PC10 outputs.
2012/1.0	Second issue of chapter for the PC10 period. - Requirement for the company to comment on the proportional allocation of blockages/collapses between main sewer defects and those on laterals added. Associated change made to reporter guidance. - Requirement to report the percentage split between customer reported sewer blockages and those identified by NI Water. - Requirement of company to report against sewer blockage clearance performance in line 13a, 13b and 13c. - Requirement to submit an updated copy of Table N1 as part of the commentary added.
2013/1.0	Third issue of chapter for the PC10 period - Request to submit PC10 Table N1 updated for all three years of PC10.