Chapter 3
Key outputs
Sewerage service

Covering:
DG5 Annual internal flooding summary
DG5 Properties on the internal flooding register

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Sewerage service

This table has 34 lines, (one of which is calculated). It covers:

- **DG5 - Annual flooding summary**

These lines include properties internally flooded as a result of overloaded sewers and other causes.

- **DG5 - Properties on the flooding register**

These lines cover properties which have flooded and are deemed to still be at risk of flooding more frequently than once in twenty years and once or twice in ten years, problem status of the properties on the register, annual changes to the register and problem solving costs. The flooding register was formerly known as the 'at risk' register and references to the 'at risk register' should now be treated as a reference to the flooding register.

The information in this table is used to monitor and compare company performance against the DG Indicators. It may be published, in summary, in the annual 'Cost and Performance Report'.

Common definitions

Flooding incidents: For the purpose of the return, a flooding incident is defined as an event of internal flooding (as defined below) from a public sewer (whether foul, combined or surface water). It does not include flooding caused by assets which are beyond the water company's control for example:

- Inundation of the sewerage system due to run off from fields
- Fluvial flooding

Internal flooding: For the purposes of DG5, internal flooding is defined as flooding from a public sewer which enters a building or passes below a suspended floor. For reporting purposes, buildings are restricted to those normally occupied and used for residential, public, commercial, business or industrial purposes. The list below gives examples of what **should** be included in the internal flooding category. It is not designed to be an exhaustive list and examples will be added as they are identified.

- Conservatories
- Basements and cellars (even if unoccupied)
- Stairwell/lobby area of flats (to be counted as 1 flooded property)
- Studios and workshops
- Porches
- Garages which are an integral part of the house with adjoining door to the occupied building

Damp patches on walls should be excluded but all incidents should be recorded irrespective of size.

Buildings where the prime purpose is not habitation or occupied business premises should not be included on the internal register but should be recorded under external flooding. The list below gives examples of what should be included in the external flooding category:

- buildings where the prime purpose is for storage or installation of domestic appliances and is not accessed from the house by means of an adjoining door to the habitable building;
- detached garages (whether situated inside the boundary of the property and separated from the main building or outside the boundary but with common access as in a garage block); and
- linked detached garages (i.e. garages which are attached to a property but separated from it by an external passageway);
- sheds and outbuildings (e.g. stables, kennels, coal houses, outside toilets);
- summer houses; and

- swimming pools/ jacuzzis.

However, garages forming an integral part of a property are classed as part of the building and are included, even if their prime purpose is storage, etc.

Overloaded sewers: A sewer is overloaded when the flow from a storm is unable to pass through it due to a permanent problem (e.g. flat gradient, small diameter). Temporary problems such as blockages, siltation, collapses and equipment or operational failures are excluded. No account should be taken of the severity of the storm causing the flooding incident when reporting in lines 2, 3 and 5.

Properties on the register: These are defined as properties that have suffered and are still likely to suffer internal flooding from public foul, combined or surface water sewers due to overloading of the sewerage system more frequently than the relevant period (either once in twenty years or once or twice in ten years).

Severe weather: All flooding incidents should be reported irrespective of the severity of the storm. The company may indicate in the commentaries when flooding incidents have been due to severe rainfall and this information will be taken into account when producing the 'Levels of service' report. Severe weather incidents should only include rainfall events having a storm return period that is greater than once in twenty years.

Uninhabited cellars: An uninhabited cellar is defined as an integral part of a building that is at least partially below ground level. It is not used for habitation. Where such a cellar is in regular use as part of the normal living accommodation it is termed a basement and any flooding should be reported as a normal internal flooding incident. All cellar flooding should be counted as internal for the purposes of the register but sewer flooding to uninhabited cellars should be recorded as a subset separately in line 5.

Lines 1 to 11: DG5 Annual flooding summary

Aim

To measure the frequency of actual flooding of properties from the public sewerage system by foul water, surface water or combined sewage.

Lines 12 – 34: DG5 Properties on the "At risk" register

Aim

To measure the number of properties that have flooded and are still at risk of flooding from the public sewerage system by foul water, surface water or combined sewage.

It is unlikely that properties on the register can be removed from the risk of flooding again by operational improvements alone.

Information on properties on this register is to be reported in the form of a balance sheet, which identifies performance against the three DG5 reference levels at the end of the report year as well as the reasons for changes in the reported DG5 figures during the report year. It distinguishes between those problems that have been solved as a result of action by the company and those which have been removed due to better information. (Properties should be reported under the 1 in 20, 1 in 10 or the 2 in 10 category.)

Guidance lines 1 to 11

Flooding incidents: All incidents of internal flooding of properties should be reported in the table under the appropriate category. No exclusions are permitted, even for third party damage or for "customer abuse". The table requires that the company report flooding by both number of properties and the number of incidents.

For the purpose of the return, all flooding incidents caused by the overloading of sewers (which cannot be attributed to other causes, such as blockages or collapse) must be reported under the heading of overloaded

sewers. This includes flooding incidents caused by severe storms which may be outside the company's design standard for a particular sewer. Properties affected by a flooding incident should be placed into an appropriate risk category under incidents due to overloaded sewers unless there is positive identification that the flooding was due to blockage, collapse or equipment failure.

Properties experiencing repeat flooding due to other causes (line 7)

We are now collecting data on properties which have experienced repeat flooding due to other causes. This is to enable us to gauge the extent of the problem and may help inform investment decisions. We expect the company to keep a record of properties which have flooded more than once due to other causes. Initially we will use a ten year period for repeat flooding. This may be revised depending on the data received.

Internal and external flooding

Table 3a collects data on external flooding. For lines 1 to 11 of table 3, the following rules should apply:

- All incidents of internal flooding in the report year should be recorded regardless of any previous or subsequent external flooding events;
- If a property is flooded both internally and externally during the same event, it should be recorded as an internal incident on table 3 only;
- If a property has mitigation which prevents an internal flooding incident but the property still floods externally this incident should be reported in table 3a line 1; however the property should still remain on the internal risk register as explained below.

See the guidance for "Properties at risk" for the treatment of properties flooding both externally and internally.

Guidance lines 12 to 34

It should be noted that DG5 measures the frequency of flooding incidents in properties and not the return period of the storm that causes the flooding.

Properties on the registers will be identified by a number of methods:

- historical information on actual flooding incidents;
- actual flooding incidents of properties reported to the company at the time of the incident;
- properties near to the initial property that subsequently report flooding. This could be as a result of a member of the household declaring this, from a company operator visiting the property, or by any other contact with members of the household; or
- a verified hydraulic model. (Verified means that properties indicated as at risk are known to have flooded, or there is good reason to believe that unreported flooding has occurred, for example, neighbouring properties to the initial reported property).
- or changes in the network or properties draining to the system clearly put the property in the at risk category although insufficient time has elapsed for actual flooding to have arisen).

When a previously unreported property is flooded, it should be entered onto the register under an appropriate category. It should normally be added to the 1 in 20 category unless:

- Investigation, such as verified hydraulic modelling clearly shows that it is likely to flood more frequently than once in ten years, then it should be added to the once in ten years category, or is likely to flood more frequently than twice in ten years, then it should be included in the twice in ten year category;
- the storm was severe and investigation shows that it is clearly not likely to flood as frequently as once in twenty years and the severity of the storm can be verified (e.g. by the Meteorological Office); or,
- the cause was a blockage, etc.

In all cases, the decision as to whether a property is to be reported on the register should be taken in the context of the aim of the indicator, as set out above.

If a problem is identified and resolved during the report year, it should be entered in the balance sheet as a new problem and as a problem resolved during the same year. (This ensures that the company is reporting the total number of problems resolved by company action).

Flooding is not always reported. Therefore, when an incident is reported, the company is expected to investigate the extent of the problem and the number of surrounding properties that were affected. These should then be reported in the relevant categories (both on the register and recorded as incidents). Where the cause of flooding at a property is still unknown at the time of compilation of the return, then that property must be categorised as affected by internal flooding due to overloaded sewers, and placed in the appropriate risk category.

All properties which have flooded in the report year must be entered in the 'Annual flooding summary' part of the DG5 register, although those meeting the defined exclusion criteria are not reported as being on the register. Properties that have not flooded for the last 10 years should be reported in line 16 and the company should take action to confirm if the property has been correctly categorised and should still be on the register. This should include examination of the cause of the property initially being put on the register, and could include interviews with residents and/or hydraulic modelling.

A flooded property should appear on either the internal risk register or the external risk register, but not both. For example:

- A property that has flooded internally and subsequently floods externally should not be added to the external register but kept on the internal register. However, the external flooding incident should be recorded in the annual flooding summary part of table 3a if it has flooded externally during the report year;
- A property that has only flooded externally and then floods internally should be removed from the external register and placed on the internal register; or
- A property should not move from the internal to the external register even if it floods internally once and all subsequent flooding events are external, unless action is taken to remove the risk of internal flooding.

Where the company has relied on historical records which indicate that a property might be at risk of flooding due to hydraulic overload but those records do not provide a sufficiently robust basis to confirm the cause of flooding or the risk of flooding without further investigation, the company shall:

- not include the property in the 2 in 10, 1 in 10 or 1 in 20 at risk categories;
- include the property in line 15A of the return which asks for the number of properties identified as potentially at risk of flooding due to hydraulic overload based on historical records whose risk status cannot be confirmed without further investigation;
- provide an explanation in the commentary of the further investigations the company is taking to confirm or otherwise the risk of flooding for these properties and a programme for undertaking this work;
- provide an explanation in the commentary of the changes in this data from the previous year including: an explanation of any additional sources of data which add to the category; the number of properties where investigations have been completed from the previous year; and the number of properties allocated to each at risk category as a result of the investigations completed in the report year.

Restricted toilet use (RTU): A property suffering from RTU should be deemed at risk of internal flooding and placed on the register. In this case, the customer is preventing an internal flooding. Properties suffering RTU should be recorded in line 17 of table 3. This will enable us to gauge the extent of the problem.

Mitigation: Mitigation is a temporary solution which lowers but does not eliminate the risk of a property flooding due to hydraulic overload. It may also ensure that damage to properties from flooding incidents is minimised. The company should only install mitigation measures if the flooding is not moved to cause further problems elsewhere. If mitigation measures have to be installed to neighbouring properties to prevent them flooding as part of the overall mitigation solution and the neighbouring properties have never flooded then only the properties that have flooded should be counted in the total number of properties mitigated. A property that is on the 1 in 10 risk register should **not** be moved off the 1 in 10 register or to the lower risk

category of 1 in 20 as a result of not flooding due to mitigation measures.

Where such a property is flooded as a result of failure of the mitigation, it should be reported as an overloaded sewer incident.

Properties protected by mitigation measures should include those where mitigation was installed in earlier years and still reduces the risk of flooding at that property.

Movements between registers

Some companies move properties between the risk registers if they have not flooded for a certain period. We do not expect to see properties that have 'timed out' being added back on to the register due to re-flooding. The company should use its commentary to inform us if 'timed out' properties are being added back on to the register.

Methodology statements

The company must include their methodology statements with each Annual information return. The statement should include

- How a property is added to the at risk register from the initial flooding incident, for example what investigation is carried out immediately after the incident, which register it goes on to;
- How properties are moved between the 1 in 10, 2 in 10 and 1 in 20 risk registers;
- Mitigation – how a company approaches mitigation, how a mitigated property is treated on the at risk register;
- Restricted toilet use – how properties affected are substantiated;
- Definition of severe weather – how the company determines whether a property was flooded due to severe weather; and
- If the methodology for external flooding is the same as internal flooding the company should state this. However a definition of what is counted in the 'curtilage', 'highway' and 'other' categories should be included.
- How cost benefit analysis is applied to properties on the registers.

Cost calculations

The problem solving costs in lines 26 and 34 should be calculated using the costs and outputs of schemes completed during the report year. In the first instance, the company should identify the cost of resolving flooding within the overall scheme. The allocation should exclude specific asset maintenance costs such as the rehabilitation of a sewer or the maintenance of a pumping station. If a scheme solves both internal and external problems, the cost should be proportionally allocated. For example:

- The preferred approach is a detailed allocation based on the cost of works within a scheme targeted at solving internal and external problems within the overall scheme costs.
- Where a project solves both internal and external flooding and it is not practical to undertake a detailed allocation of costs between them, the company should identify the marginal costs of solving external flooding problems which are consequential to the solution of internal flooding problems.
- If the company cannot undertake a detailed allocation then a simple proportional allocation should be adopted as follows. If a scheme costs £100k and solves two internal problems and three external problems, then £40k and two outputs should be included in the average cost calculation.

Records

The company must maintain verifiable records for DG5. The aim of the records is to provide an auditable method for identifying the specific properties which are affected by flooding or are at risk of experiencing flooding.

The DG5 Register: As part of these records the company must maintain a DG5 register which should form a database of all properties which have flooded and are likely to experience sewer flooding more than once in twenty years. It will enable the identification by address of individual properties which are below the reference level and should also contain information on (for example) complaints and the results of their investigation, problems which are attributable to customers apparatus and properties which experience sewer flooding but are covered by one of the allowable exclusions.

The register must clearly identify those properties below the reference level, distinguish them from those which have flooded but are not below the reference level and provide a verifiable reason for the exclusion (e.g. flooding was a result of a blockage).

The records should include:

- date of incident;
- properties affected identified by address;
- cause of flooding (including source and reason, where known);
- action taken;
- name of the persons completing the records;
- the 'at risk' category for reporting under DG5;
- if a property on the register is not reported as being on the flooding register under DG5, the reason should be stated; and
- if the internal and external registers are held in the same database then the problem needs to be identified as either an internal or external flooding problem.

Problem Status of Properties in the various at-risk categories

The company is not required to provide data or commentary on the problem status of properties in the various at-risk categories for this return.

Company commentary

The company should:

- provide details of its programme and approach for improving the quality and comprehensiveness of the information held on its DG5 register and comment on the progress made against this programme (Note: this submission should cover both internal and external flooding records. No separate submission is required under Chapter 3a)
- comment on significant year on year changes in reported figures;
- comment on the number of properties reported under internal flooding due to overloaded sewers because no other cause has been positively identified for flooding incidents at those properties;
- state whether any allowance has been made for problems as yet undiscovered;
- include the storm return periods of severe weather incidents reported in line 4 and the number of properties flooded in each incident;
- include a table in the commentary showing the number of properties that have experienced repeat hydraulic flooding in the report year and the number of times they have flooded;
- state any assumptions made in reporting the figures in the balance sheets;
- comment on the reason why, and number of, individual properties, which are added and then removed from the at-risk register during the report year. For example, this might include: properties added to but subsequently removed from the at risk register in the report year due to the rainfall event associated with the flooding incident being assessed as ‘severe weather’ or; properties which are added to but subsequently removed from the register due to company action during the report year;

- comment on the company's policy on provision of mitigation measures and state:
  - the number of internal or external problems where mitigation measures were installed during the report year and separately identify how many were installed where a full capital solution may not be cost beneficial;
  - the total number of properties which are benefiting from mitigation at the end of the year;
- report on the number of internal and external outputs delivered from the sewer flooding early start programme, and whether any outputs or schemes remain outstanding at the end of the year;
- comment on its policy on determining which schemes are cost beneficial;
- comment on progress of the programme relative to the profile of internal problems solved. State any reasons behind any significant variances from the assumed profile of outputs in the report year;
- comment on any significant changes to the number of net additions to the register from those estimated in the final business plan;
- state the number of 'unknown cause' properties affected by flooding incidents which have been placed in the overloaded sewer category;
- provide commentary on the number of properties added to the once in twenty years "at risk" register which have not been positively identified as being at risk of flooding less frequently than once in ten years but more frequently than once in twenty years; and
- provide commentary where the company has relied on historical records which indicate that a property might be at risk of flooding due to hydraulic overload but those records do not provide a sufficiently robust basis to confirm the cause of flooding or the risk of flooding without further investigation which are reported in Line 15A; and
- Identify the number of properties experiencing Restricted Toilet Use and comment on how this was assessed.

Guidance to Reporters

Reporters should comment on:

- the appropriateness of the company's programme and approach for improving the quality and comprehensiveness of the information held on its DG5 register and the progress made by the company against this programme (Note: this submission should cover both internal and external flooding records. No separate submission is required under Chapter 3a)
- whether data collection methods used are appropriate to meet NIAUR's reporting requirements and are clearly set out in the methodology statement;
- whether all assumptions have been disclosed and their materiality;
- the appropriateness of the confidence grades assigned;
- the efficacy of the methodologies used and the quality of data employed by the company to identify severe weather events;
- the quality of the data supplied for internal and external flooding and the methodologies used to collect it;
- the numbers reported in the additions/removals lines in the balance including minimum design storm return periods for properties removed by company action;
- the accuracy of reporting with respect to non cost beneficial problems. Please detail the number of schemes on the list that have been checked;
- whether the prioritisation process has changed; and
- if the company 'times out' properties from the register reporters should check how many of these are being added back on to the register and comment on the reasons for this;
- whether the approach to cost benefit analysis is appropriate;
- whether all sewer flooding other causes incidents are included in the annual return figures for Tables 3 and 3a, including any third party incidents (e.g. builders digging through a sewer) or for "customer abuse" (e.g. unsuitable items found to have blocked the sewer). The extent of third party or customer abuse incidents should be explained in the company commentary;
- the basis of the allocation of properties to line 15A and the companies proposals to reach a conclusion on the risk of property flooding for these properties;
- the allocation of cost of internal and external property flooding; and
- the number of properties experiencing Restricted Toilet Use.

In the report on AIR 2010, the Reporter raised specific concerns on the information used by the company to allocate properties at risk of flooding between at risk categories. The company should assess and provide commentary on how the company has addressed those concerns and whether they have been addressed to the Reporter's satisfaction.

Table 3 line definitions

A ANNUAL FLOODING SUMMARY

1	Number of domestic properties connected to sewerage system	000	1dp
Definition	The number of domestic connected properties connected to the sewerage system within the company's area at the end of the year. The number should include any property connected for surface water drainage only and is billed (whether notionally or otherwise).		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

(i) OVERLOADED SEWERS

2	Properties flooded in the year (overloaded sewers)	nr	0dp
Definition	The number of properties affected by internal flooding incidents due to overloaded sewers. This should include properties where an uninhabited cellar is the only part affected by the flooding.		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

3	Flooding incidents in the year (overloaded sewers)	nr	0dp
Definition	The number of incidents of internal flooding caused by overloaded sewers. This should include properties where an uninhabited cellar is the only part affected by the flooding.		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

4	Flooding incidents (overloaded sewers attributed to severe weather)	nr	0dp
Definition	The number of incidents of internal flooding caused by overloaded sewers in properties which are known to be not at risk of flooding more frequently than once in ten years. Accordingly, this line's enumeration includes flooding incidents caused by severe storms which affect properties that are not at risk of flooding more frequently than once in ten years. The company should use the commentary to report the number of flooding incidents caused by severe weather at properties that are already known to be at risk of flooding from sewers more frequently than once in ten years. The company should include the rainfall return periods for the incidents reported in the commentary Incidents of flooding via the sewers caused by overflowing watercourses should be excluded.		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

4a	Properties flooded in the year attributed to severe weather	nr	0dp
Definition	The number of properties affected by internal flooding incidents due to overloaded sewers. This should include properties where an uninhabited cellar is the only part affected by the flooding. This line's enumeration includes flooding caused by severe storms which affect properties that are not at risk of flooding more frequently than once in ten years. Data should be input for the years 2007-08 to 2012-13		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

5	Props. where flooding limited to uninhabited cellars only (o/loaded sewers)	nr	0dp
Definition	The number of properties where only uninhabited cellars were affected by internal flooding incidents due to overloaded sewers. In these instances the flooding must have entered the uninhabited cellar directly (i.e. not from another part of the property). A property affected by more than one incident under this definition is reported as one property in this line.		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

(ii) OTHER CAUSES

6	Properties flooded in the year (other causes)	nr	0dp
Definition	The number of properties affected by flooding incidents from equipment failures, blockages or collapses (collectively grouped as other causes). This should include properties where an uninhabited cellar is the only part affected by the flooding. A property affected by more than one incident under this definition is reported as one property in this line.		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

7	Properties which have flooded more than once in the last 10 years (other causes)	nr	0dp
Definition	The number of properties which have experienced multiple incidents of internal flooding in the last 10 years caused by blockages, collapses and equipment failure.		
Primary Purpose	Confirming delivery of key outputs and service		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

8	Flooding incidents (other causes – equipment failure)	nr	0dp
Definition	The number of incidents of internal flooding caused by the failure or incorrect operation of company apparatus (e.g. non-return (flap) valves, pumping stations, maintenance equipment, penstocks, combined sewer overflows, or real time control systems). Flooding incidents due to third party damage including "customer abuse" must be included.		
Primary Purpose	Confirming delivery of key outputs and service		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

9	Flooding incidents (other causes – blockages)	nr	0dp
Definition	The number of incidents of internal flooding caused by a complete or partial blockage of the sewer (including siltation) where the sewer itself is still intact. If the blockage is the result of a fracture or deformation of the pipe, it should be included in the 'other causes – collapses' category.		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

10	Flooding incidents (other causes – collapses)	nr	0dp
Definition	The number of incidents of internal flooding caused by the collapse of a sewer. This line's enumerator should also include incidents due to fracture or deformation. (This does not affect the definition of collapse for reporting in table 16).		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

11	Props. where flooding limited to uninhabited cellars only (other causes)	nr	0dp
Definition	The number of properties where only uninhabited cellars were affected by flooding incidents due to equipment failures, blockages or collapses (collectively grouped as other causes). In these instances the flooding must have entered the uninhabited cellar directly (i.e. not from another part of the building). A property affected by more than one incident under this definition is reported as one property in this line.		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

B DG5 PROPERTIES ON THE FLOODING REGISTER
(i) AT RISK SUMMARY

12	2 in 10 register at end of year	nr	0dp
Definition	The number of properties which have flooded and are deemed to be at risk of flooding twice or more in ten years at the end of the year.		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

13	1 in 10 register at end of year	nr	0dp
Definition	The number of properties at risk which have flooded and are deemed to be at risk of flooding more than once in ten years (but less than 2 in 10) at the end of the year.		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

14	Total 1 in 10 and 2 in 10 properties on the register at end of year	nr	0dp
Definition	The total number of properties which have flooded and are deemed to be at risk of flooding more than once in ten years and twice in ten years at the end of the year. Validation check: line 14 previous year – (current year line 22 + line 23) + (current year line 24 + line 25) = line 14 current year.		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Calculated: the sum of lines 12 and 13		
Responsibility	Comparative Efficiency & Performance Team		

15	1 in 20 register at end of year	nr	0dp
Definition	The number of properties which have flooded and are deemed to be at risk of flooding more than once in twenty years (but less than 1 in 10) at the end of the year. Validation check line 15 previous return - (line 30 + line 31) +(line 32 + line 33) = line 15 current year)		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

15A	Potential risk of property flooding identified requiring further investigation to assess at risk category.	nr	0dp
Definition	The number of properties where historical records indicate that a property might be at risk of flooding due to hydraulic overload but those records do not provide a sufficiently robust basis to confirm the cause of flooding or the risk of flooding without further investigation		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

16	Props. on the register which have not flooded in the past 10 yrs (excl. severe weather)	nr	0dp
Definition	The total number of properties on the 2 in 10 and 1 in 10 register which have not flooded in the last ten years (excluding severe weather).		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

17	Properties which have not flooded internally but suffer restricted toilet use (RTU)	nr	0dp
Definition	The total number of properties which have not flooded internally but who suffer from restricted toilet use due to the sewers being hydraulically overloaded more than once in twenty years (excluding severe weather). Restricted toilet use is defined as the inability of the customer to flush their toilet without the risk of the toilet backing up and flooding the property. Properties that have received mitigation measures that cause RTU such as flap valves should NOT be included in this line. This line is a subset of the risk register and properties suffering RTU should also be included in the appropriate register category (lines 12,13,or15)		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

Lines 18 to 21	Not used

(iii) ANNUAL CHANGES TO 2 IN 10 & 1 IN 10 REGISTERS

22	Removed by company action	nr	0dp
Definition	The number of properties removed from the 1 in 10 and 2 in 10 "at risk" register by company action. These are properties removed from being at risk of flooding due to company action such as sewer enhancement which is linked to capital investment (for capital maintenance, ESL or SDB purposes) in the sewerage system. The company should use the commentary to explain the reasons why and the number of individual properties added to and subsequently removed from the "at risk" register during the report year. There must be clear and auditable links between the company's registers and the DG5 balance sheet.		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

23	Removed because of better information	nr	0dp
Definition	The number of properties removed from the 1 in 10 and 2 in 10 "at risk" register because of better information. This category is defined as changes resulting from better quality information such as improved knowledge of the sewerage system (e.g. extended modelling, better estimates of figures). This number will include properties previously thought to have been at risk but where investigation has subsequently shown the problem to have been, caused by reasons other than overloading (e.g. a blockage or collapse). The line should also include properties, which were incorrectly identified as being at risk in previous years. The company should use the commentary to explain the reasons why and the number of individual properties added to and subsequently removed from the "at risk" register during the report year. There must be clear and auditable links between the company's registers and the DG5 balance sheet.		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

24	Added because of better information (actually flooded)	nr	0dp
Definition	The number of properties added to the 1 in 10 and 2 in 10 registers following a flooding incident. It includes neighbouring properties to the initial reported property which are known to have flooded as a result of more detailed investigation for example results of questionnaires and on site investigations at the time of flooding e.g. door knocking. There must be a clear and auditable links between the company's registers and the DG5 balance sheet.		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

25	Added because of better information (modelled)	nr	0dp
Definition	The number of properties added to the 1 in 10 and 2 in 10 registers because of information provided by a verified hydraulic model. Properties in this line have not been reported as flooded by the householder but detailed hydraulic modelling shows that they are at risk of flooding and there is good reason to believe that unreported flooding has occurred for example neighbouring properties have actually flooded. Properties identified in this category will have always been at risk of flooding in previous years but not previously identified. There must be a clear and auditable link between the company's registers and the DG5 balance sheet.		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

26	Average capex cost of permanent solutions to 1 in 10 & 2 in 10 DG5 problems	£000/ prop	1dp
Definition	The average capex costs attributed to permanently removing problems from the 1 in 10 and 2 in 10 'at risk' register. Average cost should be calculated by dividing the capex cost of resolving the flooding problem for schemes completed during the report year by the number of 1 in 10 and 2 in 10 outputs resolved by these schemes. For schemes that also solve external problems, the cost should be proportionally allocated based on outputs and only the 1 in 10 and 2 in 10 costs used in the calculation. Investment made to reduce the level of risk but not to remove a property from the register should not be included.		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

Lines 27 to 29	Not used

(v) ANNUAL CHANGES TO 1 in 20 REGISTER

30	Removed by company action (1 in 20)	nr	0dp
Definition	The number of properties removed from the 1 in 20 "at risk" register by company action. These are properties removed from being at risk of flooding due to company action such as sewer enhancement which is linked to capital investment (for capital maintenance, ESL or SDB purposes) in the sewerage system. The company should use the commentary to explain the reasons why and the number of individual properties added to and subsequently removed from the "at risk" register during the report year. There must be clear and auditable links between the company's registers and the DG5 balance sheet.		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

31	Removed because of better information (1 in 20)	nr	0dp
Definition	The number of properties removed from the 1 in 20 "at risk" register because of better information. This category is defined as changes resulting from better quality information such as improved knowledge of the sewerage system (e.g. extended modelling, better estimates of figures). This number will include properties previously thought to have been at risk but where investigation has subsequently shown the problem to have been, caused by reasons other than overloading (e.g. a blockage or collapse). The line should also include properties, which were incorrectly identified as being at risk in previous years. The company should use the commentary to explain the reasons why and the number of individual properties added to and subsequently removed from the "at risk" register during the report year. There must be clear and auditable links between the company's registers and the DG5 balance sheet.		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

32	Added because of better information (actually flooded - 1 in 20)	nr	0dp
Definition	The number of properties added to the 1 in 20 register following a flooding incident It includes neighbouring properties to the initial reported property or area which are discovered as a result of more detailed investigation, for example results of questionnaires and on site investigations at the time of flooding e.g. door knocking . There must be a clear and auditable links between the company's registers and the DG5 balance sheet.		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

33	Added because of better information (modelled - 1 in 20)	nr	0dp
Definition	The number of properties added to the 1 in 20 register because of information provided by a verified hydraulic model. Properties in this line have not been reported as flooded by the householder but detailed hydraulic modelling shows that they are at risk of flooding and there is good reason to believe that unreported flooding has occurred for example neighbouring properties have flooded. Properties identified in this category will have been at risk of flooding in previous years but not identified There must be clear and auditable links between companies' registers and the DG5 balance sheet.		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

34	Average capex cost of permanent solutions to 1 in 20 DG5 problems	£000/ prop	1dp
Definition	The average capex costs attributed to permanently removing problems from the 1 in 20 'at risk' register. Average cost should be calculated by dividing the capex of schemes completed during the report year by the number of 1 in 20 outputs resolved by these schemes. For schemes that also solve external problems, the cost should be proportionally allocated based on outputs and only the 1 in 20 costs used in the calculation. Investment made to reduce the level of risk but not to remove a property from the register should not be included.		
Primary Purpose	Confirming delivery of key outputs and service.		
Processing rule	Input		
Responsibility	Comparative Efficiency & Performance Team		

CHANGE CONTROL SHEET
CHAPTER 3

2008/1.0	First issue of chapter for the SBP period
2009/1.0	Second issue of chapter for the SBP period – company and reporter guidance amended to include the requirement to comment on the programme and approach for improving the quality and comprehensiveness of the information held on the DG5 register (for both internal and external flooding records) and the progress made against this programme
2010/1.0	Third issue of chapter for the SBP period. – Amendments to guidance and definitions – Line 15A introduced.
2011/1.0	First issue of chapter for the PC10 period. – Line added for properties flooded attributed to severe weather. – "Added because of better information" line split between 'actually flooded' and 'modelled'. – Additional commentary asked for in relation to RTU's – Lines to capture average capex cost of permanent solutions to DG5 problems added – Block B – Sections (ii) and (iv) deleted.
2012/1.0	Second issue of chapter for the PC10 period. – Deletion of line references in the mitigation paragraphs (page 6). – Line 14 definition: removal of a validation check. – Line 15 definition: removal of a validation check.
2013/1.0	Third issue of chapter for the PC10 period - No changes.