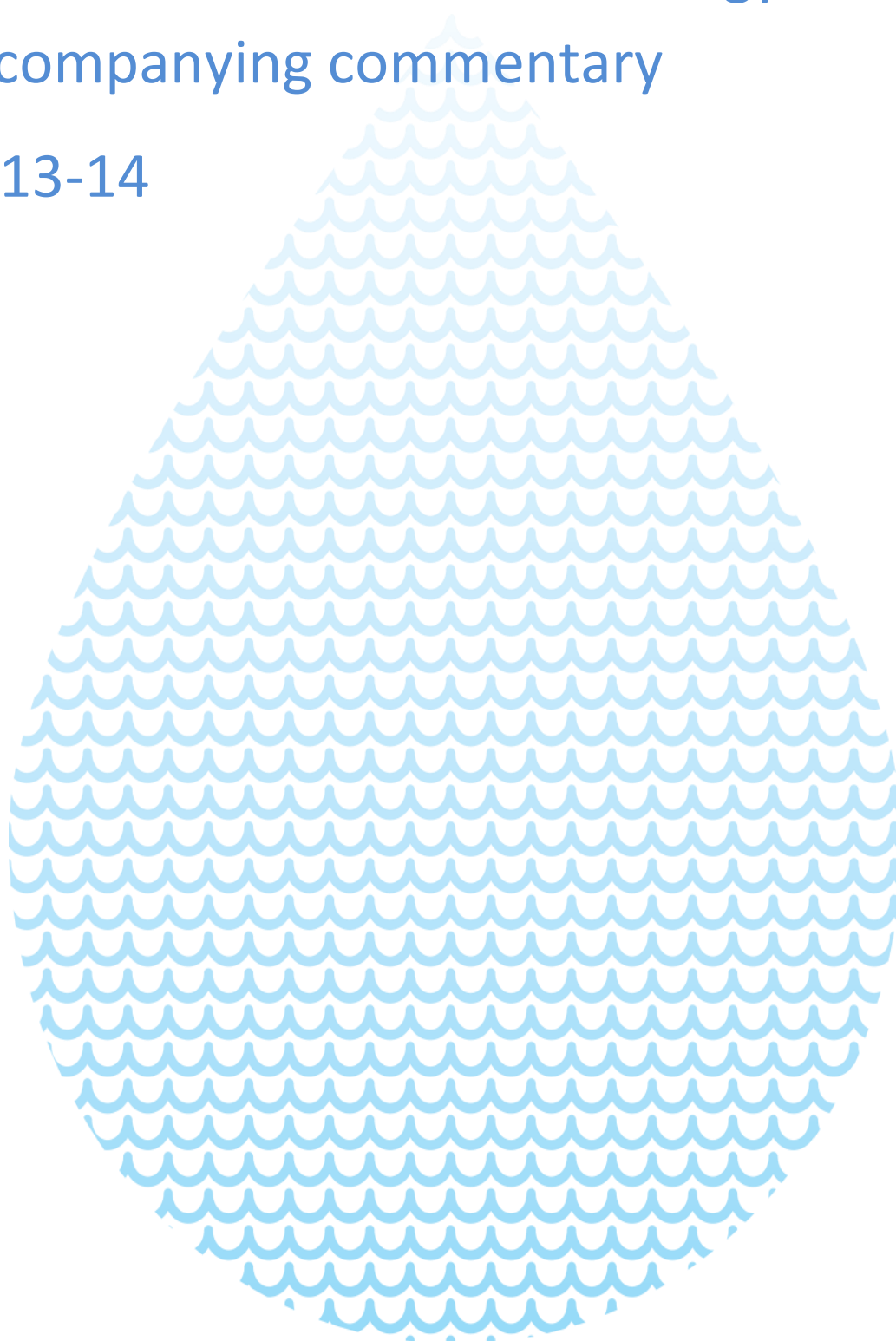


Dŵr Cymru Cyfyngedig

Upstream services methodology and  
accompanying commentary

2013-14



# Dŵr Cymru Cyfyngedig

## Upstream services trial data - methodology statement

### Year ended 31 March 2014

## Introduction

In February 2013 Ofwat published their guidance for the production of an upstream services report which would provide further detailed information on how the costs could be broken down even further than the accounting separation tables published in the Company's 2012/13 regulatory accounts. Ofwat have asked for the same information to be submitted for 2013/14 and they have asked that this is supported by audit assurance from external auditors. Ofwat's main concerns are:

- financial information may have been wrongly translated into services types;
- any apportionments used may not correctly reflect the relevant cost drivers; and
- they may be unaware of any changes in policy .

Ofwat requires companies to further breakdown of operating costs into the following upstream services:

#### Accounting separation units

#### Upstream Services business units

##### Wholesale water:

Water resources

Abstraction licence

Raw water distribution

Raw water abstraction

Raw water transport

Raw water storage

Water treatment

Water treatment

Treated water distribution

Trunk treated water transport

Local water distribution

4

7

##### Wholesale wastewater:

Sewage collection

Sewage collection - foul

Sewage collection - surface water drainage

Sewage collection - highway drainage

Sewage treatment

Sewerage treatment and disposal

Sludge treatment, recycling and disposal

Sludge transport

Sludge treatment

Liquor treatment

Sludge disposal

Sludge disposal

4

8

Upstream service costs are being published on a trial basis in order to better understand the different approaches taken and methodologies applied in allocating costs to services.

Dŵr Cymru's allocation to upstream services uses regulatory accounting totals for wholesale services as the starting point and, while some costs for individual upstream services can be readily identified and therefore allocated directly, others rely on management estimate or a simple pro-rata approach where there is insufficient supporting information to facilitate a meaningful allocation of costs.

As stated above, the upstream services cost analysis is prepared on the same bases as the accounting separation tables that feed into the regulatory accounts. From the accounting separation tables some of the accounting separation units need to be further analysed and the methodology below is an extension to the accounting separation methodology

It is our intention to develop these allocation bases further in advance of reporting this information for 2014/15 and to create SAP reports that will extract the information in the format requested.

The following details each individual upstream service and assumptions applied.

**Dŵr Cymru Cyfyngedig**  
**Upstream services trial data - methodology statement**  
**Year ended 31 March 2014**

## **Water Services: operating expenditure**

### **Abstraction licence**

#### **Guidance**

This service has been identified separately from the raw water abstraction service because of the potential for a market to emerge in the future, which would enable abstraction licences to generate a separate income stream.

This service includes activities related to negotiating with third parties to obtain abstraction rights and to agree charges, as well as the annual cost of the licence itself. This service should not include activities that are incurred in choosing abstraction sites, optimising abstraction or ensuring compliance with licence conditions. All such abstraction planning activities and licence administration activities should be included in the “raw water abstraction” service.

#### **Methodology**

The Company records the cost of the abstraction licence within a separate general ledger code in SAP and is shown within the Water Resources accounting separation table as service charges. As this cost is readily identifiable no further allocation of costs is required. Cost associated with the negotiation of the licences has been obtained from the Company’s Abstraction team, who have assessed the time spent on the negotiation and procurement of these licences to be very low; the related costs have been allocated to this activity.

No assets included in this area and therefore there is no IRC or CCD

## **Raw water abstraction**

#### **Guidance**

The water abstraction service includes activities related to the identification of new sources, including catchment management, licence management, and the abstraction infrastructure.

Pre-treatment processes can vary, from a relatively simple physical separation of the largest impurities, to more complex chemical treatments, depending on the source of abstraction and on the type of treatment plant to which the raw water is transferred. Therefore, it seems appropriate to combine activities related to abstraction and pre-treatment within the same service. Moreover, any transport from the water abstraction site is included within the abstraction service, although these costs are expected to be very small. For example, transport between reservoirs where both reservoirs have an abstraction licence is considered to be part of the raw water abstraction service. However, transport which occurs between a reservoir with an abstraction licence and a reservoir/storage tank without an abstraction licence would be considered to be part of the raw water transport service. The activities relating to the inspections, operation and maintenance of impounding reservoirs are included in this service.

All activities related to planning are to be included in “water abstraction” and it is only the administrative costs involved in obtaining the licence and the cost of the licence itself that should be included in the “water licence” service.

#### **Methodology**

All other costs attributable to the Water Resources accounting separation unit apart from the costs included in abstraction licence costs above are included within raw water abstraction

# **Dŵr Cymru Cyfyngedig**

## **Upstream services trial data - methodology statement**

### **Year ended 31 March 2014**

## **Raw water transport**

### **Guidance**

This service includes the activities related to transporting the raw water from the boundaries of the abstraction site to a treatment plant, a raw water storage facility, or to large industrial customers that require untreated water in their production processes.

The activities allocated to this service include primarily the development and maintenance of the physical raw water transport network.

### **Methodology**

All direct and indirect costs relating to raw water distribution, apart from a small element of insurance and rates have been allocated to raw water transport.

All the IRC charge included in raw water distribution relate to raw water transport. The assets that are included are raw water aquaducts.

For CCD, 16% of the asset base within raw water distribution relate to raw water transport. The assets include booster pumping stations. The CCD shown for raw water transport is derived by applying this % to the CCD reported in the Accounting Separation tables for raw water distribution.

## **Raw water storage**

### **Guidance**

This service includes activities related to the construction, operation and maintenance of raw water storage facilities. In general, no transport costs should be allocated to this service, since the cost of transport should be included within the 'raw water transport' service.

Reservoirs that do not have an abstraction licence attached to them and are used to store raw water should be included under raw water storage. Associated activities, such as control of the inflow to prevent overfilling and outflow (which ensures continuity of availability of supply) and planned and emergency drawdown and discharge facilities (with associated permitting) should also be included in this service. Activities related to determining losses due to leakage and to ensuring security of the site from contamination are also expected to be included.

### **Methodology**

For PR14 the company carried out a MEAV valuation on its asset base. The assets in the valuation were grouped into the same categories as required for Accounting Separation. The structures that were identified as relating to raw water storage were raw water balancing tanks which amount to 84% of the above ground asset costs for raw water distribution.

We were advised by the finance team that look after the water sector that the operational costs associated with these were minimal. The operational costs that have been included are the insurance cost and an element of cumulo rates that have been apportioned over MEAV valuation. The split of the MEAV valuation for raw water distribution amounts to raw water storage 16%: raw water transport 84%.

Last year's submission included some scientific costs in raw water but it appears that these costs were allocated to this activity in error and has been corrected for this submission. There are no scientific services allocated to raw water storage.

There is no IRC charge as there is no infrastructure assets allocated to raw water storage

# **Dŵr Cymru Cyfyngedig**

## **Upstream services trial data - methodology statement**

### **Year ended 31 March 2014**

84% of the above ground assets that are reported within raw water distribution relate to raw water storage. The assets that are included in this category relate to raw water balancing tanks and other similar structures. The CCD shown for raw water storage is derived by applying this % to the CCD reported in the Accounting Separation tables for raw water distribution

## **Water treatment**

### **Guidance**

This service includes all the activities involved in the treatment of raw water, including both chemical and physical treatment. This also includes activities within the treatment plant.

The water treatment processes may result in the production of sludge. In such cases, an appropriate share of the costs incurred during treatment and/or disposal of this sludge should be allocated to the water treatment service, regardless of whether the treatment and disposal of this sludge occurs at the water treatment or at the sludge treatment plant.

### **Methodology**

All operating expenditure, IRC and CCD relating to the water treatment business unit as reported in the Accounting Separation tables is allocated to the water treatment business unit.

## **Trunk and local treated water distribution**

### **Trunk treated water distribution**

#### **Guidance**

Trunk treated water transport includes activities related to transporting treated water from the treatment works to District Metered Areas (DMAs). This service includes all trunk network repair and maintenance activities, as well as activities associated with any new network development. In addition to directly attributable costs, other activities that might need to be considered within this service may include the provision and maintenance of storage towers and reservoirs and ancillaries such as booster pumps, pressure reduction, hydrants, air release valves, washouts and flow measurement.

#### **Methodology**

The water distribution network is managed on a fully integrated basis and therefore we do not recognise the split between trunk and local water distribution in our day to day operational management of the business. However, for this purpose we have gone through the cost centres that are included in treated water distribution and have allocated, as much as we can either to trunk or local treated water distribution. The cost centres included in this business unit are; trunk mains, service reservoirs and water pumping stations. A report has been created in SAP which extracts the direct costs relating to this business unit.

All Bulk supply costs and third party services cost, reported as treated water distribution have been allocated fully to trunk treated water distribution.

Other indirect costs have been allocated to trunk or local treated as follows:

|   |   |
|---|---|
| Pension actuarial credit and bonus payments | -allocated over employment costs                            |
| Insurance and cumulo rates                  | -allocated using PR14 MEAV revaluation information          |
| General and support costs                   | -allocated over direct costs for treated water distribution |
| Other business activities                   | -allocated over direct costs for treated water distribution |

The 2013 MEAV revaluation has been used to allocate the assets between the both services in treated water distribution for both IRC and CCD.

# **Dŵr Cymru Cyfyngedig**

## **Upstream services trial data - methodology statement**

### **Year ended 31 March 2014**

For infrastructure assets we have allocated all water mains pipes >320mm and communication pipes that are included within treated water distribution as trunk treated water distribution. This accounts for 21% of the infrastructure assets. We have applied this to the IRC charge for treated water distribution to arrive at the IRC for this service

For above ground assets we have allocated service reservoirs, water towers, booster pumping stations, treated water storage and general and management costs to this service. These accounts for 84% of the above ground assets within treated water distribution .We have applied this to the CCD charge for treated water distribution to arrive at the CCD for this service.

## **Local treated water distribution**

### **Guidance**

Local treated water distribution includes the activities related to distributing treated water to customers within DMAs including secondary disinfection and other chemical dosing. This service includes all distribution network repair and maintenance activities, as well as the activities associated with any new network development

### **Methodology**

Within SAP which is our finance system, costs relating to Local treated water distribution is recorded within identified cost centres and have therefore been 100% allocated to local treated water distribution. This includes minor works, network inspectors, leakage inspectors, clerical and all associated costs. A report has been created in SAP which extracts the direct costs relating to this business unit.

Scientific services have been fully allocated to local treated water .In addition customer compensation payments relating to wholesale performance are included in local treated water distribution.

Other indirect costs have been allocated to trunk or local treated as follows:

|   |   |
|---|---|
| Pension actuarial credit and bonus payments | -allocated over employment costs                            |
| Insurance and cumulo rates                  | -allocated using PR14 MEAV revaluation information          |
| General and support costs                   | -allocated over direct costs for treated water distribution |
| Other business activities                   | -allocated over direct costs for treated water distribution |

As above, the 2013 MEAV revaluation has been used to allocate the assets between the both services in treated water distribution for both IRCand CCD.

For infrastructure assets we have allocated all water mains pipes <320mm that are included within treated water distribution as local treated water distribution. This accounts for 79% of the infrastructure assets. We have applied this to the IRC charge for local water distribution to arrive at the IRC for this service

For above ground assets we have allocated customer meters to this service. These accounts for 16% of the above ground assets within treated water distribution .We have applied this to the CCD charge for treated water distribution to arrive at the CCD for this service.

## **Sewerage Services: operating expenditure**

### **Foul, surface water and highway drainage**

#### **Foul**

### **Guidance**

This service includes the activities related to collection of foul sewage from customers' properties. The activities included in this service relate to the development, repair and maintenance of the sewage collection infrastructure. Other activities that should be

# **Dŵr Cymru Cyfyngedig**

## **Upstream services trial data - methodology statement**

### **Year ended 31 March 2014**

considered within this service may include the provision and maintenance of ancillaries such as overflows, screens, on-line and off-line retention tanks, rising main wells and pumps and flow measurement.

## **Surface Water Drainage**

### **Guidance**

This service includes the activities related to the collection of surface water from exterior areas of customers' properties. The activities included in this service relate to the development, repair and maintenance of the sewage collection infrastructure. Other activities that should be considered within this service may include the provision and maintenance of ancillaries such as overflows, screens, on-line and off-line retention tanks, rising main wells and pumps and flow measurement.

## **Highway Drainage**

### **Guidance**

This service includes the activities related to collection of surface water that runs off roads and pavements. The activities included in this service relate to the development, repair and maintenance of the sewage collection infrastructure. Other activities that should be considered within this service may include the provision and maintenance of ancillaries such as overflows, screens, on-line and off-line retention tanks, rising main wells and pumps and flow measurement.

### **Methodology**

For 2013 the costs were allocated over the sewage collection business units based on the performance data for 2012/13 in conjunction with a report prepared by Hyder Consulting in 1999. As a result the % split that was used to allocate costs between business units was as follows:-

|                  |     |
|------------------|-----|
| Foul             | 88% |
| Surface Water    | 8%  |
| Highway Drainage | 4%  |

It appears however, following further discussions with the income and tariffs team that the % allocation should be the same as that reported in the Hyder Consulting report as this is the basis of the sewage tariff. Hyder Consulting were asked to review sewage collection activity in order to support the surface water drainage tariff charges in 1999. Their findings at that time was that the cost of dealing with foul sewage/surface water/highway runoff flows were comparable with previous findings. Therefore from this study we can see that the % splits do not fluctuate significantly. However, we realize that this survey was conducted some years ago, and we will consider whether we will conduct another survey this year to support 2014/15 upstream services reporting.

The revised splits, which has been used for 2013/14 is shown as follows:

|                  |     |
|------------------|-----|
| Foul             | 61% |
| Surface Water    | 16% |
| Highway Drainage | 22% |

For IRC and CCD, we currently have no meaningful way of splitting our collection assets between these headings and have therefore pro-rated the costs as reported under sewage collection in our regulatory accounts based on the ratio of operating expenditure between the services.

**Dŵr Cymru Cyfyngedig**  
**Upstream services trial data - methodology statement**  
**Year ended 31 March 2014**

## **Sewage treatment and disposal**

### **Guidance**

This service includes all the activities related to the treatment and disposal of sewage. This includes the costs of development, repair and maintenance of treatment plants and sludge holding tanks, as well as any intra-plant transport required.

### **Methodology**

All operating expenditure, IRC and CCD relating to the sewage treatment business unit as reported in the Accounting Separation tables is allocated to the sewage treatment and disposal business unit.

## **Sludge Treatment**

### **Sludge transport**

#### **Guidance**

This service includes the transport of sludge from the sewage to the sludge treatment plant. All types of transport, and associated fuel costs, are included within this service. However, transport within the treatment plant or between sludge treatment plants is not included in this service, which is instead an activity of the 'sludge treatment' service.

#### **Methodology**

Costs of our internal and contracted sludge transport service are used to manage routine haulage work and these costs are separately identifiable.

## **Sludge treatment**

### **Guidance**

This service includes all the activities related to sludge treatment. While different technologies exist for sludge treatment, sludge treatment is defined as a technology-neutral service for the purpose of accounting separation

### **Methodology**

Total sludge treatment costs as reported in the regulatory accounts less sludge transport and liquor treatment costs.

## **Liquor Treatment**

### **Guidance**

Includes all activities in transporting and treating liquors generated during the sludge treatment process. The liquors may be treated either on site at a sludge treatment plant or at a sewage treatment plant.

### **Methodology**

For 2013 this costs was arrived at by management allocation of 7%.

For this report year, we asked the managers if they could support this allocation. An exercise was carried out for a typical site with primary settlement, activated sludge and no imported sludge. The strengths of centrates were measured and compared to the total measured biological load on the works. The result was that, based on BOD, 8.6% of the total loads being treated by the works was due to return liquors from the centrate. We have used this revised split for 2013/14.

## **Sludge transport, sludge treatment and liquor treatment**

For CCD we have split the costs to Liquor treatment based on 2009 MEAV splits. We have not used the 2013 valuation in this case as these assets were not separately identified. We do not currently have a meaningful way of splitting our sludge transport and



# **Dŵr Cymru Cyfyngedig**

## **Upstream services trial data - methodology statement**

### **Year ended 31 March 2014**

treatment assets costs and have assumed a split based on managers estimate for transport 2%, sludge treatment 91% and liquor treatment 7%.

## **Sludge disposal**

### **Guidance**

This service includes all the activities related to the storage and disposal of treated sludge, regardless of the method of disposal. The most commonly used sludge disposal methods include land spreading, ash from incineration, landfilling, forestry, land reclamation and combustion.

### **Methodology**

All operating expenditure relating to sludge disposal business unit as reported in the Accounting Separation tables is allocated to the sludge disposal business unit.

# Dŵr Cymru Cyfyngedig

## Upstream services trial data - methodology statement

### Year ended 31 March 2014

## Explanation of cost movements from prior years

Included in the Accounting separation methodology statement is a comparison against prior years for those business units where the costs do not have to be broken down any further. These business units are water treatment, sewage treatment and sludge disposal.

However for water resources, raw water distribution, treated water distribution, sewage collection and sludge treatment we have split the costs further as part of the upstream services reporting. The commentary below will provide explanations for any significant movement (above 10%).

| Water resources               |    | Operating expenditure |                       |            | IRC                 |                       |            | CCD                 |                       |            | Total operating costs |                       |            |
|-------------------------------|----|-----------------------|-----------------------|------------|---------------------|-----------------------|------------|---------------------|-----------------------|------------|-----------------------|-----------------------|------------|
| Service                       |    | Abstraction licence   | Raw water abstraction | Total opex | Abstraction licence | Raw water abstraction | Total opex | Abstraction licence | Raw water abstraction | Total opex | Abstraction licence   | Raw water abstraction | Total opex |
| Total operating costs 2012/13 | £m | 10.1                  | 12.8                  | 22.9       | 0.0                 | 2.6                   | 2.6        | 0.0                 | 0.7                   | 0.7        | 10.1                  | 16.1                  | 26.2       |
| Movements                     | £m | 0.4                   | -2.2                  | -1.8       | 0.0                 | 2.3                   | 2.3        | 0.0                 | 3.9                   | 3.9        | 0.4                   | 3.9                   | 4.4        |
| Total operating costs 2013/14 | £m | 10.6                  | 10.5                  | 21.1       | 0.0                 | 4.9                   | 4.9        | 0.0                 | 4.6                   | 4.6        | 10.6                  | 20.1                  | 30.6       |
| Movement since last year      |    | 4%                    | -18%                  | -8%        | 0%                  | 88%                   | 88%        | 0%                  | 554%                  | 554%       | 4%                    | 24%                   | 17%        |

Significant movement (10%) compared to last years is as follows:-

- Raw water abstraction operating costs have decreased by 8%. Reasons are:
  - Employment costs £0.4m credit pension actuarial movement included
  - Higher rates recharged to EA relating to reservoir operating agreements
  - Reduction in third party services costs relating to Water Competition Appeal Tribunal.

Offset by

- Increase in cumulo rates allocated to water resources due to the change in the mix in PR14 MEAV revaluation
- Raw water abstraction IRC charge has increased by 88% reflecting the revaluation of the asset base in 2013. This differed from the previous 2009 revaluation as the current revaluation has categorized the assets into each accounting separation area. Previously the assets were split over the Accounting Separation areas based on management judgement and some high level apportionments.
- Raw water abstraction CCD charge has increased by 554% reflecting the revaluation of the asset base in 2013. This differed from the previous 2009 revaluation as the current revaluation has categorised the assets into each accounting separation area. Previously the assets were split over the Accounting Separation areas based on management judgement and some high level apportionments. It is management opinion that the assets are classed in their appropriate accounting separation area as a result of the recent revaluation.

**Dŵr Cymru Cyfyngedig**  
**Upstream services trial data - methodology statement**  
**Year ended 31 March 2014**

| Raw water distribution        |    | Operating expenditure |                   |            | IRC                 |                   |            | CCD                 |                   |            | Total operating costs |                   |            |
|-------------------------------|----|-----------------------|-------------------|------------|---------------------|-------------------|------------|---------------------|-------------------|------------|-----------------------|-------------------|------------|
| Service                       |    | Raw water transport   | Raw water storage | Total opex | Raw water transport | Raw water storage | Total opex | Raw water transport | Raw water storage | Total opex | Raw water transport   | Raw water storage | Total opex |
| Total operating costs 2012/13 | £m | 8.5                   | 1.7               | 10.2       | 0.0                 | 0.0               | 0.0        | 8.7                 | 0.5               | 9.2        | 17.3                  | 2.2               | 19.5       |
| Movements                     | £m | -2.3                  | -1.6              | -3.9       | 0.0                 | 0.0               | 0.0        | -8.6                | 0.5               | -8.1       | -10.8                 | -1.2              | -12.0      |
| Total operating costs 2013/14 | £m | 6.3                   | 0.1               | 6.3        | 0.0                 | 0.0               | 0.0        | 0.2                 | 0.9               | 1.1        | 6.5                   | 1.0               | 7.5        |
| Movement since last year      |    | -27%                  | -95%              | -38%       | -14%                | -100%             | -18%       | -98%                | 100%              | -88%       | -63%                  | -54%              | -62%       |

Significant movement (10%) compared to last years is as follows:-

- Raw water transport operating costs have decreased by 27% . Reasons are:
  - Reduction in third party services costs relating to Water Competition Appeal Tribunal.
  - Decrease in cumulo rates allocated to transport due to the change in the mix in PR14 MEAV revaluation
- Offset by
  - Less costs allocated to raw water storage as it is management's opinion that the amount of operating costs that should be included within raw water storage is minimal
- Raw water storage operating costs have decreased by 95% . Reasons are:
  - Sampling costs included here in error – this should have been included in treated distribution and sewage treatment
  - Less costs allocated to raw water transport as it is management's opinion that the amount of operating costs that should be included within raw water storage is minimal
- Raw water transport and storage IRC charge has decreased by 18% reflecting the revaluation of the asset base in 2013.
- Raw water transport and storage CCD charge has decreased in total by 88% reflecting the revaluation of the asset base in 2013. Within service areas however there are upwards and downwards movements with raw water transport decreasing by 98% and raw water storage increasing by 100%. This differed from the previous 2009 revaluation as the current revaluation has categorised the assets into each accounting separation area. Previously the assets were split over the Accounting Separation areas based on management judgment and some high level apportionments. It is management opinion that the assets are classed in their appropriate accounting separation area as a result of the recent revaluation.

| Water treatment               |    | Operating expenditure |  | IRC | CCD  | Total operating cost |
|-------------------------------|----|-----------------------|--|-----|------|----------------------|
| Service                       |    |                       |  |     |      |                      |
| Total operating costs 2012/13 | £m | 38.9                  |  | 0.0 | 28.1 | 67.0                 |
| Movements                     | £m | -1.8                  |  | 0.0 | 5.1  | 3.2                  |
| Total operating costs 2013/14 | £m | 37.1                  |  | 0.0 | 33.1 | 70.2                 |
| Movement since last year      |    | -5%                   |  | 0%  | 18%  | 13%                  |

Significant movement (10%) compared to last years is as follows:-

- Water treatment CCD has increased in total by 18% reflecting the revaluation of the asset base in 2013.

**Dŵr Cymru Cyfyngedig**  
**Upstream services trial data - methodology statement**  
**Year ended 31 March 2014**

| Treated water distribution    |    | Operating expenditure |                     |            | IRC                 |                     |            | CCD                 |                     |            | Total operating costs |                     |            |
|-------------------------------|----|-----------------------|---------------------|------------|---------------------|---------------------|------------|---------------------|---------------------|------------|-----------------------|---------------------|------------|
| service                       |    | Trunk treated water   | Local treated water | Total opex | Trunk treated water | Local treated water | Total opex | Trunk treated water | Local treated water | Total opex | Trunk treated water   | Local treated water | Total opex |
| Total operating costs 2012/13 | £m | 11.6                  | 41.1                | 52.7       | 7.1                 | 28.5                | 35.7       | 2.8                 | 17.9                | 20.7       | 2.8                   | 17.9                | 109.0      |
| Movements                     | £m | 3.5                   | 1.2                 | 4.7        | 0.2                 | -1.6                | -1.4       | 16.3                | -14.2               | 2.1        | -2.8                  | -17.9               | 5.5        |
| Total operating costs 2013/14 | £m | 15.1                  | 42.3                | 57.4       | 7.4                 | 27.0                | 34.3       | 19.1                | 3.7                 | 22.8       | 0.0                   | 0.0                 | 114.5      |
| Movement since last year      |    | 30%                   | 3%                  | 9%         | 3%                  | -6%                 | -4%        | 593%                | -79%                | 10%        | -100%                 | -100%               | 5%         |

Significant movement (10%) compared to last years is as follows:-

- Trunk treated water operating costs have increased by 30% . Reasons are:
  - Employment costs increased which relates to costs being allocated to correct areas via settlement cycles. In 2012/13 these costs should have been cleared to trunk mains costs via the SWITCH system and this has been corrected for 13/14
  - Power costs have increased
  - In 2012/13 22% which was based on management assessment was included in trunk treated water distribution. For 2013/14 we have based this on actual cost centres and have undertaken an exercise during the year to allocate costs to trunk mains. The effect of this is that the costs allocated within treated water distribution has increased to 26%
- Trunk treated and local treated water CCD charge has increased in total by 10% reflecting the revaluation of the asset base in 2013. Within service areas however there are upwards and downwards movement with trunk treated increasing by 593% and local treated water decreasing by 79%. This differed from the previous 2009 revaluation as the current revaluation has categorised the assets into each accounting separation area. Previously the assets were split over the Accounting Separation areas based on management judgment and some high level apportionments. It is management opinion that the assets are classed in their appropriate accounting separation area as a result of the recent revaluation.

| Sewage collection             |    | Operating expenditure |               |                  |       | IRC  |               |                  |       | CCD  |               |                  |       | Total operating costs |               |                  |       |
|-------------------------------|----|-----------------------|---------------|------------------|-------|------|---------------|------------------|-------|------|---------------|------------------|-------|-----------------------|---------------|------------------|-------|
| Service                       |    | Foul                  | Surface Water | Highway drainage | Total | Foul | Surface Water | Highway drainage | Total | Foul | Surface Water | Highway drainage | Total | Foul                  | Surface Water | Highway drainage | Total |
| Total operating costs 2012/13 | £m | 29.6                  | 2.7           | 1.3              | 33.7  | 25.7 | 2.3           | 1.2              | 29.2  | 15.9 | 1.4           | 0.7              | 18.1  | 71.2                  | 6.5           | 3.2              | 80.9  |
| Movements                     | £m | -10.2                 | 2.5           | 5.8              | -1.9  | -7.4 | 2.5           | 5.5              | 0.6   | -1.7 | 2.4           | 4.5              | 5.2   | -19.3                 | 7.4           | 15.7             | 3.8   |
| Total operating costs 2013/14 | £m | 19.4                  | 5.2           | 7.1              | 31.7  | 18.2 | 4.9           | 6.7              | 29.8  | 14.2 | 3.8           | 5.2              | 23.2  | 51.9                  | 13.9          | 19.0             | 84.8  |
| Movement since last year      |    | -34%                  | 93%           | 428%             | -6%   | -29% | 109%          | 472%             | 2%    | -11% | 164%          | 620%             | 29%   | -74%                  | 366%          | 1520%            | 25%   |

Significant movement (10%) compared to last years is as follows:-

- Foul operating costs have decreased by 34%. Reasons are:
  - Change in % allocation from 88% to 61.2% has meant lower costs included in Foul.
  - Pension actuarial movement
  - Additional capitalisation
  - Lower Hired and BIS by applying cost matrix to contractors costs

# Dŵr Cymru Cyfyngedig

## Upstream services trial data - methodology statement

### Year ended 31 March 2014

- ▶ Lower insurance costs
- ▶ Lower transport costs offset by higher depreciation

Offset by

- ▶ Increase in power
- ▶ Increase in PST
- Surface water drainage operating costs have increased by 93%. Reasons are:
  - ▶ Change in % allocation from 8% to 16.4% has meant higher costs.
  - ▶ Less costs allocated to raw water transport as it is management's opinion that the amount of operating costs that should be included within raw water storage is minimal
- Highway drainage operating costs have increased by 428%. Reasons are:
  - ▶ Change in % allocation from 4% to 22.4% has meant higher costs.
- Foul, surface water and highway drainage IRC charge has decreased by 2% reflecting the revaluation of the asset base in 2013 and the change in the allocation.
- Foul, surface water and highway drainage CCD charge has increased by 29% reflecting the revaluation of the asset base in 2013 and the change in the allocation. Within service areas however there are upwards and downwards movement with foul decreasing by 11% , surface water drainage increasing by 164% and highway drainage increasing by 620%. This differed from the previous 2009 revaluation as the current revaluation has categorised the assets into each accounting separation area. Previously the assets were split over the Accounting Separation areas based on management judgment and some high level apportionments. It is management opinion that the assets are classed in their appropriate accounting separation area as a result of the recent revaluation. The change also reflects the different allocation % used.

| Sewage treatment              |    |                       |     |      |                      |
|-------------------------------|----|-----------------------|-----|------|----------------------|
| Service                       |    | Operating expenditure | IRC | CCD  | Total operating cost |
| Total operating costs 2012/13 | £m | 54.4                  | 0.4 | 46.3 | 101.1                |
| Movements                     | £m | -1.0                  | 0.1 | 18.4 | 17.5                 |
| Total operating costs 2013/14 | £m | 53.4                  | 0.5 | 64.7 | 118.6                |
| Movement since last year      |    | -2%                   | 29% | 40%  | 67%                  |

Significant movement (10%) compared to last years is as follows:-

- IRC has increased reflecting higher activity in the year
- CCD has increased and reflects that the PR14 MEAV values were used for the CCD values. CCD was forecast during the valuation up to 2030 using for each category of asset age, condition and expected life of asset. Using this forecast has meant that CCD costs have increased.

**Dŵr Cymru Cyfyngedig**  
**Upstream services trial data - methodology statement**  
**Year ended 31 March 2014**

| Sludge treatment              |    | Operating expenditure |                  |                  |       | IRC              |                  |                  |                  | CCD              |                  |                  |                  | Total operating costs |                  |                  |                  |
|-------------------------------|----|-----------------------|------------------|------------------|-------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------------------|------------------|------------------|------------------|
| Service                       |    | Sludge transport      | Sludge treatment | Liquor treatment | Total | Sludge transport | Sludge treatment | Liquor treatment | Sludge transport | Sludge transport | Sludge treatment | Liquor treatment | Sludge transport | Sludge transport      | Sludge treatment | Liquor treatment | Sludge transport |
| Total operating costs 2012/13 | £m | 2.3                   | 8.6              | 0.8              | 11.7  | 0.0              | 0.0              | 0.0              | 0.0              | 0.2              | 9.0              | 0.7              | 9.9              | 2.5                   | 17.7             | 1.5              | 21.7             |
| Movements                     | £m | 2.8                   | -2.1             | -0.2             | 0.5   | 0.0              | 0.0              | 0.0              | 0.0              | -0.1             | -4.1             | -0.3             | -4.5             | 2.7                   | -6.2             | -0.5             | -4.0             |
| Total operating costs 2013/14 | £m | 5.1                   | 6.6              | 0.6              | 12.3  | 0.0              | 0.0              | 0.0              | 0.0              | 0.1              | 4.9              | 0.4              | 5.4              | 5.2                   | 11.5             | 1.0              | 17.7             |
| Movement since last year      |    | 123%                  | -24%             | -25%             | 5%    | 0%               | 0%               | 0%               | 0%               | -45%             | -45%             | -45%             | -45%             | 78%                   | -69%             | -70%             | -41%             |

Significant movement (10%) compared to last years is as follows:-

- Sludge transport costs opex costs have increased by 123% which is offset by the decrease in sludge treatment and liquor treatment. The reason for this is that not all the costs were included last year and we have set up specific cost centres to capture this expenditure.
- CCD movement relates to the revised CCD forecast prepares as part of the PR14 MEAV revaluation.

| Sludge disposal               |    | Operating expenditure |  | IRC | CCD | Total operating cost |
|-------------------------------|----|-----------------------|--|-----|-----|----------------------|
| Service                       |    |                       |  |     |     |                      |
| Total operating costs 2012/13 | £m | 3.8                   |  | 0.0 | 0.0 | 3.8                  |
| Movements                     | £m | 0.0                   |  | 0.0 | 0.3 | 0.3                  |
| Total operating costs 2013/14 | £m | 3.8                   |  | 0.0 | 0.3 | 4.1                  |
| Movement since last year      |    | 0%                    |  | 0%  | 0%  | 0%                   |

There were no significant movements in the year

**Regulatory supplementary table- upstream services trial 2013-14**

| Wholesale water               |          | Network plus   |  |  |  |                                       |   |   |
|-------------------------------|----------|--|--|--|--|---------------------------------------|---|---|
|                               |          | Water resources  |  | Raw water distribution   |  | Water treatment                       | Treated water distribution  |   |
|                               |          | Abstraction licence  | Raw water abstraction  | Raw water transport  | Raw water storage  | Water treatment                       | Trunk treated water distribution  | Local treated water distribution  |
| Total operating expenditure   | £m       | 10.550   | 10.541   | 6.259  | 0.077  | 37.117                                | 15.092  | 42.269  |
| IRC                           | £m       | 0.000  | 4.939  | 0.036  | 0.000  | 0.000                                 | 7.352   | 26.958  |
| CCD                           | £m       | 0.000  | 4.574  | 0.171  | 0.923  | 33.121                                | 19.063  | 3.739   |
| Total operating costs         | £m       | 10.550   | 20.054   | 6.466  | 1.000  | 70.238                                | 41.507  | 72.966  |
| Total BU operating costs      | £m       | 30.604   |  | 7.466  |  | 70.238                                | 114.473   |   |
| Drivers used -opex            |          | Abstraction licence plus an element of costs for negotiating | All other costs included in water resources less abstraction licence | Raw water distribution less raw water storage  | MEAV valuation to split insurance and rates  | As in Accounting seperation           | Specific cost centres and some indirect cst's allocated using MEAV and direct costs                             | Specific cost centres and some indirect cst's allocated using MEAV and direct costs |
| Drivers used -IRC             |          |  | All costs within water resources                                     | All costs within raw water distribution  | No infrastructure assets   | As in Accounting seperation           | MEAV  | MEAV  |
| Drivers used -CCD             |          |  | All costs within water resources                                     |  | MEAV   | As in Accounting seperation           | MEAV  | MEAV  |
| Volume/Drivers for unit costs |          | Raw water abstracted table 10b line4                         | Raw water abstracted table 10b line4                                 | Raw water abstracted table 10b line12 (830.01 ml/d) plus non potable supplies table 10b line11(37.08 ml/d) | Raw water abstracted table 10b line12 (830.01 ml/d) plus non potable supplies table 10b line11(37.08 ml/d) | Potable Water Produced from Own Works | Treated (potable) water into the local distribution network or delivered to retail customer / 3rd Party Company | Supply of treated (potable) water to retail customer                                |
| Units used                    | ml/d     | 868.058  | 868.058  | 867.091  | 830.011  | 793.90                                | 715.85  | 588.51  |
| Unit costs                    | £/m3/day | 12   | 23   | 7  | 1  | 88                                    | 58  | 124   |

| Wholesale wastewater        |    | Network plus      |                        |                  |                               |                  |                  |                  |
|-----------------------------|----|-------------------|------------------------|------------------|-------------------------------|------------------|------------------|------------------|
|                             |    | Sewage collection |                        |                  | Sewage treatment              | Sludge treatment |                  |                  |
|                             |    | Foul              | Surface water drainage | Highway drainage | Sewage treatment and disposal | Sludge transport | Sludge treatment | Liquor treatment |
| Total operating expenditure | £m | 19.429            | 5.207                  | 7.111            | 53.404                        | 5.094            | 6.566            | 0.616            |
| IRC                         | £m | 18.219            | 4.882                  | 6.668            | 0.488                         | 0.000            | 0.000            | 0.000            |
| CCD                         | £m | 14.223            | 3.811                  | 5.206            | 64.660                        | 0.108            | 4.934            | 0.329            |
| Total operating costs       | £m | 51.871            | 13.900                 | 18.985           | 118.552                       | 5.203            | 11.500           | 0.995            |
| Total BU operating costs    | £m | 84.756            |                        |                  | 118.552                       | 17.698           |                  |                  |

|                               |          |   |  |  |  |                        |   |   |  |
|-------------------------------|----------|---|--|--|--|------------------------|---|---|--|
| Drivers used -opex            |          | Findings from study in 1999 by Hyder Consulting which is used as basis for tarriiffs ( 61%) | Findings from study in 1999 by Hyder Consulting which is used as basis for tarriiffs (16%) | Findings from study in 1999 by Hyder Consulting which is used as basis for tarriiffs (22%) | As in Accounting seperation                                      | cost centres           | total costs less sludge transport and liquor treatment    | sampling approach   | As in Accounting seperation                                |
| Drivers used -IRC             |          |   |  |  | As in Accounting seperation                                      | No IRC                 | No IRC  | No IRC  | As in Accounting seperation                                |
| Drivers used -CCD             |          |   |  |  | As in Accounting seperation                                      | managers estimate( 2%) | managers estimate (91%)                                   | managers estimate (7%)  | As in Accounting seperation                                |
| Volume/Drivers for unit costs |          | Sewerage table 17a line 4- Volume of sewage collection (daily average) Ml/d * 61.2%         | Sewerage table 17a line 4- Volume of sewage collection (daily average) Ml/d* 16.4%         | Sewerage table 17a line 4- Volume of sewage collection (daily average) Ml/d * 22.4%        | Sewage loads Table 15 line5- total loads enering sewerage system | Total volume moved     | Sewage loads Table 15 line14 total sewage sludge produced | Assumption that 9 % of total output relates to liquor treatment | Sewage loads Table 15 line15- total sewage sludge disposed |
| Units used                    |          | 341.552 ml/d  | 91.526ml/d   | 125.012 ml/d   | 84768 t BOD/year   | 465578 m3              | 65.98 ttds  | 3.62 ttds   | 65.98 ttds   |
| Unit costs                    | £/m3/day | £151.86 m3/d  | £151.86 ml/d   | £152 ml/d  | £1399tBOD/year   | £11.18/ m3             | £174295/ttds  | £274520/ttds  | £62524 /ttds   |