

**Table 42 – PPP Reporting**

## 1. Introduction

The purpose of the table is to collect information on the cost, performance, and other explanatory variables of the PPP concession, together with assessment of NIW and PPP relative efficiency.

## 2. Key findings

Criteria	RAG	Assessment
Independent review of performance and reporting	Green	Performance good. Reporting process well managed
Methodology	Green	Methodology well documented
Assumptions	Green	Assumptions reasonable and appropriately applied
Source data	Green	Source data is clearly identified, complete beyond material concern, well managed through to accurate systems input
Clarity of audit trails	Green	Detailed and comprehensive audit trail to all numbers available
Confidence grades	Green	Confidence grades are deemed appropriate
Governance	Green	Responsibilities for integrity of data and commentary clearly defined. Good evidence of engagement of senior staff

- Based on our audit of selected sample data we believe that the data reported in this table is materially consistent with the reporting requirements.
- More granular Unitary Charge information is supported by invoices from the PPP concessionaires, either split down by site where shown or at PPP level as shown.
- More granular information on other lines is extracted from the PPP models which were established at the outset of each concession. Line 14 (Maintenance) for Alpha uses an average.
- We audited the reported data and challenged the processes on a sample basis, generally informed by the materiality of the data and variances from the previous year. We consider the data reported in the table is robustly prepared using systems and process that are appropriate and in line with the reporting requirements and that are properly implemented with effective quality control and governance arrangements.

## 3. Audit approach

To verify the data reported our audit consisted of an interview with the NI Water system holders during which the methodologies were reviewed and a selection of data reported in the table was audited back to example source data (e.g. to concessionaire invoices) .

We have checked a sample of data back to the PPP models this year and found full consistency.

## 4. Audit findings

### 4.1 Block A – Project Description

No changes have been made to this data. No changes were expected.

### 4.2 Block B – Payment to PPP concessionaire (Lines 7 to 20)

#### Line 7 – Unitary Charge Capacity Charge

This charge applies to Alpha sites only.

NI Water satisfactorily demonstrated that the data is based on actual invoices from the concessionaires which detail the charges for each of the sites for the 12 months up to and including March 2016. The costs are based on the payment mechanism as set out in the contract.

On average, the Alpha capacity charges have risen by [ x ] since last year.

#### **Line 8 – Unitary Charge Variable Charge**

This charge is identifiable at site level for all PPPs.

As for the capacity charge, NI Water satisfactorily demonstrated that the data is based on actual invoices received for each of the sites for the 12 months up to and including March 2016.

In total, across the Alpha sites, the Variable charges have fallen by [ x ] but Distribution Input (line 21) from these sites has reduced by [ x ], this is an indicator but is not fully proportionate as the take from each site has varied by different amounts and there is a charge escalation mechanism which applies when the agreed flows are not taken.

Kinnegar charges have risen by [ x ]. Flows and loads have also risen, but to a lesser extent.

The variable charges for the Omega sites have risen by [ x ] whilst both p.e. and loads received at WwTW are similar to last year.

We specifically checked the audit trail for the Sludge Services entry of £ [ x ]. This checked back satisfactorily to invoices via a spreadsheet containing a monthly summary of invoices by site and through to the invoices for Omega and Ballynacor TDS. The Omega invoices are monthly and show that they carry ongoing credit for overpayments where necessary. The Ballynacor TDS is accrued and billed 6-monthly, then spread across the months. The audit check fully reconciled.

#### **Line 9 – Unitary Charge Deductions**

These deductions are identifiable at site level for Alpha only.

NI Water makes performance deductions for both capacity and quality failures. The data is extracted from the invoices (which was satisfactorily demonstrated) and the payment calculation mechanisms.

Performance deductions have been reported in the company commentary for both Alpha and Omega (for both WwTW and Sludge services).

Note that there is a difference between the way in which Alpha PPP and Omega PPP deductions are treated. For Alpha, the deductions are generally agreed quite quickly and identified in, and consistent with, the monthly invoices. Supporting information confirmed the figure. For Omega, the performance deductions are recognised through credit notes, some of these are not resolved for some time and may be reported in subsequent years. At [ x ] this year, the deductions are low but we note that there is considerably more (circa [ x ]) still awaiting resolution from previous years.

No deductions were made for Kinnegar.

#### **Line 10 – Atypical Expenditure**

All PPPs have atypical expenditure reported, at PPP level only.

The atypical expenditure reported includes any payments or credits agreed in monthly invoices. It also includes provisions for claims, which may not necessarily be site specific.

NIW has provided detail on the relevant items in their commentary.

Whilst the detail is clearly given and supported, we suggested that NI Water include a table in their commentary to better demonstrate how the figures for Omega are calculated. This has been included in the final commentary.

### **Line 11 – Efficiency Gains included in lines 7 - 10**

This information is generally reportable at PPP level, as is the case this year.

As NI Water has stated, the only legitimate efficiency gains that can be used are those that arise from a change in levels of service.

The company commentary identifies the initiatives which have yielded the savings (these are consistently included in the figures and commentary for line 10). We have satisfactorily traced these back to the source documents.

### **Line 13 – 14 – Capital Repayments and Maintenance**

These lines relate to Alpha only.

This data relates to paying off the finance lease creditor and any capital maintenance carried out on the contract during the year. The Company advises that data related to capital repayments at PPP level has been extracted from its accounts.

The capital maintenance charge (line 14) for the Alpha PPP has been allocated as a straight line based on the total amounts in the original financial model. This is different to the approach adopted prior to 2013/14 where the value was provided by Dalriada Water and could vary markedly between years. The values in the financial model were split by site and the totals across the full concession period have been used to pro rate the straight line ([ x ]) between the sites.

The financial lease model gives (by site) the capacity charge (line 7), from which the capital maintenance charge (line 14) is deducted. These values were used to pro rate the total Interest (line 19) and total Capital Repayments (line 13) and derive charges per site. The values are tabulated in the company's commentary.

It should also be noted that in 2013/14, the financial lease model was revised. This is because it was noted that a discrepancy was present between the financial lease repayment term and the contract term. The Company now also allocates a proportion of the capacity charge to Opex ([ x ]). We have not reviewed the detail behind the model or the appropriateness of the amount allocated to Opex. We understand that this approach was suggested/supported by the financial auditors.

### **Line 15 – Residual Interest**

This relates to Kinnegar and Omega only (which are off balance sheet) as reported in the company's commentary.

The figures are taken from the Residual Interest Models and are not divisible by site. An increase of [ x ] on 2014/15 is assumed in the model, as reported in the table.

This company has advised that the amounts stated are consistent with those stated in the financial accounts, pre IFRS adjustments.

### **Line 16 – Atypical Payments Capitalised**

The Company has reported a nil return for this line.

### **Lines 17 & 18 – Totals from other lines**

No comment

### **Line 19 – Interest**

This relates to Alpha only (which is on-balance sheet).

The Company demonstrated that the data is from the financial model and advised that this is consistent with the statutory accounts. We did not review the financial model and accepted the data provided to us at face value. We do note a small reduction ([ x ]) on last year.

## **Line 20 – Total PPP Opex**

At PPP level this reconciles satisfactorily to a downloaded report from the General Ledger data.

## **4.2 Block C – Water distribution data (Lines 21 and 22)**

### **Line 21 – Distribution Input**

This line represents the water utilised by the PPP companies. The methodology mirrors that of Table 10 Line 26 to provide a calculated volume for each site and a cumulative figure for the Alpha contract.

The volume reported has reduced very marginally from 240.82 Mld to 232.70 Mld. The principal reduction has been at [ x ] (94.79Mld to 80.73Mld), where pumping costs are higher.

### **Line 21a – WTW Capacity**

There has been no change to the minimum required capacity of the Alpha WTW under the contract. The capacities are based on Functional Design Specifications. As per the reporting guidance the volume is 'Qminreq' for each facility and this aligns with the Alpha Contract requirement.

### **Line 22 – Length of Mains**

This line represents the length of main under the contract which links [ x ] to [ x ]. This 16.42 km main is operated and controlled by the contractor and information has not changed from previous reports and correlates with totals reported in other tables.

## **4.3 Block D – Water resource and treatment data (Lines 23 to 27)**

### **Lines 23&24 – Turbidity 95%-ile greater or equal to 0.5NTU**

The status reported in these lines is the same as in 2014/15, when we fully checked back to source data. The data source is the LIMS system which is an Oracle database. We re-ran the SQL queries to replicate the reported data and confirmed the reported information was correct. We also noted that NIW had appropriate quality checks in place within the Environmental Regulation function.

### **Lines 25-26 – Treatment Source/Type**

There are no changes to these lines from the previous year.

Data is consistent with the methodology and summary data in Table 12. However as [ x ] WTW has three sources (impounded reservoirs at [ x ] and [ x ] as well as an intake from River Bann), the overall classification is more complex.

### **Line 27 – Average Pumping Head**

The Company uses the PPP Distribution Input as the denominator.

The AIR16 aggregated value is [ x ] compared to [ x ] in AIR15. The audit of the information for AIR15 identified that whilst the input for each site was being used in the calculation, the pumping head for each site was the same as the previous year. However, given that the pumping heads for each site are of a similar order (130-170m) and that the overall input from these sites is relatively constant, there would need to be a significant change in the balance of the inputs to materially affect the APH. Thus we consider that the APH figure is likely to remain reasonably stable unless there is a significant outage of one of the major sources.

We understand that at some point in 2014/15, NI Water installed a throttling valve (at [ x ]) on the main from [ x ] so that more flow is diverted to another part of the network. The impact of this seems to have raised the APH for [ x ], despite a reduction in flow.

#### **4.4 Block E – Sewerage data (Lines 28 and 29)**

##### **Lines 28-29 – Total Length of Sewer**

As all the sewers reported are classified as critical (as defined by WRc), the length is unchanged from last year. Each PPP facility has collective lengths of sewer which are supported by record drawings for each site.

#### **4.5 Block F – Sewage treatment and disposal data (Lines 30 to 38)**

##### **Line 30 – PE of load received**

The PE has been derived satisfactorily from total loads (line 31) received from the contractors using the industry standard factor of 60g BOD per person per day.

##### **Line 31- Load received**

The total load is based on analytical data derived from samples taken from the inlet of all the PPP wastewater treatment works.

##### **Lines 32-36 - Consents**

Information is unchanged and is derived from Water Order Consents which are held by the Contractors and supplied by the Environment Agency. These are legal documents with unequivocal limits. Consents are based on lower and upper tier limits with pass/fail being based on look up tables, a breach of the upper tier limits being classed as a failure.

The Phosphate consents which are applicable to Armagh and Ballynacor are based on annual average consent figures <1mg/l as set out in the Water Order Consent.

##### **Line 37 – Classification of works**

The treatment type has followed guidelines as per methodologies reported in Table 17b Line 8 and is unchanged from previous years.

##### **Line 38 – Size Band of works**

This mirrors requirements associated with size banding. There is no change from last year.

#### **4.6 Block G – Sludge treatment and disposal data (Lines 39 to 52)**

##### **Line 39 – Sludge imported**

Sludge imported from NI Water is only either transferred to the belt press at Ballynacor or to the incineration plant at Duncrue Street, the sum of the two values reported in Line 39 is consistent with the total value reported in Table 15 Line 16. The minor difference is due to the volumes of grit and screenings.

##### **Line 40 – Sludge produced by the PPP facility**

The values reported in Line 40 are consistent with Table 15 (PPP) line 15, the difference between the figures being the grit and screenings arising at the Omega and Kinnegar sites (as shown in the table in the company commentary) and which are disposed of to landfill.

Sludge produced at North Down Ards, Ballyrickard, Richill and Armagh are transferred to either the caking, belt press facility at Ballynacor or sent directly to Duncrue Street incineration plant and are measured by on-site 'Slogger' sludge monitoring systems. The 'Slogger' system has the capability of recording volume as well as dry solids content to provide accurate ttds. In conjunction with NI Water, consistent sampling and measuring of sludge cake imports is also in place.

At Ballynacor the indigenous sludge is calculated by subtracting the input logger data (which records both inputs from NI Water and PPP facilities at North Down Ards, Ballyrickard, Richill and Armagh) from the cake transferred to Duncrue Street.

To avoid double counting of sludges produced at NI Water facilities or Kinnegar, but transferred and treated at either Ballynacor or Duncrue Street PPP Sludge facilities, zeros have been entered at these PPP sites, which do not produce their own sludges.

Kinnegar sludge is transferred to the incineration plant at Duncrue Street. Prior to discharge at this facility the sludge from Kinnegar is monitored by weighbridge at Duncrue Street. This system involves weighing the vehicles entering and leaving the facility to ascertain the exact tier weight. This is an accurate methodology for sludge disposal.

NI Water has incorporated an analysis of the sludge production trends by PPP site in their commentary.

#### **Line 41 – Sludge exported to Duncrue Incinerator**

Due to all PPP sites transferring sludge to Duncrue Street and mixing with sludge from NI Water, it is impractical to determine where any discrete PPP wastewater treatment sludge was ultimately disposed of to any of the eight disposal sites.

All sludge from PPP facilities is measured irrespective of whether it was thickened at Ballynacor only on receipt at Duncrue Street. At Duncrue Street the sludge is either incinerated or disposed of by alternative disposal routes.

The line confirms exports from only PPP Facilities to Duncrue Street. NI Water's sludge's are not included in this line, but are captured in Table 42 Line 39 instead.

The number reported excludes grit and screenings, which are sent to landfill.

#### **Line 42 – Sludge exported to Other PPP facilities**

N/A and zeros are reported as expected.

#### **Line 43 – Sludge exported to NI Water**

Zeros - the Omega sludge PPP contract has no provision regarding return of sludge to NI Water for disposal.

#### **Line 44 to 51 – Sludge Disposed**

The figures for alternative disposal are based on the total ttds excluding incinerated sludge, split in accordance with the proportion of m3 of cake sent by each disposal route. All information is based on contractor reports detailing disposal route and the disposal site. The transfers are cross-referenced by waste management notes and weighbridge reports as well as being calibrated using on-board weighing systems on plant and road haulage vehicles. Information is collated (in wet tonnes) and submitted monthly to NI Water. The wet tonnes volumes are converted to ttds by assuming a 20.5% dry solids content.

Line	Disposal Route	AIR16 (ttds)	AIR15 (ttds)	AIR14 (ttds)	AIR13 (ttds)	AIR12 (ttds)
46	Farmland Advanced (Lime treatment)	2.019	1.559	0.384	0	8.190
47	Incineration	36.199	37.497	36.545	36.386	26.765
48	Land fill	0.132	0.140	0.880	0.128	0
49	Composted	0	0	0	0	0.097
50	Land Reclamation	0.290	0.084	0.409	0.549	2.561
51	Other (Willow Coppicing)	0	0	0.657	0.515	0.634
<b>52</b>	<b>Totals</b>	<b>38.640</b>	<b>39.280</b>	<b>38.875</b>	<b>37.578</b>	<b>38.247</b>

Note that line 47 (Incineration) is calculated as the total sludge received at the Duncrue Street site minus the total sludge recorded as disposed of off-site.

The disposal route to landfill (line 48) is primarily for grit and screenings. This has the most uncertainty (although it is only a small volume) as the % dry solids are not measured for all skip loads. The volume reported is all grit and screenings from both Kinnegar and Omega.

**Line 52** is correctly calculated from the sums of Lines 44 to 51.

## **5. Assumptions**

Except where noted above we do not believe there are any material assumptions to report.

## **6. Confidence grades**

We have no reason to reconsider the confidence grades as previously agreed.

## **7. Reconciliation checks**

Line 21 is consistent with methodology and figures used for Table 10, line 26

Line 25 = Table 12 (PPP). Confirmed.

Line 26 = Table 12 (PPP). Confirmed.

Line 27 = Table 12 (PPP)/line 5. Immaterial difference.

Line 30 = Table 12 (PPP)/line 6. Confirmed.

Line 31 = Table 15 (PPP), lines 2-5. Confirmed (NB - different units).

Line 39 = Table 17g (PPP) and Table 15, line 16. Immaterial differences.