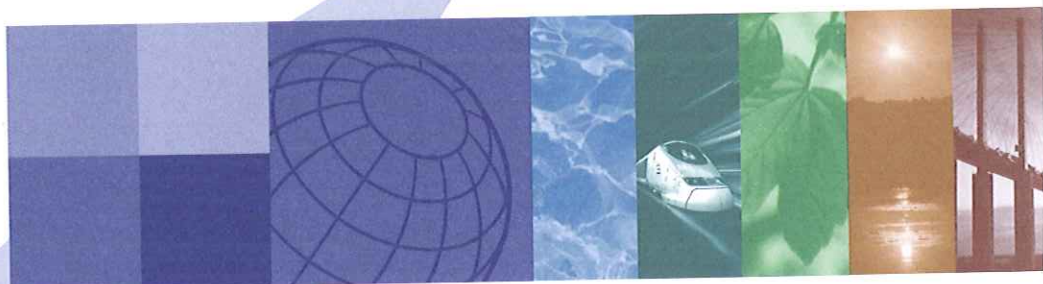


Northern Ireland Water Ltd
Annual Information Return 2011
To the
Northern Ireland Authority for Utility Regulation



Public Domain Version

Part 8 of 10 containing:
PPP costs and activity - commentary for tables 42 and 43

Reporter's Submission

By

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Table 42 – PPP Schemes

Commentary by REPORTER

1. Background

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

- New certificates reflecting the service reporting period have been issued during AIR11 for Ballynacor WwTW and Ballynacor sludge treatment facilities. All other certificates are unchanged from AIR10.
- The total load is based on analytical data derived from samples taken from the inlet of all the PPP wastewater treatment works. Sampling frequencies vary from 52 to 365 per annum

3. Audit Approach

To verify the data reported our audit consisted of an interview with the NI Water system holders. We have not commented upon the various reports produced by the Company describing the nature of each of the PPP schemes.

4. Audit Findings**4.1 Block A – Project Description**

The Alpha PPP Concession is specific to Water Treatment and distribution PPP Projects. The concession consists of four water treatment works (as summarised below) and an upgraded pumping station which was built in preference to provision of another water treatment works. The upgrade at Forked Bridge consists of a linked main and contact tank operated by the Contractor. There are also two design and build link main facilities at Ballymoney and Limavady which are operated by NI Water.

Ballinrees	Water Treatment Facility
Castor Bay	Water Treatment Facility
Dunore Point	Water Treatment Facility
Moyola	Water Treatment Facility

Wastewater treatment Processes are serviced by two PPP Concessionaires Omega and Kinnegar.

Kinnegar is a standalone treatment facility. Caked sludge from this facility is transferred to Duncrue Street for incineration. The Omega project has five wastewater treatment facilities at Richill, Armagh, Ballynacor, North Down, Ballyrickard and two sludge treatment centres. Caked sludge from the belt press facility at Ballynacor is transferred to the incineration plant at Duncrue Street for

The commencement date is as certified by the relevant contract and the service duration is the differential between the Service Commencement date and the Expiry Date. All three PPP contracts have a 25 year term.

4.2 Block B – Payment to PPP Concessionaire

NI Water advised that the data is [] for each of the sites for the 12 months until and including March 2011.

As for the capacity charge, NI Water advised that the data is based on actual invoices received for each of the sites for the 12 months until and including March 2011.

The chart below shows the total capacity and variable charge for the various sites with an associated unitary charge. It also provides data on performance deductions for sites.

$$[x]$$

[
x

] The Company has included the data in line 8 to ensure no double counting and consistency with the Company's statutory accounts.

The invoice does not provide a split between Ballynacor sludge costs and Duncrue sludge costs. The Company has reported zero under these cells and instead reported a Sludge Service Total cost.

Line 9 – Unitary Charge Deductions

NI Water makes performance deductions for both capacity and quality failures. The data is extracted from the invoices and the payment calculation mechanisms.

For Omega, the Company advises in its commentary that it believes it is entitled to [x] of deductions in relation to [

x
]

NI Water believes that some further [x] deductions should be made for the Omega contract as well. It advises that a [x], though this value is included in the variable charge data in line 8. Further, the Company advises that there are in the region of [x] of withheld payments in the year due to a [x].

[x]

As the Company notes in its commentary, such disputed amounts are considered an outstanding liability. As a result, the Company will accrue for these until a time where the Parties choose to have the matter resolved by means of dispute resolution.

Line 10 – Atypical Expenditure

- **Alpha**

Various items of atypical expenditure have occurred on the Alpha contracts. These items are as follows:

[x]

The Company has not been able to split this expenditure by site so has allocated the expenditure in the total column for Alpha.

[x]

[x]

Line 11 – Efficiency Gains Included in Lines 7-10

The majority of the efficiency gain recorded here arises from the [x] to the contract which took effect from April 2010 reducing the frequency of sampling required. This resulted in a [x] saving in 2010/11 and a similar indexed amount per annum for the remainder of the contract.

Line 13-14 – Capital Repayments and Maintenance

This data relates to paying off the finance lease creditor and any capital maintenance carried out on the contract during the year. The capital maintenance charge has been provided by Dalriada Water and therefore we have accepted this at face value. The Company advises that data related to capital repayments has been extracted from its accounts and therefore the overall value is consistent with the accounts. The financial lease model was then used to apply a capital repayment cost by site. In order to split the totals by interest and lease payments by site the Company has used a 21.2% capital repayment and a 78.8% repayment of interest. This agrees to the Company statutory accounts.

Line 15 – Residual Interest

The Company provided us with data for the Kinnegar site and the Omega sites. The Company has not been able to split the data for the Omega sites on a site by site basis and hence reported the entire sum under 'Omega all'.

Line 16 – Atypical Payments Capitalised

The Company has reported no such payments for AIR11.

Line 19 – Interest

The Company provided us with a breakdown of data related to interest payments. The Company advised that the data is from the financial model related to the contract and is consistent with the statutory accounts. We did not review the financial model and accepted the data provided to us at face value.

4.3 Block C – Water Distribution Data

Line 21 – Distribution Input

This line represents the water utilised by the PPP companies. The Supply Source Distribution Table has been updated from AIR10 to take cognisance of the change in demand associated with PPP sites. 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 Confidence grade of B2 due to checks can be supported.

Line 21a – WTW Capacity

This is a new requirement for AIR11 to represent the capacity of each water treatment works. Similar to Table 15 Line 9 for wastewater treatment works, the water treatment works capacity is based on 'functional design specification'. As per the AIR11 reporting requirements, the volume is Q minreq for each facility which aligns with the Alpha Contract requirement. The confidence grade of A1 is prescriptive however based on Qminreq it can be supported.

Line 22 – Length of Mains

This line represents the length of main under the DBFO contract which links the main from Castor Bay to Forked Bridge. This section of the main is operated and controlled by the Contractor and information has not changed from AIR10. Detailed drawings with defined cross sectional details and chainage allow for a confidence grade of A2 to be supported.

Line 22: Length of main

The 16.42km length of mains relating to the Castor Bay to Forked Bay rising main is confirmed as the correct length of main owned by PPP and correlates with totals reported in other tables.

4.4 Block D – Water Resource and Treatment

Lines 25-26 – Treatment Source/Type

There are no changes to these lines from AIR10. Confidence grade is A1 as source type and treatment provided are unequivocal. Data is consistent with methodology and summary data in Table 12

Line 27 – Average Pumping Head

Data has been updated to mirror requirements of Table 12. Refinement to interstage pumping has provided a new calculated figure for AIR11 for the individual sites as well as the cumulative Alpha Contract. There has been no change in methodology from AIR10 and due to reliance on data sets with various nuances the confidence grade recommended by the Reporter in AIR10 of B4 can be supported.

Lines 23&24: Turbidity 95%ile greater or equal to 0.5NTU

Checks against Table 11a turbidity data confirm the reported line totals.

Lines 25&26: Source and treatment type

Source types and treatment types correlate with data analysed and reported in Table 12.

Line 27: Average pumping head

Data has been updated to mirror requirements of table 12. Following discussions with the Company, during AIR10 audit this years AIR11 submission reflects to total flow. This refinement provided enhanced data for individual sites as well as the cumulative Alpha Contract.

These values correctly tally and correlate with the 51.47m pump head reported in Table 12.

4.5 Block E – Sewerage data (Lines 28 and 29)**Lines 28-29 – Total Length of Sewer**

As all the sewers are critical as defined by WRC, data on both lines is the same. Each PPP facility has collective lengths of sewer which are supported by record drawings enabling a confidence grade of B2 for each site to be carried forward as the overall grade.

North Down WwTW receives pumped screened sewage from terminal pumping stations at Briggs Rock, Donaghadee, and Millisle. Each main has its own record drawings and the cumulative chainage reflects the input. Ballynacor WwTW has a similar network with in this instance two terminal pumping stations at Bullays and Seagoe forwarding screened sewage. Ballyrickard and Richill WwTw have pipelines from the perimeter to the inlet screens and from the storm tanks discharge and final effluent outfall. Armagh WwTW has a pipeline from the perimeter to the inlet screens and the final effluent outfall to the discharge point.

4.6 Block F – Sewage treatment and disposal data (Lines 30 to 38)**Line 30 – PE of load received**

The PE has been derived from the total loads received from the Contractors, and is consistent with Table 15 Line 6. The Confidence grade for this line and Table 15 line 6 is B3. Given the frequency of sampling for PPP facilities a confidence grade of B2 for both lines could be supported.

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. Sampling frequencies vary from 52 to

365 per annum which provide a greater degree of confidence than the proposed B3 grade. Due to the frequency of sampling and analytical monitoring the confidence grade could increase to B2.

Lines 32-36 - Consents

Information derived for these lines emanates from Water Order Consents which are held by the Contractors and supplied by the Environment Agency. They are legal documents with unequivocal limits hence the A1 Confidence Grade. Consents are based on lower and upper tier limits with pass failure being based on look up tables. Any exceedence of the upper tier limits is classed as a failure. Exceedence of the lower tier is based on the look up table. For AIR11, 100% compliance has been achieved.

The Phosphate consent which is applicable to Armagh and Ballynacor are based on annual average consent figures <1mg/l as set out in the Water Order Consent. Confidence grade of A1 can be supported.

Line 37 – Classification of works

The treatment type has followed guidelines as per methodologies reported in Table 17b line 8 and a confidence grade of A1 can be supported.

Line 38 – Size Band of works

This mirrors requirements associated with size banding. There is a slight change from AIR10 in that Armagh loading was reported in AIR10 as a size band 6. In AIR11 the loading is less than 1500kg and now meets size band 5 requirements. Armagh is on the cusp of the categories and could vary year on year dependent on weather or trade loadings.

Most of the data reported here is derived from Table 17b and has been obtained in the same way as for NIW data, described in the commentary for Table 17b. This covers entries for Table 42 Line 30 and Lines 32 to 37.

The load received by PPP STWs is reported in Line 31 as 20264 kgBOD/day. This is the same as the load reported in Table 17d Line 7 (PPP data).

Treatment classifications reported in Line 37 are consistent with the data reported in Table 17c (PPP table).

Finally the size bands of the PPP STWs reported in Line 38 are consistent with the same data presented in Table 17c (PPP data).

4.7 Block G – Sludge treatment and disposal data (Lines 39 – 52)**Line 39 – Sludge imported**

The PPP works receive no sludges from NI Water WTWs at the works inlets. Imported sludges are either transferred to the belt press at Ballynacor or the incineration plant at Duncrue Street.

NI Water sludges are imported and measured at Duncrue Street. The calculated measured sludge imported from NI Water is therefore the total weight received at Duncrue Street minus sludges from Omega and Kinnegar. Sludges received at Duncrue Street are reported in Table 15 Line 16. Sludges received by the Contractor are reported in Table 15 line 15 with NI Water import being the differential.

Due to monitoring and sampling the confidence grade of B2 can be supported.

Line 40 – Sludge produced

Sludges produced at North Down Ards, Ballyrickard, Richilland and Armagh are transferred to either the caking, belt press facility at Ballynacor or direct to Duncrue Street incineration plant. On site slogger sludge monitoring systems at both sludge treatment centres record inputs from the aforementioned wastewater treatment centres. The slogger system has the capability of recording volume as well as dry solids content to provide accurate ttds. The confidence grade is B2 which given the consistency of approach can be supported.

At Ballynacor the indigenous sludge is calculated by subtracting the input slogger 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. The confidence grade for this operation is B3. Given the reliance on different monitoring systems this confidence grade can be supported.

Kinnegar sludges are 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 and the confidence grade of B2 can be supported.

Overall given the proportionalities of sludge monitored by the three separate systems the overall confidence grade of B2 is realistic.

Line 41 – Sludge exported to Duncrue

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

All sludges from PPP facilities are measured irrespective of whether they were thickened at Ballynacor only on receipt at Duncrue Street. At Duncrue Street the

sludges are either incinerated or disposed of to alternative disposal routes. The data provided relies upon data provided in line 40.

The confidence grade of B2 although unable to pinpoint actual disposal from a particular site which from sludge treatment centre perspective treating multiple source inputs is unrealistic can be supported.

Line 42 – Sludge exported to Other PPP

All PPP facilities ultimately route sludge to Duncrue Street for final disposal. While sludges from North Down Ards, Armagh, Richill and Ballynacor are thickened in the belt press at Ballynacor they are still transferred to Duncrue Street for disposal. For the avoidance of doubt, sludges are recorded as being exported to Duncrue Street as per line 41 and are not reported as being exported to another PPP facility as they are being transferred for further treatment.

Line 43 – Sludge exported to NI Water

The Omega sludge PPP contract has no provision regarding return of sludge to NI Water for disposal. Therefore no sludge is returned to NI Water. It should be noted that in AIR10, during testing and commissioning, a return was recorded. As the testing and commissioning phases have been approved there is a nil return in AIR11.

Line 44 to 52 – Sludge Disposed

In AIR11, 1.915 ttds has been reported in Line 44, as being disposed of untreated to farmland. We challenged this and the Company were able to demonstrate that this quantity was disposed of to willow coppicing which was an accepted practice under Para 10 of Waste Licence Regs 2003. Confidence grades vary for these lines dependent on disposal route; between A1 for landfill and Farmland conservation; and B2 for the remainder. Given waste management licensing requirements and ADAS 10 requirement for field disposal the A1 confidence grades can be supported. Also given the quick response to questions raised about untreated sludge being disposed of to farmland the confidence grades of the other practices can also be supported at B2.

Disposal of sludge via alternative routes other than incineration is measured volumetrically. The weight of each alternative route is therefore the proportion of sludge disposed of by alternative routes divided by the overall alternative volume times gross weight of alternative disposal.

Date: 29 July 2011
Prepared by: HMS

Table 43 – Key Outputs – PPP reporting operational costs**Commentary by REPORTER****1. Background**

The purpose of this table is to report information on operational costs related to the PPP contracts.

2. Key Findings

- In order to report data for some lines the Company has had to rely on data from external sources;
- Some apportionments and assessments are required to report the data. Where these have been applied we believe they are appropriate and likely to result in data that is reflective of the actual position.

3. Audit Approach

The audit consisted of an interview with the table owner to discuss the methodology and review the source data extracted from the financial system.

4. Audit Findings

Data has been reported at site level for each of the 16 active sites. Further detail relating to each line is discussed below:

Line 4 – Payment to Concessionaire

This data has been transposed from table 42, line 12.

Line 5 – Payment by Concessionaire to Operating Company

The data relating to payment by concessionaire to operating company is provided to NI Water by the PPP contractors. There is no way to determine the veracity of this information as the data originates externally.

Line 6 - Power

This data has been extracted from the Company's general ledger system. Data related to power costs is reported on a site by site basis and hence no apportionment of data to derive these figures is required. Note the company has not attempted to estimate power costs for Kinnegar for AIR11 as it has no mechanism for doing so. If this data was required by the regulator the Company may consider using apportionments or an alternative method to estimate power costs at Kinnegar.

Line 7 – Other Direct Costs

The Company has not reported any data for line 7.

Line 9 – General and Support Expenditure

General and support costs are a combination of consultancy costs and time costs of staff employed by NI Water to manage these contracts. Consultancy costs are taken directly from the general ledger. For staff costs a P101 cost centre report is run

which shows the relevant payroll costs. The general and support costs are then allocated evenly across each of the sites in order to apply payroll costs to individual sites.

Line 11 – Scientific Services

The company has determined the total costs related to scientific services and allocated these costs across PPP sites based on the assessed percentage of samples attributed to each PPP site, an allocation of staff costs and operational contractor costs per site visit. The approach relies on judgement and assessments. However in the absence of actual data we believe the approach is appropriate.

Line 12 – Rates

The company has apportioned the rates bill across the different types of sites. For the rates bill related to water sites the company has data related to total rates bills. It has allocated the portion to the Alpha sites based on the proportion of potable water provided as a percentage of total NI Water input. In the absence of more direct data we believe this approach is appropriate.

Wastewater sites receive a separate rates bill and hence the data can be attributed to each PPP site. Some apportionment has been applied to adjust for part year impacts. At the Duncrue site 15% of the costs have been allocated to PPP based on the fact that PPP occupies 15% of the site. For Ballynacor the Company has split costs between sewerage and sludge on the basis of a 65%:35% wastewater to sludge split.

Line 13 – Estimated Terminal Pumping Costs

The Company has reported power costs related to the terminal pumping station by using the location codes for known sites. In AIR11 Ballynacor has also been included as a PPP site.

Line 14 – Estimated Sludge Costs

The cost here is simply the payment by concessionaire, functional expenditure and rates for Ballynacor and Duncrue.

Date: 29 July 2011
Prepared by: HMS