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## NWL NARRATIVE – BIORESOURCES MARKET DEVELOPMENT DATA

This narrative accompanies our response to the query from Ofwat regarding NWL's bioresources market data. It sets out the basis on how figures have been produced to complete the data request.

### ASSURANCE

Our approach to independent assurance of our Bioresources Market Information is consistent with that adopted for other regulatory publications, notably the Annual Performance Report (APR) and Cost Assessment publication. Our Internal Audit team have performed a review of the information provided by our Bioresources team for the purpose of providing assurance in accordance with the guidance provided by Ofwat.

Based on the results of their review our Internal Audit team have confirmed that no exceptions or issues were noted. The data reported in all of the tables has been reconciled to supporting documentation and to data taken from our corporate systems. The data is also consistent with that used in the preparation of our APR and Cost Assessment submissions, the assurance for which is detailed in our 2019/219 Data Assurance Summary document.

### COMMENTARY

#### Table 1. Company

Line 1 to 3 regarding costs, the total of these lines does not match the total in the Annual Performance Report (APR) table 4W.

Line 3, total raw cake road transport is reported within the sludge treatment costs in the APR table 4E as per the RAG4 guidelines. The cost reported in table 4W did not include this cost. This cost is not included in table 4W.9. Therefore lines 1 and 2 equal the value in 4W.9.

Lines 4 to 6 of this table have been provided using the Annual Performance Report (APR) for 2019-20. The guidance required the data to be derived from our PR19 business plan data table Bio. However values in this table will have been forecasts which were provided in late 2018, early 2019. The APR data provides actuals for the period 2019-20 and we would recommend these are used in place of forecasts. We use APR table 4R to compile the responses in lines 4 to 9.

#### Table 2. Transport data

The data in this table is based on the figures submitted in the APR for 2019-2020. It specifically correlates directly with the calculations used in Table 4R, Lines 27, 32 and 33.

For Bran Sands, line 15, we have allocated the main transport mode as pipeline, however this sludge merely moves over the site, so officially there is no actual intersiting between sites.

Updated data has been available and as such we have provided it. This means there are some differences between the numbers submitted here and those submitted in July (Market Data Information). These differences are limited to a number of small STW's and Septic Tanks where assumptions on sludge production were used as per Ofwat guidelines. (see appendix 1)

#### Table 3. Total capacity

NWL operate two Advanced Anaerobic Digestion (AAD) processes at Howdon STW and Bran Sands STW. The design capacity of both plants is 40,000 tds per annum giving Northumbrian Water a total design capacity throughput of 80,000 tds per annum.

There are currently no plans to either increase or decrease capacity at either plant or bring another plant or alternative sludge outlet online.

#### **Table 4. Tradeable capacity**

NWL currently has a theoretical headroom capacity of circa 10,000 tds per annum. However, with theoretical throughput of 80,000 tds across both sludge treatment assets (Bran Sands and Howdon) unlikely to be a prolonged and sustainable target. Northumbrian Waters expectation is that 50% of headroom can be identified as "Tradeable Capacity".

#### **Table 5. Headroom Capacity**

NWL has determined this to be the difference between "Total Capacity", as defined above and predicted annual sludge production. For 2020-2021 NWL are predicting 70,537 tds, this number is split as follows; Bran Sands 33,484 tds Howdon 37,053 tds.

It is important to highlight that the split between these two sites for the current year shows Howdon STW treating 10% more sludge than Bran Sands STW. This will not necessarily follow a linear trend. Multiple factors determine the split of Sludge transported to Howdon and Bran sands for treatment. This will include

- Planned maintenance on each site
- Optimisation of gas production
- Unplanned interruptions and breakdowns on site.
- Available storage capacity at each site
- Availability of Landbank for digestate

During the period 2019-2020 Howdon STW produced 24,295 tds of indigenous sludge and Bran Sand 12,723 tds of indigenous sludge. This represents the baseline load into each plant (37,018 tds combined). The destination of the remaining, (circa 32,000 tds) imports of sludge will be determined by the factors above.

Given the fluid nature of planning sludge into Both Bran Sands and Howdon it is difficult to breakdown with accuracy the headroom capacity at each site. For the purposes of this exercise it assumed that the split in throughput between Howdon and Bran sands will remain linear. There has also been an assumption of an annual increase in tds of 500 per annum. This has been split evenly across both sites.