Response to Draft Determination

Millbrook Sludge Capacity scheme

Issue

The Millbrook Sludge scheme is to provide a total of 6,000 tonnes of dry solids sludge capacity required to meet population growth. It was originally planned to be delivered in AMP5 but it has been re-phased from AMP5 into AMP6. The logging down case for the AMP5 output has been accepted in the Draft Determination.

Table 1: Summary of Ofwat Draft Determination information for Millbrook sludge scheme.

<table>
<thead>
<tr>
<th>Company Proposal</th>
<th>Assessment</th>
<th>DD Allowance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claim</td>
<td>Amount Sought</td>
<td>Implicit Allowance</td>
</tr>
<tr>
<td>Millbrook Sludge</td>
<td>£19.9m</td>
<td>£2.8m</td>
</tr>
</tbody>
</table>

In the June 2014 update to our Business Plan, we submitted a total scheme cost of £19.9 million toex. The project costs were assessed on an individual basis, rather than being included in the overall cost models. This resulted in a lower project cost than would have been otherwise under Ofwat cost models.

The AMP6 Millbrook Sludge scheme was 'partially accepted' at the Draft Determination stage. The need for the scheme and the cost benefit were accepted. Ofwat challenged the cost robustness due to a high level of on-costs. As a result, an upper quartile efficiency adjustment of £1.8m was applied to the scheme costs. There is therefore a funding gap of £1.8m for completion of this project.

Ofwat also required additional customer protection for non-delivery of the scheme through an Outcome Delivery Incentive (ODI).

In our representation we have provided additional information as follows:

i) We explain why the application of an upper quartile efficiency factor is not appropriate.

ii) We demonstrate that application of an efficiency challenge due to on-costs for a project at early design stage is not appropriate. We make reference to the Woolston Wastewater treatment works representation, which provides supporting evidence.

Southern Water, in line with industry best practice, uses a project cost estimation process based on historical equipment set costs. As part of the estimation process, a level of overhead (on-costs) is then applied to account for all other project costs not captured by equipment level costs. The level of on-costs for a scheme, as a proportion of the overall scheme costs, reduces as the design detail develops. This is because at the early stages of project design and estimation, the full details of planning, project management and construction costs are not at a granular enough level for them to be directly allocated at equipment level. As a project progresses from outline to detail design and through to construction, these costs move from on-costs to equipment and construction direct costs, whilst the overall project costs remain the same.
As a result, the proportion of costs allocated to on-costs reduces as the project progresses to completion. This is demonstrated through the Woolston wastewater treatment works representation, where the proportion of on-costs reduced by 10% between outline design and agreed target costs. The overall scheme cost did not change. For more details refer to Section 12, Woolston STW NEP Scheme.

The June 2014 Business Plan update demonstrated that the total project cost was efficient and this was confirmed in the Ofwat Draft Determination. The standard Ofwat cost assessment model, with upper quartile efficiency included, results in a project 15% less efficient than our own proposals.

Applying a further efficiency adjustment is not appropriate for this project, for two reasons:

I) The project costs we submitted in our June 2014 update to our Business Plan already included a Company efficiency adjustment of £1.5m applied to our standard cost estimation.
II) Our scheme costs are 15% more efficient than the upper quartile efficiency assessed costs as reflected in Ofwat DD.

For the Final Determination, allowances should be either based on the standard Ofwat cost assessment model output or the submitted scheme costs (including the Company efficiency adjustment). Applying a further Ofwat efficiency is not consistent with the output for other modelled costs, where the total scheme cost is already demonstrably efficient.

We are also including a new, financially incentivised ODI to protect customers from scheme non-delivery.

**Remedy**

- We request that the full £19.9 million scheme cost is recognised in full in the Final Determination toex baseline.
- We request that the financially incentivised ODI is reflected in the Final Determination ODI framework (Annex 1).
Summary of the evidence

1. Justification

1.1 Justification – Robust Costs

The AMP6 Millbrook Sludge scheme was ‘partially accepted’ at the Draft Determination stage. The need for the scheme and the cost benefit was accepted. However, the cost robustness was challenged due to a high level of on-costs.

The Ofwat deep dive assessment for Millbrook states:

“If we add 6 thousand tonnes dry solids per annum to the inputs to our sludge unit cost model, our allowance would increase by £22.12m, which is more than £19.9m value of the claim. The value of the claim is also less than the allowance made for providing this capacity in PR09 (£25m in 2012-13 prices). From these two sources it would appear that the claim cost is efficient. However, the breakdown of the £18.2m costs provided by the company (Chapter 6, page 813) shows more than 50% of the costs are categorised as "uplift for contractor overhead, Southern Water overheads, tender to outturn". This is a high percentage of on-costs and suggests the costs are less than efficient for the scope of work. We will therefore apply our upper quartile assumption to the costs.”

“We consider that due to the breakdown of costs showing an on-cost of >50% this is a partial pass, despite the cost being less than was given at PR09 and less than our unit cost model would allow. We are therefore applying our upper quartile efficiency assumption to the costs.”

Southern Water costs for this scheme are 15% more efficient than the Ofwat modelled costs, even after the upper quartile efficiency factor has been included. This clearly suggests that this scheme is already efficient and that further efficiency is not justifiable.

The important points to note surrounding Millbrook costs are:

- The Millbrook costs have been developed using our standard approach (see December 2013 Submission, Annex 5, Supporting Document 5.4: Wholesale cost estimating process for further details)
- The scheme is currently at outline design stage and the proportion of on-costs is typically higher than those at the detailed design stage.

Therefore, in-line with the Ofwat upper quartile modelled outputs; Southern Water is confident that full funding for this scheme (£19.9m totex) is justifiable and already more efficient than the upper quartile.

1.2 Justification – Customer Protection

The Ofwat deep dive assessment for Millbrook states:

“We are proposing a new financial performance commitment should be introduced to protect customers in the event of non-delivery.”
Within the June update 2014, we proposed that there would need to be a ‘logging down’ type adjustment as part of the special case submission. This has been converted into an ODI format as part of this representation (see Annex 1).

2. Evidence

2.1 Evidence – Robust Costs

As stated in the Draft Determination, when Millbrook sludge is entered into the Ofwat cost models the cost allowance generated is £22.1m. We have entered the same information into the Ofwat cost model calculations. We have identified that with 6,000 tonnes of dry solids per annum entered into the cost models the total costs are £25.6m as an average figure, reducing to £22.9m once the upper quartile efficiency factor is applied. Therefore, at £19.9m the Millbrook scheme is shown as being 15% more efficient than the Ofwat modelled upper quartile efficiency value.

It should be noted that the submitted scheme Totex value of £19.9m already includes a Company efficiency adjustment of -£1.52m as set out in the June 2014 update special case for Millbrook, page 813, Table 5.

By adjusting our scheme total at Draft Determination stage by the upper quartile efficiency factor, the resulting allowance is double counting upper quartile efficiency.

<table>
<thead>
<tr>
<th>Table 2: Ofwat modelled data compared with June 2014 BP Update Capex.</th>
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</thead>
<tbody>
<tr>
<td>Ofwat Model</td>
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<tr>
<td>Millbrook Capex, Pre-Efficiency</td>
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<tr>
<td>Millbrook Efficiency</td>
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<tr>
<td>Millbrook post efficiency</td>
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<tr>
<td>Remove Implicit Allowance</td>
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<tr>
<td>Additional Draft Determination Efficiency</td>
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<tr>
<td>Millbrook Draft Determination</td>
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</tbody>
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It is our understanding that the Ofwat cost modelling approach has been successful in deciding how best to allocate and approve money; it has been a tried and tested method during this business plan process. Achieving upper quartile efficiency is important and Southern Water has endeavoured to achieve this with this scheme (and many others that have been modelled). Therefore, by not following a consistent modelling approach, and by effectively double counting the upper quartile efficiency factor; it could bring into question the whole approach to the Ofwat cost modelling and the basis for trying to achieve upper quartile costs. In our view Ofwat should ensure that they maintain a consistent approach. Using the same methodology to the one they have used throughout the business plan process and accept the modelled outputs as they currently stand rather than applying a further upper quartile efficiency factor to an already efficient totex cost.

The other factor to take into account is the maturity of the project. As the Draft Determination response for Woolston demonstrates, there was a 10% reduction in the proportion of on-costs to direct costs between ‘outline cost stage’ and the more mature ‘target cost stage’. The cost, as submitted for Millbrook, are currently at the ‘outline design stage’ and we would fully expect the proportion of on-costs to reduce, as has been demonstrated with Woolston.
The change in these on-costs is a result of the fact that, as the design detail progresses, the construction costs become much more defined and the risks and other on-costs start to reduce. So, for example, the project risk and on-cost budget reduces as it is converted into tangible assets or project costs to overcome the risks identified (i.e. it gets converted into a direct works cost). For Woolston this change from planning phase to construction phase represented just over a 10% change to the on-cost to total cost split; without increasing the overall cost of the scheme. Therefore, it would be reasonable to assume that the Millbrook project is likely to have a similar change in on-cost profile as it moves into construction phase. With this in mind the on-cost to total scheme cost split would move from 54% on-costs at ‘outline estimate cost stage’ to 44% on-costs at ‘agreed target cost stage.’

Table 3: Breakdown of Millbrook scheme costs.

<table>
<thead>
<tr>
<th>Scheme / Benchmarking</th>
<th>Direct Work Cost</th>
<th>On-Costs</th>
<th>Total Cost</th>
<th>Direct Work Cost % Of Total Cost</th>
<th>On-Cost % Of Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Millbrook Scheme ‘Outline Estimated Cost Stage’</td>
<td>£9.0m</td>
<td>£10.7m</td>
<td>£19.8m</td>
<td>45.7%</td>
<td>54.3%</td>
</tr>
</tbody>
</table>

Table 3 summarises the costs submitted in June as described in the June 2014 Business Plan update 2014, Chapter 6 Wholesale costs – Millbrook special case, page 813.

In terms of the on-costs and Southern Water overheads, it is recognised that we calculate these costs at the programme level. This method of calculating on-costs and overheads has generally been accepted throughout the business planning process. We recognise that other companies within the water industry calculate on-costs and overheads at a scheme level which can make some of our on-costs and overheads look somewhat less favourable when directly compared with them. A direct comparison is not possible between these two approaches and we maintain that on-costs and overheads calculated for Millbrook remain within normal ranges of on-cost to direct works cost split for a scheme at this stage of outline estimate design.

In summary, we have further detailed why costs (particularly on-costs and overheads) remain robust. Costing for this Millbrook scheme is consistent with the Southern Water business plan methodology and costs are efficient. Further efficiency application, at this stage of planning, is not justified when compared to Ofwat modelled outputs that are already at upper quartile limits. Full funding of £19.9m Totex is required, robust, fair and justifiable and that this should be reflected in the Final Determination baseline.

We request that the full £19.9m scheme cost is recognised in full in the Final Determination totex baseline.

2.2 Evidence – Customer Protection

A financial penalty based ODI for scheme non-delivery has been included as set out in Annex 6.1. The penalty is based upon the incremental totex in conjunction with the 50:50 sharing totex menu mechanism.

We request that the financially incentivised ODI is reflected in the Final Determination ODI framework.
3. Board Engagement

The Board has supported the case, as part of the overall DD representations.

4. CCG

As this is a representation wholly associated with the application of cost efficiency challenges in the Draft Determination no specific CCG support was required.

5. External Assurance

This representation has been independently assured by Halcrow Management Sciences Limited, a subsidiary of CH2M HILL. Their ‘Review and Assurance of Draft Determination Representations, Summary Report’ dated 2 October stated:

“Our sample checks on data presented in the Company’s representation has confirmed satisfactory trails to both internal and external information sources. On this basis we conclude that the evidence base for the representation is robust.”

6. Annexes

Annex 1 Outcome delivery incentive: Millbrook Sludge
Annex 1 Outcome delivery incentive: Millbrook sludge

For more details refer to Section 13, Outcome Delivery Incentives.

**Detailed definition of performance measure:** Delivery of Millbrook sludge scheme for removal of 6,000 tonnes of dry solids spent by 31/03/2020.

**Incentive type:** Financial – penalty only

### Performance commitments

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<tbody>
<tr>
<td>PC</td>
<td>Tonnes</td>
<td>n/a</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Penalty collar</td>
<td>Tonnes</td>
<td></td>
<td>0</td>
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<td></td>
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<tr>
<td>Penalty deadband</td>
<td>Tonnes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6000</td>
</tr>
</tbody>
</table>

### Incentive rates

<table>
<thead>
<tr>
<th>Incentive type</th>
<th>Performance levels (tonnes)</th>
<th>Incentive rate (£/tonne)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penalty</td>
<td>0</td>
<td>6000</td>
</tr>
<tr>
<td></td>
<td>6000</td>
<td>1,658</td>
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### Additional details

- **Necessary detail on measurement units:** Failure to deliver the scheme by 31/03/2020 will result in a financial penalty of £1,658 per tonne. Customers will get back the remaining scheme costs through cost performance incentives.
- **Frequency of PC measurement and any use of averaging:** Performance will be measured following the expected scheme completion date on 31/03/2020.
- **Timing and frequency of rewards/penalties:** Penalties will apply following the expected scheme completion date on 31/03/2020.
- **Form of reward/penalty:** RCV adjustment
- **Any other information or clarifications relevant to correct application of incentive**