

Meeting note

Wednesday 20 July 2016, 10.00 am to 3.30 pm
Centre City Tower, 7 Hill Street, Birmingham B5 4UA

Sludge working group – 5th meeting

Attendees	
Adrian Mercer	Veolia
Alexander Maddan	Agrivert Ltd
Alison Fergusson	Ofwat
Alec Llewelyn	Northumbrian Water
Anna Simpson	NFU
Clive Humphreys	Environment Agency
Doug Grieve	Grieve Strategic
Fran Lowe	Environment Agency
Howard Brett	Thames Water
Henry Leveson-Glower	Defra
Jacob Wood	Ofwat
Jessica Allen	Anaerobic Digestion and Bio resources Association
Jo Pope	South West Water
John Kirkham	Welsh Government
Jon Latore	United Utilities
Kevin Wightman	Southern Water
Mark Jones	Ofwat
Mat Davis	Environment Agency
Matt Wheeldon	Wessex Water
Natalie Hall	Natural Resources Wales
Nicky Cunningham	Environment Agency
Paul Hickey	Environment Agency
Perry Hobbs	Welsh Water

Ralph Lodge	Digitrm
Sam Evans	Yorkshire Water
Sam McGauley	Severn Trent Water
Simon Black	Anglian Water
Steven Jackson	Kelda Group
Tina Benfield	CIWM

Action	By whom	Deadline
Ofwat to circulate to the group members the questionnaire on tonnes of dry solid definition	Ofwat	29th July 2016
Environment Agency to take the output from the breakout sessions and work into a programme of work for proposals and potential solutions.	Environment Agency	TBC
Ofwat to distribute latest view on Sludge Boundary definitions for high level review prior to publication of the RAG Consultation.	Circulate: Ofwat Responses: UU and Wessex	21st July 2016 25th July 2016
Clarification of the interaction between the Cost Assessment Group and this group.	Ofwat	By next meeting
Consideration of volunteers for speakers at CIWEM seminar (6 October) and potentially for November biosolids conference in Edinburgh.	ALL – responses back to Ofwat	31st August 2016
United Utilities volunteered to take Ofwat's draft of the physical market information and develop an item for discussion at the next working group.	Ofwat to provide draft to UU. UU to develop a working group discussion item	By first week in August. By first week in September.

Note of the meeting

Introduction

Paul Hickey, Deputy Director of Water Quality and Water Resources at the Environment Agency, gave a brief overview of the scope and theme of the day, in particular asking everyone to explore the issues with an open mind and emphasizing that regulation is there to support innovation, the opening up of markets, and protect the environment whilst maintaining the confidence of all stakeholders.

Overview of Water 2020 Proposals

Ofwat gave a high level overview of the Water 2020 proposals in preparation for PR19 which is seen as an evolution from PR14. The primary focus is on sludge and water resources which will require changes to the current economic regulatory processes. The overall programme timetable was presented which highlighted that the PR19 methodology needs to be finalised and agreed by the end of 2017, in line for the start of the Business Planning process.

The proposal sees the introduction of the new markets for sludge treatment, transportation, recycling and disposal. The environmental regulations surrounding this market are outside of Ofwat's control, hence the purpose of today's meeting. The objective is to devise the best solution for all stakeholders and not just water companies, with more transparency with regard to the benefits to end customers and other stakeholders. The May decision document highlighted the main decisions relating to market information and the form of price controls.

Environmental Regulations covering sludge treatment and use

The Environment Agency stated at the start of the presentation that some assumptions have been made in the slides that may be subject to discussion and they are happy for delegates to take these away and consider them and respond accordingly.

A range of organic materials was presented, which was not exhaustive, that are covered by regulation. The regulation itself derives from two primary sources, European and Domestic legislation, this is pre any impact from Brexit. There are a number of disparate regulations relating to the treatment and use of waste and non-waste materials, including exclusions, in particular material with an end of waste status falls outside of the regulations. Case Law has confirmed that there is a clear

distinction between sludge (including liquors) and waste water which is important so as to determine which legislation is applicable to sludge. A number of effective sludge treatment processes were highlighted, which is important for the opening up of the market, which are assumed to be still relevant but if not, then the question would be why not? These processes could be used to set standards going forward.

There are 3 levels of environmental permitting:

1. Exemptions – for low risk activities
2. Standard permits – minimises the regulatory costs of obtaining a permit as it is a standard process which is well understood.
3. Bespoke permits – full process and detailed disclosure required and subject to the greatest assessment

Under the Controlled Waste Regulations 2012, WaSCs have a regulatory dispensation, will this distort the market going forward? Opening up the market is likely to place pressure on the following words used in the Controlled Waste Regulations 2012 ‘...within the curtilage of a sewage treatment works as an integral part of the operation of those work’.

Under the Industrial Emissions Directive (IED), WaSCs have significantly lower regulatory obligations and costs compared to other organic waste companies who would require a permit to treat sludge. No decision has yet been made as to whether this will continue to be the case. The current rules apply to sites exceeding 75 wet tonnes per day (on any one day). One delegate commented that the waste industry is subject to more constraints compared to the water industry.

WaSCs also have a further exemption, T21, covering the recovery of relevant waste at a waste water treatment works, which also results in them having significantly lower regulatory obligations and costs compared to other operators.

The EA then commented on some environmental concerns:

- Environmental issues must not be compromised by the opening up of the market, by a loss of confidence in the sector by consumers;
- We do not want to see a “race to the cheapest cost option” by companies to the detriment of the environment;
- Currently the EA has good visibility of where sludge comes from and goes to, as there are only a small number of players in the market. There is a concern that this could change and reporting become difficult with the opening up of markets; and
- The EA recognises that there are different recording and reporting systems for sludge and OOW’s which will need to be reconciled.

There was then a general discussion around emerging concerns / questions:

- Some operators are sweating their assets which could lead to poor quality outputs, commercial decisions are driving this behaviour but the EA do not want to see this increasing.
- Concern over the split between sludge and network plus, in that the level of the quality of the sludge produced could impact later processes. Where does the responsibility over the quality of the sludge reside?
- Contaminants in sludge: where do they go? what are the future challenges? can it still be used on land?
- An EA internal audit project found some wastes not suitable for composting going to other waste treatment sites which could include Anaerobic Digestion. Further investigation is required.

One delegate asked whether Brexit gives us the opportunity to consolidate waste regulations or is this too big a task. The response was that was no reason to change the environmental standards but it may be an opportunity to revisit the administrative processes and to reduce red tape. It was also commented that EPR is a modern recently developed platform, but may still be improved upon.

One delegate commented that Ofwat's objectives are more short term, but it could take a long time for the market to open up and become fully established so could the regulations be addressed to meet the likely market opening timescale, i.e. in 5 years' time? However, it was suggested that there is no guarantee that government and civil servants could carry out all of the regulatory requirements in the timescales ready for the market opening, and no guarantee of these regulations being high priority in a post-Brexit UK.

One delegate asked if the EA is proposing any alternatives, to which the EA responded that this was the purpose of today's meeting, to capture people's suggestions, what they do and don't like and to take these away and work up any options as required. They re-affirmed that this forum is not a decision making body.

One delegate asked why WaSCs receive exemptions, the response being mainly as a result of past successful lobbying and history. Ofwat's proposal is to try and address these issues and make it a more level playing field for everyone. There was a general comment that if the water industry was aligned more to the rest of the industry then this could have a significant impact on water customer bills with possibly no additional benefit to the environment.

There was a general comment that agricultural manures and slurry are not a waste when used/spread on agricultural land.

One delegate asked why the focus of attention is on the waste side and why do we not move more towards the water side and thereby meet more in the middle?

One delegate pointed out that if food waste is accepted into a sludge treatment site, the exemption is lost and the site needs to comply with full EPR, which would be a commercially based decision. However, it was pointed out that waste already arrives without wastewater treatment sites losing exemptions via households with food waste disposal units that feed into the sewer system.

Water Company Perspective

Anglian Water presented a view from a water company's perspective in relation to the sludge market both current and future.

78% of the current UK sludge output goes to agriculture, if this market was to cease to exist the only alternative would be incineration, which is very expensive and would have a considerable impact on customer bills. Biosolids are a valuable resource and must be seen as such, not just waste, and are beneficial to both agriculture and the environment.

Anaerobic Digestion accounts for 73% of all treatment methods, which has been rising over the past few years. This process produces a high quality product for agricultural use, which is something that we do not want to see reversed in the future as a result of opening up the market. Biosolids is a product with a considerable value, it generates £2.8m for Anglian Water alone. It has a beneficial yield on crop growth and to the soil environment, supporting the view that this is not a waste disposal programme.

The Biosolids Assurance Scheme (BAS), is a transparent standard to provide reassurance and confidence to the food chain and its consumers. All biosolids products water companies produce will meet the standard by the end of next year and will be subject to audit by a third party accreditation body. The standard sets the minimum / benchmark requirements and does not preclude co treatment. BAS is run through a not for profit organisation established by the water companies.

Anglian Water then presented a view on whether the environmental legislation was a trading barrier for the market. They do not see it as a barrier for WaSCs trading as this is covered by the Sludge Use in Agriculture Regulations, however co-treatment

of two materials appropriate for light touch regulation on their own moves to a complex and costly regulatory approach if combined.

They do not want to see the light touch regulations removed as the impact could be significant on water customer bills. One company quoted c£100m of capital expenditure would be required for their implementation of IED, and across the sector this would be considerably more. Similarly if OOW's wanted to treat sludge it would take them into a different more costly regulatory regime which would not be appealing for them.

'Other Organic Waste' Industry Perspective

Agrivert presented a view from the Waste Industries in relation to the sludge market both current and future.

At present, there is no UK evidence to say that co-digestion of food waste and sludge would be beneficial in the UK. It is used elsewhere in Europe but it is very expensive. One of the main practical challenges is de-packaging of food waste which can account for up to 40% of the costs. Retention time is also a factor requiring a minimum of 60 days, with up to 100 days to extract gas etc, which is significantly different to sludge treatment. De-watering of food waste digestate cannot be done economically, but this may be possible if mixed with sewage sludge. There are also large seasonal variations in food waste composition to deal with.

There are also influences to take into account, i.e. historical subsidies may preclude treating sludge or affect local authority claims for recycling targets. Animal Plant and Health Authority rules for animal by-products are particularly stringent.

Very few WaSCs have third party sludge processing and recycling at WaSC sites due mainly to accounting treatment (capex / opex) and ownership of the solution and risk.

Agrivert presented a case study of their own with Northumbrian Water. The project ran for 10 years, required £1.6m of capital investment from Agrivert, minimal input from NWL and returned a good margin over the 10 year period. At the end of the project the plant was refurbished and re-sold back to NWL. The project did not continue in their view that despite they are Anaerobic Digestion suppliers they were not framework contractors, and so despite their solution having a lower cost they did not succeed in their bid. In their opinion, in order for this market to develop, contracts need to be long term and large volume to enable costs to be spread, and the contractors need to be able to take on the complete totex risk.

Drivers for Change

Paul Hickey (EA), introduced the session of breaking out into two groups, Water Companies and Non Water Companies / Organisations, with the objective of discussing the opportunities and constraints for the sludge market and the regulatory boundary points between sewage and sludge. The aspiration was to derive a programme of work that can run alongside the working group to develop new ideas and proposals in this area.

Each Group was asked to provide a high level feedback of their discussion.

Non-water company breakout group. Facilitated by Nicky Cunningham and Mat Davis.

CONSTRAINTS

- Possible increase in cost to public if financial burden of applying environmental regulations to sludge treatment and use outweighs commercial gains/costs savings to the water industry.
- Risk if cost pressures in sludge market drive down quality of sludge treatment and final sludge quality going to land.
- Time and flexibility to deliver sludge materials to agriculture affected by any need to agree use in advance e.g. as occurs under EPR landspreading deployments.
- What happens if changes in the sludge market cause a loss in landbank confidence to accept sludge. What is the contingency option?
- Dilution and traceability issues if there is an increase in mixtures passing through treatment facilities and into the landspreading supply chain.
- Legal length of contract for sludge service – too short given uncertainty around costs of Environmental Regulations.

OPPORTUNITIES

- Raise the 'bar' on water company performance by using the same level of control as in the waste industry.
- Opening up the sludge markets creates more transparency in sludge use and sludge quality.
- 'Polluter pay principle' applied to use of sludge which creates an income stream to fund regulator compliance activities.
- Creation of earned recognition principle through use of the Biosolids Assurance scheme.
- New treatment and use opportunities created in the water industry through access to civil engineering and waste management experiences/facilities e.g. road sweeping treatment technology transfer to grit and screening treatment.

- Liquor treatment (and other sludge management related material streams) also enter opened up sludge market.
- Ability to utilise short term/emergency sludge treatment without complexity of interaction between EPR and Sludge (Use in Agriculture) Regulations.
- Involvement of downstream stakeholders in wider sludge market e.g. British Retail Consortium.
- Believe this is an opportunity if sludge market is opened up because 'where ever we move to must be a better place than if we stay still' and 'keep what is good' while 'challenge what is not'.
- Creating a 'level playing field'.

Water company breakout group. Facilitated by Fran Lowe and Clive Humphreys

CONSTRAINTS

- Uncertainty about which operating model will emerge in the developing market i.e. co-digestion, co-location, trading within WaSCs etc. The constraints will be different for each scenario.
- Discharging duty of care is a cost – (but acceptance that existing record keeping and tracking arrangements could be adapted to meet DoC requirements).
- Placing permit requirements upon treatment activities generally introduces unnecessary additional costs in the form of consultancy fees and application/subsistence charges.
- EPR requirements can restrict operational flexibility and be over-prescriptive. Some requirements e.g. secondary containment may be disproportionate or impractical.
- Sludge would be perceived more negatively if associated with and regulated under the same system as waste.
- Lack of an end of waste option for sludge and products derived from or containing sludge acts as a barrier to co-digestion.
- Cost prohibition of co-treatment; waste industry will not want to take sludge if it precludes EoW for the product.
- Landspreading deployments reduce operational flexibility and require greater degree of forward planning.
- Risk of race to bottom – choice of technology may reflect least cost option to achieve compliance rather than a quality standard or maximising resource efficiency. May affect confidence in quality of materials being used on land.
- Lack of clarity over responsibility for discharging obligations under the Sludge Regulations and demonstrating satisfactory disposal of sludge.

OPPORTUNITIES

Recognising the continued need to maintain confidence in the industry, protect the landbank and maintain the quality of outputs the water company breakout group identified the following opportunities:

- Consequences of EU Referendum. Given the lack of civil servants identify what can be achieved in the short term and look at what can be achieved using the 80:20 principle.
- Rationalisation of end of waste mechanisms:
 - make EoW available for outputs containing sludge
 - reclassify sludge as a source segregated material
 - embed / recognise BAS across the sectors for outputs containing sludge
- If EPR is introduced or extended it could be adapted or 'flexed' to reduce the regulatory burden on water companies. Allow additions of de minimis quantities of other material without changing the status of the material e.g. allow the addition of up to 20% of food waste to sludge but still recognise it as sludge.
- Recognition of Biosolids Assurance Scheme (BAS) within the regulatory framework would allow sludge to be used with a lower regulatory burden.

Future Meetings

The next meeting is scheduled for the 8th September in Ofwat's Birmingham Office. The agenda for this meeting is to consider:

- Form of control, including questions posed by Welsh Water's discussion paper and to includes run off rates for old RCV, and new investment.
- Market information - discuss mock up of market information and data assurance

A further meeting is proposed for 20th October in Ofwat's Birmingham Office. The draft agenda for this meeting is to consider:

- Market information - bid information to publish
- Charging and transfer pricing principles

Please inform Ofwat, as soon as possible, if any of these dates are impractical.