



Response to the Welsh Government consultation on the draft guidance in support of:

- The Recycling, Preparation for Re-use and Composting Targets (Definitions) (Wales) Order 2011
 - Regulations 4 and 5 of The Recycling, Preparation for Re-use and Composting Targets (Monitoring and Penalties) (Wales) Regulations 2011, made under the Waste (Wales) Measure 2010,
- and
- to the consultation on issues affecting de-watering, apportionment of recycling rates from anaerobic digestion, composting and the recycling of incinerator bottom ash (IBA)
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1 Introduction

- 1.1 The Association for Organics Recycling (AFor) is the United Kingdom's membership organisation committed to the sustainable management of biodegradable resources. It promotes the benefits of composting, digestion, and other biological treatment techniques and the use of biologically treated materials for the enhancement of the environment, business and society. See www.organics-recycling.org.uk for more information.
- 1.2 AFor currently has approximately 400 members including composting, anaerobic digestion, thermophilic aerobic digestion and mechanical biological treatment operators, local authorities, consultants, technology suppliers, compost users, academics, other membership organisations and individuals.
- 1.3 AFor has consulted with its members with regard to this consultation and would welcome the opportunity to discuss with the Welsh Government any of the points raised in this response.

2 Consultation questions

- 2.1 ***Question 1 - Do you consider that any further clarification is required regarding what constitutes local authority municipal waste? If so, please state what further clarification is necessary.***

With regard to this section of the consultation document, AfOR would like to make the point that gully suckings and road sweepings are not allowed as input materials to composting processes that are registered under the Compost Quality Protocol (End of Waste compliant processes). Please see AfOR's recent communication to all composters registered on the Certification Scheme regarding road sweepings and gully suckings (<http://organics-recycling.org.uk/page.php?article=2177>). The communication was sent in agreement with the Environment Agency. This means that currently many local authorities are likely to send gully suckings and street sweepings to landfill or supply it to a facility for processing under a 'biological treatment' environmental permit.

Therefore, although the amounts of road sweepings or gully suckings collected by a Local Authority will be included in the total amount of municipal waste collected (in the 'recycling target' formula denominator), Local Authorities will not be able to count this waste stream as recycled (in the formula's nominator), unless it is recovered by means other than composting into a product, material or substance, whether for its original or other purpose.

It is worth noticing that SITA has recently opened a facility in Wolverhampton where street sweepings and gully suckings are recycled for use in various products such as sand, washed aggregate¹.

It is not currently clear whether Local Authorities delivering street sweepings and gully suckings to a facility for transformation into sand and washed aggregate materials will be able to claim the input materials (or a proportion of the inputs) as recycled. AfOR would encourage the Welsh Government to enable local authorities that are sending street sweepings and gully suckings to such facilities to count it towards their recycling rates. This would in turn encourage local authorities to divert collected street sweepings and gully suckings from landfill.

2.2 Question 2 - Do you consider that any additions need to be made to the wastes that may count towards local authority recovery targets? If so, please state what those changes should be and in your opinion why they should be made.

AfOR requested to the Welsh Government that a solution is found with a matter of urgency for small community and farm based composting and AD operators that cannot afford going down the route of certification to End of Waste criteria.

Even though the Quality Protocols for composts and digestates are not explicitly written only for medium to large scale operators, their numerous requirements represent an expensive burden for small community, on-farm composters and micro-digestion operators. This means that although many community sites, small on-farm composters and micro-digestion operators could probably achieve the quality of compost / digestate required, the costs of proving this and gaining certification are, at worst, prohibitive and at

¹ see http://www.waste-management-world.com/index/display/article-display/8752181746/articles/waste-management-world/recycling/2012/04/New_SITA_Plant_to_Recycle_40_000_TPA_of_Road_Sweepings.html?cmpid=EnlW_MW_WeeklyApril132012; see also http://www.waste-management-world.com/index/display/article-display/2325570780/articles/waste-management-world/recycling/2010/10/Recycled_Road_Sweeper_Waste_-_Gritbuster_Turns_Costs_into_Opportunities.html

best, considerably higher than the costs associated with using the compost / digestate as 'waste'.

As a result of the Welsh Government's proposals, local authorities in Wales may decide to divert to larger EoW compliant biowaste treatment sites biowastes that are currently composted or digested through community or farm schemes. AfOR does not endorse this, as highlighted in its previous responses, for the following reasons:

AfOR believes that maintaining the diversity of sizes of biowaste treatment facilities encourages a responsive and competitive industry. We highlight the significant roles of the community, institution, Non-Governmental Organisations and on-farm sectors as well as the larger centralised composting and growing centralized AD sectors.

- Small scale on-farm sites and community composting sites fulfil an essential role in the development of the biowaste management industry in the UK, especially within rural communities, inner city areas and other locations where it is difficult to collect and/or treat biodegradable materials.
- On-farm composting and anaerobic digestion play a vital role in sustainable agricultural systems by returning nutrients and organic matter to the soil and arresting the decline in soil quality. They are fundamental in helping the Government meeting the ambitious objectives set in the Soil Strategy for England² and curbing soil erosion, compaction and soil organic matter decline.
- The use of sites local to biowaste arisings minimise the transport distance and subsequent carbon emissions associated with transport of biowaste (in keeping with the proximity principle). Similarly, use of compost / digestate close to the treatment site also minimizes the CO₂-equivalent associated with transport of this resource. Welsh Government should either find a solution that enables very small and community composting and AD sites to cost-effectively achieve 'End of Waste' criteria, or should exempt such sites from the requirement to achieve End of Waste in order to be able to claim their processed biowaste as recycled. If appropriate, such a solution should be proposed and discussed with the European Commission, in particular within the Committee for the Adaptation to Scientific and Technical Progress and Implementation of the Directives on Waste plus the technical experts within the Joint Research Centre responsible for the development of European End of Waste Criteria for biowaste.

2.3 Question 3 - Do you consider that any changes need to be made to the description of the reporting requirements in support of local authority preparation for re-use, recycling and composting targets? If so, please state what those changes should be and in your opinion why they should be made.

AND

Question 4 - Do you consider that Welsh Ministers should introduce legislation requiring all facilities that manage waste in Wales to report how much material they reject, the next destinations of materials sent from these facilities and other related information?

² <http://www.defra.gov.uk/environment/quality/land/soil/sap/index.htm>

2.3.1 Section 3.2.3 states *'where composts and digestates comply with the Quality Protocols or revised EoW criteria set out above, the amount considered recovered for the purposes of the targets set under the Waste (Wales) Measure 2010 will be the weight of the input to a composting or anaerobic digestion facility minus rejects (including plastics, metals, glass, oversized items and where appropriate non-degraded corn starch bags). This is subject to clarification on de-watering - please see Part A of 'Consultation on apportionment of recycling rates from anaerobic digestion, composting and the recycling of incinerator bottom ash (IBA).'*

AfOR supports the WG's proposal to base the targets on the **net** tonnages (i.e. input materials less 'rejects'). AfOR believes that input material tonnages claimed as 'recycled' should only be those source-segregated input materials suitable to be processed through composting or anaerobic digestion (targeted materials) and, thus, that can be turned into quality products.

It is absolutely fundamental that WG's future guidance for Local Authorities on how to calculate composting targets and report them into the Waste Data Flow System includes a mechanism to encourage Local Authorities to reduce the levels of contaminants in biowaste delivered to composting, AD and other biowaste treatment sites. Failing to do this only encourages the collection of inappropriate 'contaminant' materials which cost significant sums to remove at an appropriate stage after delivery to the composting / AD sites.

To support such a policy, AfOR recommends that a clear definition of 'rejects' is given in the WG's guidance.

The 'rejects' as defined in the WG's guidance do not include all oversized materials from composting: **the post-screening oversize woody fraction from the composting process ('compost oversize') should only be considered 'rejects' if it is sent for disposal.**

'Rejects' include non-targeted materials, such as any non-compostable or non-digestible materials³, that have been removed at any stage of the composting / AD process and sent for disposal, including any process output the facility sends to disposal. For example, 'rejects' should include materials rejected at the gate by the composting or AD facility, any whole batch / load rejected after delivery, any materials rejected during any pre-treatment step (e.g. pre-composting / pre-AD picking lines), and any materials rejected post-composting / post-AD (for example, plastics and other physical contaminants that are removed using a screen and/or wind-sifter, and any portion of stored outputs that the

³ Examples of non-compostable and non-digestible materials include (but are not limited to):

- glass
- metal
- plastics that are not certified 'compostable' and/or 'home compostable' in compliance with of the relevant standards specified in BSI PAS 100 and BSI PAS 110 and associated Quality Protocols (see AfOR guidance document at <http://www.organics-recycling.org.uk/page.php?article=1991>) .
- any kind of packaging that is bright, glossy, shiny, pigment coloured, and/or printed with ink but is NOT certified 'compostable' and/or 'home compostable' in compliance with of the relevant standards specified in PAS 100 and PAS 110 and associated Quality Protocols (see AfOR guidance document at <http://www.organics-recycling.org.uk/page.php?article=1991>) .
- stones
- pieces of brick, concrete, ceramic and tiles.

treatment facility sends for disposal). In the case of composting, the post-screening oversize woody fraction ('compost oversize') should only be considered 'rejects' if it is sent for disposal. In the case of AD, any output type (e.g. whole digestate, separated liquor, separated fibre) sent for disposal shall be considered as rejects.

The guidance clearly explains the mechanism that should be used to attribute a certain level/proportion of rejects to each local authority delivering input materials to a biowaste treatment site and report it into the Waste Data Flow. It is crucial that this mechanism does not penalise those local authorities that achieve low levels of contaminants in the feedstocks delivered to biowaste treatment sites. Equally, this mechanism should not reward those local authorities that deliver feedstocks that contain high levels of contaminants.

Afor envisages that the main problem with the 'pro-rata' approach proposed in the consultation document (section 4.3) is that Waste Collection Authorities that achieve lower levels of contaminants in the input materials are attributed exactly the same proportion of rejects (based on the treatment site's overall rejects rate) as the WCAs that are delivering feedstocks that contain high levels of contaminants. Consequently, Afor proposes that approach described in 2.3.2 is chosen instead.

2.3.2 Approach proposed by Afor for biowastes: Inputs minus rejects, calculated on a pro-rata basis and coupled with contamination sampling and measurement (this proposal takes into account all rejects arising at any stage of the process)

Premise:

For composting: Input materials that are counted towards Local Authorities' recycling rates should not include any non-compostable (e.g. plastics, metals, glass, stones etc.). In other words, any rejects from the composting process that have been sent for disposal (for example, whole load rejects or any contaminants that are removed from the delivered biowastes via the use of picking lines prior to composting, or contaminants removed after the composting process through the use of screens and wind-sifters or other post-composting steps) should not be counted towards recycling. Such rejects would be apportioned amongst the supplier local authorities.

For anaerobic digestion: A similar approach as for composting should apply to anaerobic digestion. In addition to discounting non-digestible materials from 'recycled' tonnages, the amounts of biowaste delivered by a specific source should also be discounted of an apportioned amount of digestate process by-product and an apportioned amount of output that is sent for disposal (e.g. separated liquor sent to off-site water treatment systems or treated on-site then discharged to off-site water courses or water / sewerage management systems).

This seems to be a pragmatic approach which will encourage Local Authorities or their collection contractors to deliver less contaminated biowastes to treatment facilities.

Description of the approach:

A treatment facility will determine the amount of biowastes that is delivered to it by each source (e.g. each District Council), using weighbridge records of loads delivered. The

percentage of total biowaste delivered to a treatment facility from a single LA contract is therefore easily reported.

The treatment facility will also determine the amount of rejects, from the whole treatment process, that are sent for disposal, using weighbridge records of reject loads.

Under this approach, each Local Authority's biowastes delivered to the treatment facility should initially and then periodically be sampled to measure their content of non-compostable or non-digestible materials (% by weight). This will enable the treatment facility to apportion/attribute to each biowaste source (e.g. District Council) an amount of rejects sent for disposal based on:

- A. the amount of biowaste delivered to the site by the specific source (tonnes, from weighbridge records);
- B. the levels of non-compostable / non-digestible materials measured in the biowaste delivered from that specific source (% by weight, in representative samples);
- C. the facility's total amounts of non-compostable / non-digestible materials (in tonnes, calculated using the % by weight levels determined under bullet point B; and
- D. the facility's actual amounts of rejects sent for disposal (tonnes, from weighbridge records).

The amount of biowastes recycled from each Local Authority source will be the total amount of biowastes delivered from the Local Authority's catchment to the treatment facility, MINUS an apportioned amount of the rejects sent for disposal, assigned to that Local Authority.

The sampling and measurement of contaminants in the delivered biowaste incurs cost but should be supported because it results in more accurate data for each local authority supplying biowaste. The sampling methodology for measuring non-compostable / non-digestible contaminants should examine biowaste deliveries that are representative of deliveries from the source under assessment (e.g. a specific District Council). The sampling frequency should be agreed with the Monitoring Authority or be based on a standard methodology approved by the Monitoring Authority.

Please note that AfOR is in the process of finalising a methodology to sample and measure the levels of non-compostable and non-digestible contaminants delivered with biowaste to treatment facilities. Once finalised, the methodology will be made available here: www.organics-recycling.org.uk/collections.

Example ~ Local Authority A (please see the calculations related to this example in the spreadsheet attached with this response titled 'recycling rate calculation').

The biowaste treatment facility's throughput is 50,000 delivered biowaste tonnes per annum. The facility's total amount of rejects sent for disposal that year is 6,000 tonnes.

Local Authority A (LA A) delivers 10,000 tonnes per annum to the biowaste treatment facility.

A robust contaminant sampling and measurement programme is undertaken on a number of loads delivered by all Local Authorities delivering to the biowaste facility. The sampling programme shows that 12 % by weight of the sampled biowaste delivered by LA A is classed as non-compostable / non-digestible materials. Accepting that 12 % is

representative of LA A's contamination in its biowaste, this equals 1,200 tonnes of contaminants in 10,000 tonnes of biowastes delivered from LA A's catchment.

The contaminant sampling and measurement programme also shows that the calculated total amount of non-compostable / non-digestible materials in the total biowaste delivered to the facility from all LA sources is 6,150 tonnes.

Hence, **19.5%** of the calculated total amount of non-compostable / non-digestible materials measured in the biowastes delivered to the treatment facility are attributed to LA A. This percentage is then applied to the total amount of rejects the treatment facility actually sends for disposal; for LA A this is 19.5 % of the total 6,000 tonnes of rejects disposed, which equals 1,170.73 tonnes.

LA A's recycling rate is **88 %** (10,000 tonnes biowaste delivered from LA A's catchment MINUS 1,170.73 tonnes rejects to disposal, DIVIDED BY 10,000 tonnes biowaste delivered from LA A's catchment, result MULTIPLIED BY 100).

2.4 Question 5 - Do you agree with the proposed approach to de-watering? If not, please explain what you think the approach should be.

Afor believes that the approach proposed by the Welsh Government is very data onerous and, thus, too costly. As specified by the WG in the consultation document, this approach requires frequent sampling of the fractions.

In addition, it is proposed that the proportion of digestate output recycled is based on its Total Solids content (or the Total Nitrogen content, whichever is the lesser). In the case of total solids, this approach means that the water content of EoW separated fibre is not counted as recycled. This seems to be unfair compared with what is proposed for composting. For this latter process type, all input minus rejects are proposed to be counted as recycled and the dry matter content of the EoW compost does not affect the recycling calculation.

In addition, this section does not address what the calculation would be if one fraction (e.g. separated liquor or separated fibre) is not EoW compliant, but is applied to land for agricultural benefit or ecological improvement under waste regulatory controls. Afor believes that, provided that the AD/composting facility is compliant with the EoW and produces at least one EoW compliant fraction, any other output that is NOT sent for disposal should be not discounted from the amount of biowastes recycled. Afor highlights that achieving certification for all the digestate output types / compost grades produced may be very costly; some operators may decide, for financial reasons, to certify only some of the output types / grades.

The guidance document should clearly specify what unit of measure should be used by the Local Authorities to report the amounts of Total Nitrogen or Total Solids, if either or both of these measures are included in the guidance. A spreadsheet with calculations should be provided to all Local Authorities and their contracted AD operators so that a consistent approach is used across Wales.

As an alternative to the approach proposed by the Welsh Government, Afor strongly recommends that the same approach as for composting is used for anaerobic digestion. In other words, the amount of biowastes recycled from each Local Authority source through an AD facility should be the total amount of biowastes delivered from the Local Authority's catchment to the treatment facility, MINUS an apportioned amount of the rejects sent for disposal, assigned to that Local Authority.

Rejects should include non-targeted materials, such as any non-digestible materials⁴, that have been removed at any stage of the AD process and sent for disposal, including any process output the facility sends to disposal. Rejects should include any digestate process by-product or output that is sent for disposal (e.g. separated liquor sent to off-site water treatment systems or treated on-site then discharged to off-site water courses or water / sewerage management systems).

This approach is strongly favoured by AfOR as it enables a fair comparison between composting and AD.

Basing the recycling targets on the amounts of total solids or total nitrogen recycled would lead to an uneven playing field, as the same approach is not (and should not) be proposed for composting.

Finally, AfOR is relieved that the Welsh Government has not proposed to base the recycling targets on the amounts (weights) of EoW outputs. This would also inevitably lead to an unfair comparison between the two processes, given the difference in water content of composting and AD outputs. The comparison would be very likely to favour or disfavour AD depending on whether the liquid output fraction is counted as recycled or not.

2.5 Question 6 - Do you agree with the proposed approach to the apportionment of (i) AD digestates and composts, (ii) recycled incinerator bottom ash (IBA) and (iii) air pollution control residues (APCR) towards recovery targets? If not, please explain what you think the approach should be.

2.5.1 Section B), page 18 of the consultation document says:

'As of 1 April 2012 existing composting and AD facilities that are receiving municipal bio-wastes from local authorities must either be producing composts or digestates that are Quality Protocol compliant or be in the process of applying for appropriate accreditation. These facilities must be producing Quality Protocol outputs by 1 April 2014, if the local authority inputs are to count towards recovery targets.'

1. AfOR's opinion is that it is not appropriate to set a deadline that is prior to the date of release of the final guidance. This first deadline/milestone should be revised so that:
 - a. it is set at a date after the release of the WG's guidance; and

⁴ Examples of non-compostable and non-digestible materials include (but are not limited to):

- glass
- metal
- plastics that are not certified 'compostable' and/or 'home compostable' in compliance with of the relevant standards specified in BSI PAS 100 and BSI PAS 110 and associated Quality Protocols (see AfOR guidance document at <http://www.organics-recycling.org.uk/page.php?article=1991>) .
- any kind of packaging that is bright, glossy, shiny, pigment coloured, and/or printed with ink but is NOT certified 'compostable' and/or 'home compostable' in compliance with of the relevant standards specified in PAS 100 and PAS 110 and associated Quality Protocols (see AfOR guidance document at <http://www.organics-recycling.org.uk/page.php?article=1991>) .
- stones
- pieces of brick, concrete, ceramic and tiles.

- b. it allows sufficient time to Welsh Local Authorities and their contracted composting and AD operators to take evaluate the implications of such a deadline and take appropriate actions.
2. The WG guidance should clarify the meaning of '*be in the process of applying for appropriate accreditation*'. Our main concern is that under AfOR's and the Renewable Energy Association Ltd's (REAL) certification schemes aligned to the Quality Protocols, a formal application cannot be made until the operator is ready for an inspection. This is explained in more detail in paragraph 2.6.2 below. AfOR proposes that a formal pre-registration process is introduced under AfOR's Compost Certification Scheme and REAL's Biofertiliser Certification Scheme; composters and AD operators would pre-register with AfOR / REAL their commitment to apply for the relevant certification.

2.5.2 'Formal application' under AfOR Certification Scheme:

Under AfOR Compost Certification Scheme aligned to PAS 100 and the Compost Quality Protocol (CQP) applications are only accepted when composting operators are ready for an inspection. This means that before 'formally making an application', operators must have implemented all BSI PAS 100:2011 requirements, have already undertaken the necessary compost testing and have obtained the necessary passes.

The certification bodies appointed by AfOR will not accept an application, unless the operator has implemented a Quality Management System, aligned to PAS 100 and can show that three consecutive passes for all PAS 100 obligatory parameters have been obtained for the three most recently sampled batches (this phase is normally called 'validation'). The time the operator will take to validate his process will vary depending on:

- How quickly the operator will implement the required quality management system (QMS, including a HACCP Plan);
- How long three compost batches, managed according to the implemented QMS and HACCP Plan, will take to become ready for being tested;
- How long the laboratory will take to return the test results to the composting operator (this is normally between 4 -6 weeks); and
- Whether the test results show any failures, under which circumstances the operator will need to test further compost batches until three passes have been achieved.

In summary, before applying for certification, AfOR envisages it may take up to 6 months for a composting operator to become ready to apply for certification. Once they have applied, it may take them up to another 6 months to achieve certification.

In conclusion, a composting operator cannot formally register for certification to PAS 100 and the CQP now, unless he/she has already implemented all necessary requirements.

Thus, AfOR strongly recommends that, after the publication date of the guidance document referred to above, an appropriate transition period is given to those operators that are not currently certified or applied, to allow them to:

- check what certification to PAS 100 and the CQP under AfOR Certification Scheme entails (e.g. in terms of cost and implementation of the requirements);

- implement all PAS 100 requirements and undertake the required compost testing; and
- only when they have done the above, make an application for initial certification.

Afor understands that the Biofertiliser Certification Scheme aligned to PAS 110 and the anaerobic digestate quality protocol (ADQP) follows the same approach or a very similar approach.

In response to Afor's enquiry on the above concern, Welsh Government has recently clarified to Afor that:

“A letter from an operator to a local authority outlining where they are in the process – and indicating how they will ultimately seek accreditation – is considered to be part of the process of applying. This will be made clear in the final Guidance and other representations have stressed the need for this. So, work preparatory to formal certification is considered to be part of the ‘process of applying’. If any operator has no intention of seeking accreditation and is just content to process biowastes without seeking PAS/QP, then its output will not count towards the targets. If any operator is actively pursuing pre-registration activities as part of the preparation for PAS/QP process, then its output will count towards the targets.”

However, in Afor's opinion pre-registration should be a formal process, which requires composters or AD operators who intend to apply for certification (when they are ready) to confirm in writing their commitment to the Schemes' owners. Afor could create a 'Statement of Intent form' that these operators need to complete and submit for pre-registering'. In addition, Afor could make available on its web site (or periodically to LAs and the WG on request) the up to date list of pre-registered sites.

The Welsh Government's guidance should state what is the maximum period allowed between pre-registration and formal application. In Afor's opinion a reasonable period would be one year between pre-registration and formal application. The WG's guidance document should also make clear how the recycling rates claimed by a local authority should be recalculated in the event that;

- the biowastes sent to a composting/AD operator have been counted as 'recycled' based on the operator's commitment to apply for certification, but
- the operator has subsequently not made a formal application or has not been able to achieve certification.

2.5.3 PAS 110 compliant digestate not destined to be applied to land

The consultation document states: *‘AD facilities may produce PAS 110 compliant digestate that is destined to be applied on land such that it meets the QP/End of Waste (EoW) criteria and, depending on the available markets for digestate, they may send some of their digestate for non land application uses. Where this is the case a proportionate consideration of inputs –based on total solids – from Welsh local authorities and outputs is considered appropriate. Where relevant PAS 100 may be treated in the same way’.*

In AfOR's opinion, only outputs that are sent for disposal should be discounted from the recycling targets calculations. Outputs that are sent, as an example, for energy recovery, should not be discounted'. AfOR is aware that the European 'target compliance rules'⁵ state:

*'Where the target calculation is applied to the aerobic or anaerobic treatment of biodegradable wastes, **the input to the aerobic or anaerobic treatment may be counted as recycled where that treatment generates compost or digestates which, following any further reprocessing, is used as recycled product, material or substance for land treatment resulting in benefit to agriculture and ecological improvement.***'

However, arguably the statement **doesn't state that all compost and digestate** generated must be used as recycled product, material or substance for land treatment resulting in benefit to agriculture and ecological improvement. **Furthermore, although 'waste' status compost / digestate is not a product in legal terms, if it is used for land treatment and results in benefit to agriculture and ecological improvement, it would be a 'recycled...material or substance'.**

Other comments on this section:

'Non-land applications': When referring to non-land applications, the guidance document should clarify or list a series of examples for non-land applications.

Example B in the consultation document: although Example B is clear, the calculation within it does not refer to total solids, unlike the sentence as the red text above suggests.

~ End of AfOR response ~

⁵ COMMISSION DECISION of 18 November 2011 establishing rules and calculation methods for verifying compliance with the targets set in Article 11(2) of Directive 2008/98/EC of the European Parliament and of the Council