

Organics Recycling

The quarterly members'
magazine from the Organics
Recycling Group of the REA

Spring 2018 Issue 36

- > **BIOMASS**
Fire prevention plans
- > **HOT TOPIC**
Brexit
- > **SRoC**
Updates
- > **INTERVIEW**
Tristram Stuart



TOP OF THE TABLE

WHICH LOCAL AUTHORITY IS SETTING THE PACE
IN THE ORGANICS LEAGUE TABLE?



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WELCOME



Jeremy Jacobs
Technical Director, REA

We are experiencing an unprecedented wind change in the mindset of our political leaders, embedded in a number of recently launched policies, including the Clean Growth Strategy and the 25 Year Environment Plan. There is finally recognition within both of these documents that 'soil health' as an intrinsic part of our Natural Capital is adequately protected. The use of compost and digestate as a partial or full replacement for artificial fertilisers in the farming world is becoming more commonplace and there are moves afoot to phase out the use of peat in the growing media sector where green waste derived products have been used for some time. This long overdue realisation that the use of sustainable inputs is the way forward in a resource efficient economy can only assist in promoting our work to a wider audience. The REA will be taking every opportunity to engage with government over coming months to ensure our voice is heard.

This magazine will land on your desks just before the ORG Annual Conference, Exhibition and Gala Dinner and I implore you to support this both as a means of networking with industry colleagues but also keeping up to date with the latest developments within the sector. We have a great line up of speakers including the CEO of LARAC Lee Marshall and a keynote address from Stuart Hayward-Higham on his vision of the future in organics recycling. Please come and join us, I promise you that you will not be disappointed!

Thank you once again for your continued support.

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Organics Recycling is the magazine of the Renewable Energy Association's (REA) Organics Recycling Group

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www.r-e-a.net



ISSN 2041 - 2169

Printed by Pensord Press
Printed on Revive 100% recycled

Organics Recycling is published by Resource Media Limited for the Organics Recycling Group of the REA.

No views expressed in the magazine can necessarily be interpreted as the views of the REA or Resource Media.

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FOOD WASTE



FWRAP 12 months on

WRAP’s Food Waste Recycling Action Plan (FWRAP), launched in July 2016, aims to improve the capture, supply and quality of household and commercial food waste, providing guidance and sharing cost-benefit analysis for householders, processors and local authorities.

The latest figures from WRAP show that 40 per cent of the UK’s 10 million tonnes of post-farm gate food waste is unavoidable, meaning improvements in collection and recycling, not just the reduction of waste, will be crucial going forward. The government’s 25 Year Environment Plan acknowledged the importance of recycling food waste, with a reiteration of its goal of no food waste to landfill by 2030 and a promise of support to enable more councils to introduce separate collections.

One of the key goals of FWRAP has been to develop the business case for separate collections of food waste, and the first annual report from FWRAP’s

cross-industry Steering Group, which met four times over 2016/17, reveals that during that period WRAP helped 49 local authorities assess the feasibility of implementing separate collections.

Part of this has been achieved through a dedicated Cost Benefit Analysis Tool which was designed to help food waste collectors and processors working jointly to weigh up the potential outcomes of using different intervention measures, such as bin stickers, to improve food waste capture. Mike Falconer-Hall, Programme Area Manager for Organics, also drew attention to WRAP’s new industry guidance to help AD operators meet the challenges of handling collected household waste, especially that collected in plastic liners. This information is free to download from the WRAP website.

Uptake of the guidance supplied by FWRAP so far suggests engagement in the first year has been strong, with

LOCAL AUTHORITY

Biowise wins £30m Cheshire East contract

Biowise, the composting division of recycling and waste management company Wastewise, has been awarded a 15-year minimum contract for the treatment of organic waste from Cheshire East Council.

The contract, worth £30 million, is for Biowise to provide organic waste treatment for the council, which has extended its garden waste collection to include food waste from mid-2019. Biowise has received funding from Yorkshire Bank to assist in the building of a £7-million Gicom In-vessel Composting facility, to be run alongside Aerated Static Pile composting at the council’s site in Leighton Grange, near Crewe.

The facility will have the capacity to process up to 75,000 tonnes of mixed food and garden waste every year, and it is expected that 40 per cent of the inputs will be converted to quality compost, while the rest will be re-processed, recycled or sent for energy and heat recovery.

Hull-based Biowise previously designed and developed a similar facility at its own site which handles organic waste from households in Hull, East Riding of Yorkshire and North Lincolnshire.

Cllr Don Stockton, cabinet member for environment at Cheshire East Council, said: “Biowise put forward a proposal that not only fulfilled all our strategic, operational and financial requirements, but assists us in making recycling as simple as possible for residents, with additional beneficial



(L-R) Ralph Kemp, Corporate Manager Commissioning, Waste and Environmental Services Cheshire East Council; James Landau, Managing Director Biowise; Don Stockton, Conservative elected member Cheshire East Council, Environment Portfolio Holder; Bob Wilkes, Operations & Development Director Biowise.

ORG EVENT

It’s not too late to book your place for the 24th Organics Recycling Conference, Exhibition & Dinner.

There will be presentations from LARAC CEO Lee Marshall, Stuart Hayward-Higham of SUEZ Recycling and Jody Sheckter from Laverstoke Park, as well as discussions on chargeable green waste collections,

compostable packaging, marketability of compost, EA charges, WRAP initiatives, and speakers showing us how it’s done across the channel.

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A Cunning Plan?

January saw the long-awaited launch of the government's 25 Year Environment Plan. **Tony Breton**, UK Market Developer for bioplastics company Novamont, looks beyond the headlines and considers what the Plan's contents could mean for organics



January saw the launch of Defra's long-awaited 25 Year Environment Plan. If you were to believe the mainstream media, you would think the whole thing was about plastic and how we can be rid of it. Indeed, plastic does feature, but the Plan is seeking a higher level of ambition looking to shift the nation's approach to the whole environment, from air to soil to sea and everything in between. If only half the lofty words come to fruition it should change the lives of all of us for the better, but digging a little deeper, what could it mean for the future of the UK composting industry?

On the face of it, there is a lot to get excited about in the Plan: we are promised clean air, clean and plentiful water, thriving plants and wildlife, reduced risk of harm from environmental hazards such as flooding and drought, a more sustainable and efficient use of resources, and measures to enhance the beauty of the natural environment and improve the public's engagement with nature.

Putting aside the fact that this list is in fact a recognition of everything that is wrong with our environment today, any astute composter will recognise that one thing which links all of these promises is soil. To some extent this is reflected in the Plan; early in the

section on soil, there is a paragraph that should raise the hopes of all those involved in the composting industry: 'We need to ensure healthier soils by addressing factors in soil degradation such as erosion, compaction and the decline in organic matter.'

Ask most composters to name three of the key benefits to soil of using compost and I imagine their answer would include at least two of these factors. I say two, as soil fertility would most likely be in the top three. Well, the Plan provides hope here too, with the promise of the government 'working with industry to encourage the use of low emissions fertiliser, and reviewing the levels of take-up using data from the British Fertiliser Practice Survey'.

However, the section on fertilisers may give rise for some concern, particularly for producers of whole digestate. Another listed action comprises 'putting in place a robust framework to limit inputs of nitrogen-rich fertilisers such as manures, slurries and chemicals to economically efficient levels, and make sure they are stored and applied safely.' Seemingly to offer a counter to the costs this will no doubt bring, the Plan says: 'Through the Farming Ammonia Reduction Grant Scheme, we have provided practical help for farmers by funding slurry store covers, which can

reduce emissions during storage by up to 80 per cent.' Sounds great, but it turns out that this scheme closed to new applicants just three weeks after the Plan was launched.

For composters manufacturing highly refined products, and those producing more lignin-based products for horticulture and growing media, there is optimism that the drive to reduce peat consumption will be renewed after a number of years on the back burner, with the promise of a peat strategy later in the year. In terms of waste, the Plan offers some strong words on waste reduction, with a particular focus on the issues of food and plastic waste.

It seems, therefore, there is a lot of potential in the Plan, but we cannot rest assured any of it will come into being. Indeed, the two big things which appear to be missing throughout the Plan are teeth and accountability. Even the much-hyped section on eliminating avoidable plastic waste comes with the dreaded caveat of TEEP.

Similarly, there seems to be little connection between the intrinsically joined areas of water, soil and air. References to a new legal framework and an actual plan on how to reach the necessary goals are scant at best. Without these all we have is hope, and a plan so cunning you could stick a tail on it and call it a weasel.



Prime Minister Theresa May launched the Environment Plan to much fanfare in January (photo: Flickr/Number 10)

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Welcome to the Scottish section of Organics Recycling. If you would like more information or have any comments, please get in touch with **Jenny Grant** at jenny@r-e-a.net

SEPA Compliance Assessment Scheme delayed

Following the recent consultation on its Compliance Assessment Scheme (CAS), SEPA has reviewed the responses, and feedback from stakeholders has highlighted a number of key areas which require

further consideration before continuing. SEPA had planned to introduce the new scheme on 1 January 2018, but has realised it needs some more time to ensure that any changes made improve

the accuracy and usefulness of the scheme for the public, regulated businesses and SEPA itself. The current CAS, in operation since 2009, will remain in force whilst further work is undertaken.

Plastic in food waste-derived digestate and soil: SEPA report

In 2017, SEPA investigated plastic in food waste-derived digestate and soil, and has published its findings. The objectives of this project were:

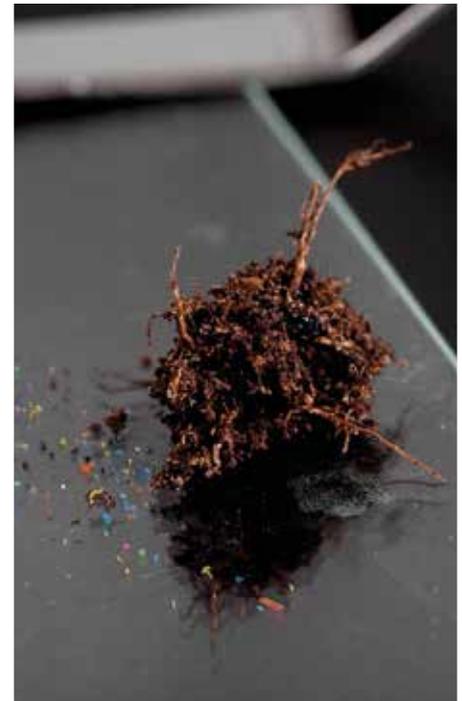
- To understand previous work on plastic in digestates and soils
- Through laboratory analysis, to develop a knowledge base of the types, quantity and particle size of plastic that may be found in food waste-derived digestate
- Through field work and laboratory analysis, to develop a knowledge base of the behaviour and distribution of plastic in agricultural soils that have had digestate applied in the past, and to assess the likely impact on soil function.

Regarding the lab analysis of plastic in digestate, 15 discrete digestate samples from three UK based PAS 110 certified sites were collected and analysed. Weight, surface area and size data for plastic contamination from a fourth PAS 110 site was also made available for this project.

The weight-based analysis showed that three of the four sites assessed were producing digestate of suitable quality (in terms of plastic contamination) to meet SEPA's 2017 and 2018 limits through high selectivity of feedstocks and post-digestion screening. However, the more stringent 2019 limit has the potential to cause periodic failures with the current feedstock selection and screening practices.

For the soils work, samples were taken from agricultural soils that have had digestate applied in the past. Samples were collected from four fields on one farm, representing arable and grassland with and without history of multiple PAS 110 certified digestate application. Five locations with three depths were sampled per field. An original wet sieving approach was trialled and validated in this project. Using this approach, plastic fragments of less than 2mm were recovered from the grassland field with digestate

application at surface (0-5cm) depth only. No plastic fragments larger than 2mm were recovered from the arable field with digestate application.



Biorefining Potential for Scotland

Zero Waste Scotland has published a report on the Biorefining Potential for Scotland. It provides the most detailed insight yet into the circular economy opportunities for waste and by-products generated in Scotland. Maximising value from 'bio' resources is identified in the Scottish Government's circular economy strategy, 'Making Things

Last', as a priority area with the greatest opportunity to deliver economic, environmental and social benefits for Scotland.

In the report, bio-resource arisings in Scotland have been mapped to understand the scale and shape of the potential market. It shows there are 27 million tonnes of biomaterials produced in Scotland

every year, with considerable scope of opportunity for development: thousands of tonnes of these valuable materials could be captured and put to high-value use. The report also highlights opportunities for new job creation in Scotland, particularly in rural and coastal areas where many of the materials arise.

BREF

Waste Treatment BREF finally released

Jenny Grant, Organics Recycling Group Manager for Scotland, has the latest on BREF, for which a long review process has finally concluded

After a long review process, the final draft of the Waste Treatment BREF document has been released by the European Bureau.

This is the EU reference document outlining the Best Available Technique (BAT) conclusions with which waste treatment sites will have to comply.

It will apply to all composting and AD sites with PPC permits or

operating as installations (in other words, those with a capacity of over 75 tonnes per day for composting or 100 tonnes per day for AD).

You can also see the BAT conclusions as a stand alone document which has most of the changes tracked from the previous version; both documents are available on the ORG website. The Article 13 forum met on 19 and 20

December to give a formal opinion of the final draft of the Waste Treatment BREF. We do not have any feedback from this meeting as yet, and there is some ongoing work on translation of technical terms.

Further updates will be circulated to members in ORG news when they become available, or you can contact Jenny (jenny@r-e-a.net) if you wish to discuss.

RHI

Crucial Renewable Heat Incentive reform finally making its way through Parliament

Frank Aaskov, Policy Analyst at the REA, charts the course for RHI reform

Legislation for the second phase of the 2016 reforms to the Renewable Heat Incentive (RHI) was laid in Parliament in early February and is expected to be implemented 6-10 weeks after this, dependent on scheduling.

Crucially, these regulations contain the uplift of biogas/biomethane tariffs and tariff guarantees, which is a mechanism that protects projects against reductions in tariffs between financial close and plant commissioning. These two changes have been long-awaited by the AD industry, with very few new plants going forward without confirmation of when they will be implemented. The reform package also includes other policy changes such as removal of wood fuel drying, waste drying or processing, feedstock restrictions for biogas/biomethane, and removal of digestate drying as eligible heat use.

The reform package had been delayed several times: initially by the referendum on Brexit, which was followed by ministerial changes at the Department of Energy and Climate Change (DECC) and its successor, the Department for Business, Energy and Industrial

Strategy (BEIS); following this, by the general election, when the department had to withdraw draft legislation; and finally by limitations to lay it before Parliament.

Many developers who were expecting and relying on the policy changes therefore delayed projects, and following February's news we are now expecting a significant increase in deployment and tariff guarantees applications.

So far, biomass boilers and plants have been the dominant technology within the scheme.

However, since 2015, biomethane deployment has accelerated, and in Q4 2017 produced 36 per cent of the generated heat within the scheme. Biomass generated 54 per cent of the heat within the same period.

Going forward, the share of generated heat produced by biomethane plants is only expected to increase, as the biomass tariff has been reduced for systems under 1MW. Some biomass companies are also expected to leave the sector, with the drying of wood fuels becoming ineligible.



AD

Time to move forward for anaerobic digestion

Dr Kiara Zennaro, REA Head of Biogas, provides the latest policy update on AD

To our great relief, the RHI regulations have finally been laid before Parliament, which my colleague Frank discusses in more detail (left). Sadly, though, projects will only be able to secure the new tariffs if they can commission or start biomethane injection by 31 January 2020, which in practice means once again developers will have to run a race to be able to complete their plants in time.

It also means we will see all the plants at the same stage of building/commissioning at the same time and then possibly nothing for a while. This is not the way we create a sustainable industry, but the long delays to the RHI regulations and the perverse way all these incentives have been structured haven't helped our cause.

Most members are not particularly concerned about the new feedstocks restrictions that will apply when the regulations come into effect: at least 50 per cent of the biogas generated must be made from feedstocks that are classed as residues or wastes. Hopefully, industry had plenty of time to get ready to meet these requirements.

More concerning, on the other hand, is the approach that Ofgem has been recently taking in relation to liquid feedstocks like glycerol. Because of the way the RHI regulations are worded, liquid feedstocks that are not classed as wastes (i.e. products/co-products or residues) are unfortunately not eligible to receive payments (and they theoretically never should have been). Only recently, however, Ofgem has started to enforce these requirements with more rigour and plants are now being told not to take any liquid feedstocks that are not eligible or they may be sanctioned. This further narrows down the feedstocks that can be accessed to feed all the plants in the pipeline.

On the electricity side of things, a consultation on the future of

Feed-in Tariffs should have been released by end of 2017, but this never materialised. The generation tariff will no longer be open to new applicants from April 2019 and it is currently not known what will happen after that.

A coalition of ten energy trade associations, including the REA, has written an open letter to the Secretary of State calling for the 'urgent publication of this long-awaited Feed-in Tariff consultation'.

Meanwhile, the government has released a number of important documents that could potentially underpin the future development of the AD sector.

The Clean Growth and Industrial Strategies were released last autumn, and the 25 Year Environment Plan followed in January this year. Overall, there are

some positive commitments in the three documents, but they remain vague, with little detail about how they wish to achieve the goals they establish. We hope to see firm policies underpinning our sector in both the Bioeconomy Strategy (BEIS) and Resources and Waste Strategy (Defra), currently being developed by their respective departments and due by the end of 2018.

A significant emphasis on the need to restore our soils and abate carbon emissions from the agricultural sector also sounds promising (what could meet these objectives better than AD?) but there is no clear or explicit recognition of this technology in either the Clean Growth or the Industrial Strategy, nor in the Environment Plan. We shall lobby and see! Stay tuned for the next update.



Growth for investors

There has been good news for investors in the UK AD market.

Foresight Group explains how to finance AD plants and grow organisations



The anaerobic digestion (AD) industry holds a strategically important position in both the UK waste management and agricultural sectors. The market is constantly evolving to meet the needs and challenges of today. Nigel Aitchison, Partner at Foresight Group, a leading infrastructure and private equity investment manager, discusses what it takes to finance AD plants successfully in the current marketplace and how Foresight plans to continue investing in greenfield and operational assets worldwide.

“At Foresight, we have been an early-mover in acknowledging the compelling investment proposition presented by the combination of biomass/waste processing capacity with subsidy-backed RPI-linked revenues. Having made investments into 20 AD projects, from a total of more than 40 waste and bioenergy projects generating 137MW of renewable energy, we recognise the contribution AD can and does make towards the UK’s climate change targets.”

Managing both institutional and retail capital, Foresight has established a leading position within the UK AD market, with AD plant sizes ranging from 0.2MW up to 3.5MW.

To date, Foresight’s AD investments have primarily been in greenfield projects, where the construction and accreditation risks have been appropriately contracted for and managed. However, in a maturing

market with lower UK subsidy levels available for new plants, Foresight is increasingly applying its AD expertise towards secondary acquisitions of operational assets.

Foresight’s recent acquisitions in partnership with Material Change, and its parent company Heathpatch, illustrates the market’s evolution towards secondary growth and aggregation. The transaction saw Foresight acquire two large-scale plants and seven composting sites located across East Anglia and the East Midlands. “These additional investments are part of Foresight’s wider AD aggregation strategy and mean that we now boast a waste and biomass processing capacity of more than two million tonnes per annum,” says Aitchison.

As part of the deal, Material Change entered into long-term maintenance service contracts, digestate offtake contracts and feedstock supply contracts. The opportunity to lock in the cost-base of AD plants with an element of performance protection over the long term with experienced credit-worthy counterparties in this way is a rarity in the market which has been very challenging for technology and O&M providers over recent years. Accurate analysis of the balance between merchant and contracted cash flows in projects is critical.

“At Foresight, we apply our deep understanding of this dynamic to match projects to the risk-reward appetite of our various retail and institutional

funds. This risk management approach means that we are able to successfully compete in the secondary market for AD plants with a broad range of risk-reward profiles”.

A key factor within this sector is employing specialists with expertise in different areas, in addition to finance professionals. Members of Foresight’s investment and portfolio teams have previously worked as project developers, lawyers, technical consultants or operators. This enables Foresight to carry out commercial, technical, valuation, deal structuring and corporate finance work. But working with the right advisers is also crucial to success and adviser input undoubtedly played a pivotal role in the Material Change acquisitions.

“In future, we plan to grow our UK portfolio and export our extensive experience to acquire operational and develop/fund greenfield AD assets globally. The AD market offers attractive opportunities to an investor base seeking long-term stable cash flows with a return premium over core infrastructure.

“Our expertise lies in matching capital to the risk profile of individual assets, building portfolios and managing them actively to ensure optimal performance. At times this can mean ‘getting your hands dirty’ either literally or metaphorically, and we’re happy to do either!”

For more information visit:
www.foresightgroup.eu

The table never lies

A lack of progress on the UK's municipal recycling rate is popular knowledge, but what about organics recycling? **Rob Cole** finds out how councils compare

It is no secret that the UK's recycling rate has flatlined somewhat in recent years. With the UK's recycling rate only increasing by 0.4 per cent between 2012 and 2015 (from 43.9 per cent to 44.3 per cent), the prospect of reaching the EU's mandatory 50 per cent recycling rate target for 2020 looks but a pipedream unless some serious gains can be found. We have seriously taken our eye off the ball.

But, of course, this is a game of two halves and there are routes we can take to push recycling rates up. One of the approaches mooted as a possible way to kickstart the UK's stagnating recycling rates is the separate collection of food waste and a concerted effort to increase organics recycling and the composting rate.

With the Waste and Resources Action Programme (WRAP) estimating that around 10 million tonnes of food waste is produced every year across UK households, hospitality and service, food manufacture, retail and wholesale sectors, 60 per cent of which is said to be 'avoidable', targeting food waste would be a fruitful road to pursue in the drive to increase recycling rates, with only 11 per cent of total food waste collected in 2015. And with 70 per cent of all food waste coming from households, separate collections of food waste at the kerbside would achieve an increase.

Organics Recycling takes a look at how UK local authorities stack up in the organics recycling league table. All figures are for household recycling rates across the 2015/16 and 2016/17 financial years, apart from for Scotland, where the figures are for the 2015 and 2016 calendar years.

At first glance, the UK's performance on organics recycling, at least in terms of collection of organic waste by local authorities, doesn't appear to be inadequate in terms of coverage, with 96 per cent of UK local authorities offering some form of organics waste collection service, encompassing garden, food and card waste. Individually, all nations are above 80 per cent, with Wales ahead at 100 per cent, England on 97 per cent, and Northern Ireland and Scotland at 82 and 81 per cent respectively.

The discrepancy in performance between the nations becomes apparent when those figures are disaggregated to look at local authorities offering separate food waste collections. Wales remains the benchmark, with 100 per cent of local authorities offering a separate food waste collection, with Scotland (56 per cent), England (33 per cent) and Northern Ireland (nine per cent) trailing in its wake. However, Scotland and Northern Ireland also have a high number of councils offering collections of food waste mixed with garden waste or both scheme types, meaning nearly all local authorities offer some form of food waste collection, whereas in England, 50 per cent of local authorities offer no form of food waste collection at all.

England's organics recycling rate increased from 18 per cent in 2015/16 to 18.6 per cent for 2016/17, however, there is a wide variation between in performance between local authorities, especially in metropolitan areas. Seven of the bottom ten local authorities in terms of green/organics recycling rates are found in London, despite 23 of the 33 London Boroughs offering separate food waste collections.

Part of the reason for this is that London has a very high density of housing stock, with many residents living in flats, from which it is harder to collect food waste - 16 Boroughs do not collect food waste from flats. The London Assembly's Environment Committee has identified the lack of recycling services for flats as holding back the capital's recycling rate of 33 per cent, which is actually one per cent lower than its rate for 2012/13.

Those in England cognisant of the need to greatly improve the local authority collection of organic waste, and food waste in particular, will have been disappointed by the recent publication of the government's 25 Year Environment Plan in January. Despite a reaffirmation of the government's commitment to the UN Sustainable Development Goal to halve food waste by 2030, a goal to which all 193 UN member states are signed up to, the Plan included no provisions or guarantees for a rollout of mandatory separate food waste collections across England. It is doubtful that the target can be achieved without such a provision.

In Wales, the outlook is brighter, with the organics recycling rate increasing from 18 per cent in 2015/16 to 18.7 per cent in 2016/17. With the separate collection of food waste recommended as part of the Welsh Government's Collections Blueprint in 2011, which recommends uniform service profile



involving the collection of a common set of materials and is part of the Welsh Government's overarching waste strategy, 'Towards Zero Waste', all Welsh authorities have made strides in their organics recycling rate, with 10 of the 22 Welsh authorities achieving organics recycling rates of more than 20 per cent.

Scotland saw a similar increase in its organics recycling rate, up 0.6 per cent from 15.7 per cent in 2015 to 16.3 per cent in 2016. All Scottish councils are obliged to provide some form of food or organic waste collection, with the Waste (Scotland) Regulations 2012 stipulating that food waste must be presented separately for collection at kerbside, although some flexibility may be demonstrated where this is not immediately practicable, in which case food waste may be presented mixed with other biodegradable organic or garden waste. This applied to local authority collections from 1 January 2016.

Scotland's biggest improver, Midlothian Council, which scored a 4.6 per cent increase in its organics recycling rate, puts its improvement down to the introduction of a weekly kerbside food waste collection at the end of 2015.

Northern Ireland has also taken a proactive approach to food waste, banning separately collected food waste from landfill from the start of 2015, although only nine per cent of councils actually offer a separate food waste collection, rather running mixed collections of food and garden waste,

which all authorities are obliged to provide.

In terms of individual local authority performers, Rochford District Council in Essex registered the highest organics recycling rate in the UK, with 37.9 per cent. Separate food and organics waste collections were rolled out from 2008, when the council began its service contract with Sita UK, which have propelled the council's overall recycling rate from a lowly 20 per cent in 2008 to 63.9 per cent in 2016/17.

The biggest improver in the UK was Ards & North Down in Northern Ireland, registering an increase in household generated organics waste collected of 7.5 per cent, which can be attributed to the council's implementation of a scheme that bans food waste from being disposed of in black bins in 2016, alongside an extension of the organic waste collection in the area, which sees food and garden waste collected together every two weeks. The council also runs a Bin-Ovation mobile app that has a library of 300 household items with information on how and where to dispose of them and reminds app users of their bin collection timetable as well as any changes to service.

Increasing capture of organic waste, in particular food waste, is paramount to increasing the UK's stagnant overall recycling rate. While Scotland, Wales and Northern Ireland appear to be on a steady trajectory of improvement and increased coverage, it seems England has some way to go to catch up with its regional partners.

The tables below show local authority organics recycling rates for the last two years on record, the difference between the two and the overall household recycling rate for each authority

Scotland	2015 (%)	2016 (%)	Change	Household recycling rate (%)
Perth and Kinross	26.9	27.9	+1%	54.7
Moray	25.4	25.6	+0.2%	59.1
Angus	26.3	24.2	-2.1%	56.7
Stirling	25	24	-1%	54.7
Midlothian	18.8	23.4	+4.6%	53.5
East Dunbartonshire	22.7	22.8	+0.1%	48.5
East Lothian	20.6	22.3	+1.7%	51.8
East Renfrewshire	21.7	22.2	+0.5%	60.8
Fife	20.5	21.5	+1%	54.7
Clackmannanshire	20.4	21.2	+0.8%	56.5
North Ayrshire	19.5	20	+0.5%	55.3
West Lothian	20.7	20	-0.7%	48.5
Falkirk	21.6	19.6	-2%	51.3
East Ayrshire	19.3	19.2	-0.1%	53.3
City of Edinburgh	16.5	18.5	+2%	44.6

Inverclyde	18.5	18.3	-0.2%	53.4
South Ayrshire	18.6	17.7	-0.9%	49.9
Aberdeen City	16.6	17.6	+1%	39
Aberdeenshire	16.3	16.4	+0.1%	43.5
Renfrewshire	14.8	14.6	0.2%	48.5
West Dunbartonshire	14.2	14.5	+0.3%	48.5
North Lanarkshire	14	13.8	-0.2%	41.1
South Lanarkshire	9.2	13.3	+4.1%	53
Dundee City	12.6	12.9	+0.3%	33.6
Highland	12.4	11.8	0.6%	44.5
Scottish Borders	8	10.2	+2.2%	39
Dumfries and Galloway	8	8.2	+0.2%	26.7
Glasgow City	6.4	7.1	+0.7%	25.2
Argyll and Bute	5.2	4.1	-1.1%	33.9
Na h-Eileanan Siar	0	0	N/A	24.1
Orkney Islands	0	0	N/A	19.4
Shetland Islands	0	0	N/A	7.9

Wales	15/16 (%)	16/17 (%)	Change	Household recycling rate (%)
Isle of Anglesey	27.5	28.9	+1.4%	51.3
Denbighshire	23.8	24.1	+0.3%	62.7
Powys	21.2	23.9	+2.7%	67.8
Monmouthshire	22.3	22.6	+0.3%	63
Wrexham	19.1	22.4	+3.3%	54
Vale of Glamorgan	22.5	21.8	-0.7%	55.1
Conwy	18.8	21.7	+2.9%	58
Gwynedd	19.7	21.1	+1.4%	54.5
Pembrokeshire	20.4	20.8	+0.4%	51.1
Flintshire	22.9	20.6	-2.3%	53

Carmarthenshire	17.7	17.2	-0.5%	62.5
Cardiff	16.4	17.6	+1.2%	57.2
Swansea	16.2	17	+0.8%	59.4
Caerphilly	16.5	16.9	+0.4%	65.6
Neath Port Talbot	19.4	16.8	-2.6%	50.3
Torfaen	15.1	16.7	+1.6%	50.8
Newport	14.8	16.4	+1.6%	47.5
Ceredigion	16.6	16	-0.6%	45.1
Merthyr Tydfil	12.6	15	+2.4%	53.2
Rhondda Cynon Taff	13.6	14.2	+0.6%	57.1
Bridgend	12.8	13.7	+0.9%	47.4
Blaenau Gwent	11.2	12.6	+1.4%	39.1

Northern Ireland	15/16 (%)	16/17 (%)	Change	Household recycling rate (%)
Ards & North Down	22.9	30.4	+7.5%	49.1
Mid Ulster	26.9	29.5	+2.6%	51.6
Antrim & Newtownabbey	26.3	27.5	+1.2%	47.5
Armagh City, Banbridge & Craigavon	24.5	25.4	+0.9%	48.8
Lisburn & Castlereagh	24.8	25.4	+0.6%	40.9

Mid & East Antrim	25	25.3	+0.3%	45.2
Causeway Coast & Glens	16.8	16.9	+0.1%	42.1
Newry, Mourne & Down	15.2	16.7	+1.5%	40.1
Fermagh & Omagh	16.5	16.7	+0.2%	45.2
Belfast	14.5	14.2	-0.3%	38.9
Derry City & Strabane	7.9	10	+2.1%	40.4

England Top 10	15/16 (%)	16/17 (%)	Change	Household recycling rate (%)
Rochford	38.9	37.9	-1%	63.9
Trafford	35.9	37.3	+1.4%	61.3
South Northamptonshire	33.4	36.5	+3.1%	61.4
Cotswold	34.6	36.5	+1.9%	59.6
Stratford-on-Avon	35.7	36.4	+0.7%	61.3
Staffordshire Moorlands	32.7	36	+3.3%	57.4
Stockport	35	35.5	+0.5%	59
West Oxfordshire	33	35.1	+2.1%	63.4
Cherwell	32	33.6	+1.6%	56.5
Daventry	31.9	33.6	+1.7%	51.8

England Bottom 10	15/16 (%)	16/17 (%)	Change	Household recycling rate (%)
Westminster	0.4	0.04	-0.36%	17.4
Gosport	1.4	1.3	-0.1%	22
Tower Hamlets	1.8	1.6	-0.2%	27.6
Hammersmith and Fulham	1.2	1.8	+0.6%	23.2
Bassetlaw	1.3	1.9	+0.6%	21.1
Wandsworth	1.1	1.9	+0.8%	21.9
Redditch	1.9	2.2	+0.3%	31
Kensington and Chelsea	2.2	2.4	+0.2%	25.7
Lewisham	1	2.4	+1.4%	17.7
Newham	2.7	2.4	-0.3%	14.1

The potential impacts of Brexit remains a hotly debated topic across all industries, and **Organics Recycling** asked three experts how they feel the organics sector will fare

Percy Foster, CEO, Cré (Composting and Anaerobic Digestion Association of Ireland)



There are a lot of unknowns. In a recent Department of Agriculture meeting on the Animal By-Products

Regulations, Brexit was discussed.

Apparently, if there is a hard border between Northern Ireland (NI) and Ireland, NI farmers would not be allowed to spread unprocessed manures in Ireland. In addition, if

compost or digestate was to be sold in either direction over the border, both governments would have to have a bilateral agreement and movement of material would be done using ABP health certificates. So really, the sale of compost and digestate is going to be made more difficult and discourage the free movement of products.

In the short term, I don't expect quality standards of compost and digestate in NI to diverge much from Ireland. However, in the longer term, I would have concerns that quality

standards won't remain aligned with Irish and European standards. If quality standards become less strict, it could hurt NI businesses trying to sell compost and digestate in Ireland as Irish users may not accept the quality of material.

Around 20 per cent of food waste collected in Ireland is sent for processing in NI. How Brexit will affect the movement of this food waste under the EU Transfrontier Shipment Regulations and whether additional duties will be imposed is unknown.

Peter Jones, Principle Consultant, Eunomia Research & Consulting



The puzzle of Brexit remains that no-one yet knows what it means. It seems that, if there is a transition period, we will

continue to implement EU laws until at least 2021. The UK government must decide whether, after that date, it wants to diverge from EU law or have frictionless trade and borders. It can't have both – and the issues a

hard border raises, perhaps most of all for Northern Ireland and Gibraltar, lead some to doubt whether regulatory divergence is really feasible.

While the government may not be saying it loudly, for the next few years, and perhaps beyond, Brexit means following EU law – and therefore adopting the Circular Economy Package. Unless the text on biowaste is amended through negotiations, that means the UK will be required to 'ensure the separate collection of biowaste where technically,

environmentally and economically practicable'. The impact on the UK organics sector depends on how government implements this rule.

When the same language was put into UK law as the test for whether dry recycling had to be collected in separate streams, it resulted in a lot of assessments being carried out and little or no practical change. If the organics sector can push for a more effective law, it could lead to a step change in both commercial and household food waste collections.

David Newman, Managing Director, BBIA



The UK's obligations under the Climate Change Treaty require a reduction in greenhouse gas emissions

by 2050 to 160Mt CO₂e compared to emissions in 2013 of circa 600Mt. We have a long way to go, and 2050 is only 30 years away.

Whatever happens with Brexit, and we have a poor idea today of what the terms and conditions of leaving the EU

will be, the government has committed to respecting the carbon budget. But we do not yet have the policies in place to achieve these cuts.

Separately collecting food waste, and sending this to AD and composting, can make a major contribution to achieving those cuts. Indeed, from 1990 to 2015, the waste sector as a whole contributed some 70Mt CO₂e in cuts, mainly due to diverting organic waste from landfill. Whilst in Scotland, Wales and Northern Ireland obligatory food waste collection have become policy, in England we are still

sending perhaps five million tonnes of food waste to landfill via MBT and to incineration, producing CO₂.

I believe the policy landscape on this will change very quickly. Not only will collecting food waste make recycling of dry waste simpler, it will help achieve GHG emissions targets, deliver digestate and compost to replenish organic carbon loss in our soils, and reduce disposal through landfill and incineration. Brexit should not be an issue in this debate and the government should take the bull by the horns and get on with it.

Jakob Rindegren, Recycling Policy Adviser, Environmental Services Association



First of all, we clearly don't know what Brexit will look like, so it is difficult to say anything with certainty about the

impact. There is also considerably less UK-EU trade of biowastes compared to dry recyclables or RDF/SRF, for example, which suggests less of an impact from potential trade barriers. However, there are at least three important areas to consider.

Firstly, legislative changes. The EU Circular Economy Package includes a number of changes on biowaste, in particular the requirement for separate biowaste collection by the end of 2023. It remains to be seen whether we adopt the package or not and what, if anything, the UK government proposes on food waste collections in the Waste & Resources Strategy, but Brexit could mean not adopting mandatory separate collection.

Secondly, collaboration with European partners. The EU is more than just institutions and law-making, with thousands of expert

meetings taking place every year to share knowledge, with significant EU funding for cross-EU research projects. While the UK will hopefully continue to be involved in many of these forums and projects, EU funding cuts and projects linked to EU policy are likely to mean UK experts will be involved less than at the moment.

Finally, the strength of the economy must be considered. It goes without saying that whether Brexit leads to an economic downturn or boost will certainly impact on businesses, including within the organics industry.

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A demand for composting

Eilidh Brunton, Vegware's Group Recycling Consultant, calls for composters to join forces to help foodservice compost more waste



The single-use plastics debate has created an unprecedented demand for composting.

Now aware of the pitfalls of conventional

disposables, major chains - and entire universities and councils - want to switch to compostable disposables, and compost them too.

As you read this, there are industrial composting facilities all around the UK processing used Vegware. Since 2012, our environmental team has been working with composters to set up trials to make sure it works in practice. We work with many UK composting facilities and some AD plants. But our foodservice clients are demanding composting all over the UK, so we want to partner with more facilities.

What's the point for composters?

With the current interest in composting, this is an opportunity to increase volumes. It's also a chance to raise the profile of composting, and highlight the importance of compost to UK soil health and our farming's resilience. In addition, composters could soon start earning an income for processing compostable packaging. Under the current Packaging Recovery Note (PRN) system, companies recycling plastic bags currently earn up to £65/tonne. The packaging industry and government are keen to reform PRNs, and composting would be included in the reformed system.

Certified compostable disposables are an allowable input into PAS100 compost. Vegware holds EN13432-compliant certification for products in their finished form, not just for the unformed sheets of material. We replace conventional plastics with compostable biopolymers such as PLA to make clear cups, hot cup lids, and cutlery. We also have many fibre-based products such as coffee cups, paper

bags, napkins and clamshells made from sugarcane fibre. Since leftovers stay in the compostable disposables, it captures food waste that would otherwise be lost to the system.

How do we reduce contamination?

As an active member of the REA ORG, we know that plastic contamination is a major concern for composters. The last thing we want is to contaminate compost, so we engage actively with catering sites to educate all bin users. We carry out catering staff training, make bespoke bin signage, and run engagement days to educate all bin users. Most disposables suppliers sell plastic as well as compostables, which makes it all too easy for mistakes to arise, contaminating the compost bin. At Vegware, we only supply compostable disposables made from plant-based materials, not plastic. We encourage clients to line bins with our biobags, avoiding needless plastic contamination.

Close the loop

In many regions, used Vegware and food waste is accepted by collectors already delivering organic waste to composting facilities. But responding

to demand, we have now also set up our own composting collection, called Close the Loop. Launched in 2017 to serve Scotland, we deliver to GP Green Recycling near Glasgow. We are extending Close the Loop to regions of England in 2018, starting with Bristol, where our waste will be composted at Rose Hill Recycling.

Campaigning for composting

We are promoting the importance of composting through our films and communications. We have even developed a virtual reality film to take people on a 360° journey, experiencing the inside of a composting facility. This has been a huge hit at our engagement days and trade shows.

Composting keeps resources here in the UK, unlike much UK plastic and paper which is exported far overseas with no guarantee of it actually being recycled. UK soils are in crisis, but the solution is in our hands.

**Contact Vegware to arrange a composting trial:
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Throw a better party

Food waste may have taken a back seat to plastic in the public eye of late, but food waste campaigner **Tristram Stuart** isn't giving up the fight



Tristram Stuart

Tristram Stuart has been at the forefront of the fight against food waste for the better part of a decade, shining a light on the scale of the global food waste problem with his international prize-winning book, *Waste: Uncovering the Global Food Scandal*, published in 2009 and revealing that Western countries waste up to half of all food produced.

On the back of the book's success, Stuart went on to found the food waste charity Feedback and the award-winning beer company Toast Ale, which makes beer from some of the 44 per cent of bread that is wasted in the UK every year, spearheading the drive to deal with our food waste problem.

His work has been something of a magnet for accolades in recent years, all of which Stuart takes in his stride with a laconic ease: his reaction to recently placing third in *Resource*

magazine's Hot 100 power list of influencers in the waste and resources world for 2018, making him the highest ranking figure dealing with organic waste? "I think it is the closest I will ever get to God... also known as Sir David Attenborough. I will definitely take that as one of my life's highest attainments thus far."

Tongue firmly in cheek there. While unable to displace the broadcaster who has become synonymous with plastic waste and a seemingly unwitting cornerstone of government waste policy, Stuart's third place position is more than warranted following another year of tireless campaigning on the food waste front.

I spoke with Stuart over the phone from a remote island in Orkney, where he has been based since April of last year in order to gain a bit of headspace and concoct new ideas for both Feedback and Toast Ale, leaving the

day-to-day running of Feedback to the "brilliant" Carina Millstone, the newly appointed Executive Director. But while he may have moved to Britain's geographical fringes, Stuart has shown no sign of stepping back from the frontline in the battle to put an end to our throwaway attitude to food waste.

Alongside work on a number of new campaigns set to go live later in the year, fundraising to allow Feedback to continue its programmatic work, and a number of 'Feeding the 5,000' events (the mass event where 5,000 people are fed with leftover food, the first of which took place in Trafalgar Square in 2009) across the world, in places as far-flung as Austin in Texas and Sao Paulo in Brazil, Feedback has been developing its model for a truly regenerative food system, led by Millstone.

Stuart recounts: "Carina has revised and launched Feedback's new strategic framework, full of intellectual rigour

and great ideas. She has put forward ideas on how to make the food system a circular system and not just talking in this narrow way about circularity.

“The basic economy of the food system is linear: we put in industrial inputs, fertiliser and fuel and all the rest of it and none of what comes off the farm goes back to it. The whole system is linear, and it’s really about implementing circularity at every stage, and maximising the use of any outputs that happen to come out of that system.”

Meanwhile, Toast Ale continues to go from strength to strength, now brewing in six countries where it partners with a local charity which receives five per cent of the pre-profit revenue. Stuart has been keen to expand the enterprise, raising over £1 million this year and devising a new investment structure to push the company forwards called ‘equity for good’, which allows investors to make capital gains on their investment in Toast Ale but obliges them to reinvest that money in other organisations, either for-profit or not-for-profit, that engage in planet-saving work. The aim is to make Toast Ale profitable (which Stuart envisages happening fairly soon) in order to be able to pour 100 per cent of the profits into Feedback.

Indeed, Toast Ale is a great example of a theme that seems to run through most of Stuart’s work and his approach to food waste: fun. Whether getting out and making the best of leftovers with 5,000 other like-minded people or kicking back with some bread beer, Stuart shows that the best way to win people over and take them with you is to “upcycle” legitimate anger over food waste into something people want to be part of. “What you have to try and do is try to throw a better party than the people that are destroying the world. Because you then don’t even need to be the person that brings people round the table, you’ve made that space that cool, fun, enjoyable, community-building, meaningful place to be.”

And it seems that big-hitters are jumping on board. The past year has been replete with developments that surely provide succour to those who have been working tirelessly to push food waste to the top of the agenda.

An agreement in principle was reached last autumn between major UK retailers on a common methodology for

measuring food waste, with plans and to report these figures transparently, something Stuart sees as a “big milestone”, while Tesco announced a series of partnership agreements with 24 of its largest food suppliers obliging them to publish food waste data from their own operations and work towards the UN’s Sustainable Development Goal (SDG) to halve food waste by 2030.

“What you have to try and do is throw a better party than the people that are destroying the world”

The Courtauld Commitment 2025, a voluntary programme launched in 2016 by the Waste and Resources Action Programme (WRAP), which aims to reduce food waste by 20 per cent by 2025, gained 24 more signatories, while a number of retailers expanded their surplus food redistribution programmes, sending an even greater amount of unsold food to charities.

Beyond that, The Consumer Goods Forum (CFG) and Champions 12.3 (a coalition of business leaders from across the food industry working to achieve the SDG 12.3 to halve food waste by 2030) issued a call to action to simplify and standardise food date labels (‘Best before’ and ‘Use by’) worldwide by 2020, something Stuart knows all too well, having been part of the drive to get the US food industry to voluntarily standardise its incoherent labeling system over the last two years.

However, it isn’t time for retailers to pat themselves on the back just yet (although Stuart concedes that “little pats” combined with “some kicks in the ass from time to time” may be appropriate). What is really needed, Stuart states, is systemic change based on a regulatory framework, without which “you haven’t prevented the bad stuff from going on, you’ve just cleansed individual companies of their responsibility for this bad stuff.”

Moreover, despite gains and gathering momentum behind action on food waste, the imperative of food waste reduction has been overshadowed somewhat by the unprecedented attention given to plastic waste in recent months ignited, or at least magnified, by Stuart’s beloved Sir David Attenborough.

While it is undoubtedly a waste stream that requires immediate attention due to its ubiquity and all-pervading nature (as we have seen within the pages of this magazine in the case of microplastics in soils), is there a risk that too much focus on plastics could see us take our eye off the ball in regard to food waste?

With the long-awaited 25 Year Environment Plan, launched by Prime Minister Theresa May on 11 January, taking the opportunity to capitalise on the attention on plastics by making it the centrepiece of the Plan, food waste appeared to take a back seat, a turn of events Stuart says the world has no time for: “There is a lot of principle in there but little of the kind of robust strategy with specific policies and timelines and how it’s actually going to work. This is not something we can sit back and relax about, this is not something we can continue to say ‘oh yes, we’re going to have a look at that’.

“The world is up against it; we need governments to make robust, decisive, impactful policies right now, not maybe look at it over the next five years.”

Food waste has been used, however, in arguments by packaging producers seeking to defend plastic against the tide of public opinion, extolling its virtues as a method of preventing food waste. This is a position that Stuart doesn’t entirely hold truck with: “Whilst I don’t actually dispute that sliced fresh mango from Kenya will find it difficult to get its way to a shop in the UK unless it has some form of packaging, this presupposes that we need to do that. And in particular when packaged products are being produced and sold in parts of the world like in Africa where there isn’t always an adequate waste collection and management system, the packaging companies have completely overstated the environmental benefit of plastic packaging and ignored the massive polluting potential of their business models for parts of the world that cannot cope with plastic waste.”

As our interview draws to a close, Stuart has to make a quick getaway to look after his child; he may have relocated to more peaceful climes, but his life remains as hectic as ever. No doubt it will remain so if the year ahead is anything like the one just finished. Thankfully, in Stuart, the food waste movement has a figure more than able to keep his eyes on the prize.



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Strategic Review of Charges: An overview of members' views...

In November, the Environment Agency proposed changes to the cost of permits and business charges as part of its SRoC. **Jeremy Jacobs** describes the industry reaction

The recent Strategic Review of Charges (SRoC), which was out for consultation towards the end of last year, has certainly rattled the cages of industry and raised significant concern with respect to the proposed increase in charges.

The REA does not think the Environment Agency (EA) should be able to charge discretionary fees as proposed, as this has the potential to be abused by officers who will be target and revenue driven and could cause absolute chaos. There is a legal argument that a government agency does not have the right to do this as a matter of public law. You will be aware that the Health and Safety Executive (HSE) already implements a Fee for Intervention (FFI) policy. In this case it is a very different scenario, as the HSE does not charge an annual subsistence fee as the EA does.

Industry seeks a fair and consistent approach to regulation that is transparent, and organisations pay their fees willingly for the EA to regulate their sites. Operators should be rewarded or penalised based on their performance through the year-on-year fees (subsistence). If the fees are set at an appropriate level, then the time and materials costs should be covered within this fee structure in the same manner in which a business sets out its stall in terms of calculating its costs for the provision of goods or services.

As a sector, we accept that an increase in fees is necessary, given

that there has been no change to fees for seven years. What is not acceptable is expecting

“The REA does not think the EA should be able to charge discretionary fees as proposed, as this has the potential to be abused by officers who will be target and revenue driven and could cause absolute chaos in the sector if it is introduced”

industry to face an uncertain charging regime that fails to allow sufficient time for industry to adapt to any changes, which may be substantial if implemented. Budgets are set months ahead and this does not allow sufficient transition time.

If these changes are implemented the industry will expect to see that the level of service is greatly improved. Many of the actions in respect to the spreading of resources to land are very time sensitive. Too often, decisions take far too long to be taken resulting in lost opportunity and revenue. It is imperative that as part of this consultation a performance metric is introduced that applies punitive sanctions on the regulator for failing to deliver its service to an agreed timetable.

The proposed consultancy fee of £100 per hour seems to be fanciful and is significantly higher than the industry norm for qualified consultants and provides plenty of opportunity for the regulator to charge disproportionately high fees for their routine work.

There may be a case for those brave enough and with deep enough pockets to challenge any changes in court and I hope that industry will have further opportunity to discuss any changes, as it is not sustainable for industry in its current form. We await the outcome of the consultation and will let you know as soon as this is available.



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The next generation

Lesley Haynes from Don & Low and Ron Wheatley from the James Hutton Institute report on recent trials for a new type of textile to cover windrows

A 2014 research study conducted by the James Hutton Institute (JHI) in partnership with Don & Low Ltd highlighted the need for lightweight, breathable compost covers on open windrow installations.

The study identified the potential benefits of using breathable compost covers, particularly where there were odour complaints regarding open windrow sites close to urbanisation. It pointed out shortcomings associated with using more traditional heavier weight covers and emphasised the need for lightweight, breathable covers for open windrow installations.

It also highlighted that there were currently no regulatory requirements for the use of covers on open windrows, but noted that the use of such covers could substantially increase with the implementation, in late 2018, of the Best Available Technique Reference Document (BREF) associated with the Industrial Emissions Directive. Semi-permeable windrow covers are listed in the BREF as an option for reducing diffuse emissions, so although covers are not extensively used at this time, it is believed that demand will grow for breathable, easy to handle, durable and economically viable covers.

There are several compost cover manufacturers producing covers from UV stabilised polypropylene and microporous fabrics. However, while these covers are vapour permeable they also act as air barriers, which can limit beneficial performance and restrict use on open windrows

Using the information from the research, Don & Low developed a new fabric. This is a lightweight (150g/m²) air and vapour permeable polypropylene nonwoven textile, with enhanced chemical and UV resistance – Windrow TX®. The material is able to shed water and offers a physical barrier to the release of odours, dust and bioaerosols whilst still allowing the windrow underneath to ‘breathe.’

To determine the effectiveness of the

newly developed compost cover fabric, a comprehensive trial was carried out from March 2016 to February 2017 at the Forth Resource Management (FRM) composting site in Braehead, Edinburgh. The site has 10 large windrows and processes approximately 25,000 tonnes of green waste per annum. FRM turns green waste, mainly collected from Edinburgh, Midlothian and West Lothian areas of Scotland, into compost that is sold to gardeners, landscapers and farmers.

“A need was identified for a lighter-weight, cost effective solution for covering open windrows to control odours and moisture content during processing – particularly at sites close to urbanisation”

FRM had just been advised by SEPA to cover their windrows due to complaints of odour. They were using three-layer laminated breathable textile covers manufactured with an integral net, but these weighed about 200kg each and were difficult to manoeuvre. This made FRM an ideal partner to use for the trial. The results of the trial are as follows:

- Covers made from Windrow TX® significantly decrease the amount of odour released from the windrows,

which results in no substantiated complaints with SEPA during the trial.

- The lightweight fabric allowed for easier manoeuvrability.
- The breathable nonwoven fabric protected the windrows from the drying power of the wind and the sun and prevented waterlogging from rain and snow.
- There was a reduction in the amount of leachate, while at the same time allowing the composting process to progress.
- There was a reduction in insect and bird activity.
- FRM noticed a reduced time for the pre-sanitisation period and a more even temperature distribution along the windrows during sanitisation. The insulating layer was thinner on covered windrows and there was an improved yield, particularly of finer grade compost.
- There was minimal degradation of the polypropylene nonwoven textile either from UV or from the composting process. The fabric lifetime is two years or more depending on site usage conditions, geographical location and exposure. The fabric’s durability is still being monitored.

Tommy Dale, FRM Managing Director, said: “If it hadn’t been for the covers, we would have found it difficult to keep composting substantial volumes at the Braehead site.” It’s extremely important to consider all of the above factors before investing in covers for your windrow site.



Don & Low’s new compost cover textile on trial in Scotland



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Head of Certification and Scheme Manager at REAL, **Justyna Staff** and **Georgia Phetmanh**, provide updates on the CCS and BCS

Compost Certification Scheme



PAS 100 revision

The British Standards Institution (BSI) opened a public consultation on the draft version of BSI PAS 100:2018, which was submitted to BSI last year. The public consultation ended on 12 January and approximately 150 comments were provided directly to BSI. With the Steering Group meeting scheduled for 7 March, REAL set up several workshops and meetings in the interim for a panel of individuals (the Review Panel) to discuss some of the more contentious issues that arose during the initial stakeholder consultation phase of the revision process and public consultation.

The Review Panel was comprised of any individual who was interested in participating in these discussions, including one on whether to introduce a market-based approach to the standard. The role of REAL was to facilitate discussions during these events and the aim for the Review Panel was to achieve general consensus on proposals. Following this, the PAS 100 revision Project Team will now be drafting another version of the new standard for the Steering Group. The Steering Group will be responsible for signing off the proposals agreed by the Review Panel and the new version of PAS 100 is due to be published in spring 2018. More information about the revision can be found on our website: www.qualitycompost.org.uk/standards/PAS100.

Revised version of laboratory terms and conditions

The Appointed Laboratories must comply with a set of Terms & Conditions (T&Cs) to undertake PAS 100 testing for the CCS. These

were first issued in 2015 and the laboratories have since been audited annually against these T&Cs. In 2017, we reviewed the first version in consultation with the Appointed Laboratories and Independent Laboratory Auditor. The laboratories and auditor provided comments on aspects of the T&Cs/auditing regime that they considered could be revised/improved. We recognised that some of the proposed changes would need to take place over a longer timescale, so we addressed a portion of the comments in 2017 and set up a Technical/Testing Working Group to discuss some of the more multifaceted proposals. A revised version of the T&Cs was issued in January 2018, taking into consideration these comments, and new requirements were introduced based on issues raised previously at audits. We will continue to review and revise the laboratory T&Cs in 2018 with a view to issue the next version in 2019.

CCS Newsletter

We produced our first newsletter for the CCS before Christmas, sharing some of our highlights from the year. Data collected in the CCS database showed that between January and December 2017, there had been a steady increase in the amount of input material that certified sites were processing on an annual basis, despite fluctuation in the total number of certified processes. In January, approximately 3.3 million tonnes of feedstock material were processed annually by certified sites and by November, that figure had risen to approximately 3.7 million tonnes per year.

We shared news on our plans for 2018, including working with the United Kingdom Accreditation

Service (UKAS). We are working with UKAS to develop specific accreditation for the CCS so that the certification bodies can be accredited against the scheme documents. UKAS carried out a technical review of the scheme documents providing recommendations for change so that the scheme could become suitable for accreditation. We have been reviewing their report recommendations on PAS 100 and once the next version of this standard has been published, we will continue to explore their recommendations on the other scheme documents. A representative from UKAS recently attended a site visit with us to learn more about the composting process and how the requirements of PAS 100 are implemented by composters. We are also meeting with UKAS prior to the Steering Group meeting for the revision of PAS 100.

Another project we will be focusing on in 2018 is setting up and managing a Research HUB that will support research and development (R&D) projects, enable us to keep informed of relevant technical developments in the industry and keep the scheme documents up to date. To update the scheme documents, we need evidence to support any changes and this evidence would be provided through relevant R&D projects. We are in the process of finalising the details for this Research HUB, including drafting Terms of Reference and agreeing the costs for scheme participants. To fund R&D projects, we will be charging operators an annual Research Fee and these funds will be used to support R&D projects that will benefit them as Scheme participants. We will disseminate more information about the Research HUB soon.

Biofertiliser Certification Scheme



Quality assurance scheme

Through stakeholder liaison, we have received feedback highlighting that the Biofertiliser Certification Scheme (BCS) might only be recognised as an end of waste scheme for digestate. However, BCS has also been established as a robust quality assurance scheme for digestate that also covers the anaerobic digestion process. BCS is the only independent certification scheme in the UK that provides a framework for independent assessment of conformance with the Anaerobic Digestate Quality Protocol (ADQP) and PAS 110. The ADQP sets the end of waste criteria for digestate but specifies PAS 110 as the underpinning standard. BSI PAS 110:2014 is a quality standard that covers the process from input all the way through to digestate quality. The scheme assures the quality of both the anaerobic digestion process and anaerobic digestate. It certifies that the production process is appropriate and well-managed, based on a robust quality management system, that is sourced only from permitted feedstocks, and that it has been produced in a hygienic manner. And BCS-certified digestate is widely recognised as high quality and safe by the environmental regulators. We are planning to market the BCS as both an end of waste scheme and quality assurance scheme for the anaerobic digestion process and anaerobic digestate going forward.

PAS 110 digestate analysis request form

REAL, in conjunction with the Appointed Laboratories, produced a new analysis request form for AD producers to use when sending digestate samples for PAS 110 testing for certification purposes.



The analysis request form simplifies the selection of tests and allows the laboratories to distinguish between samples sent for certification purposes and samples not sent for certification purposes, e.g. samples sent for R&D. This analysis request form will support future scheme developments in 2018, including the development of a new database and the collection of PAS 110 test reports. AD producers started using this new analysis request form from 1 January 2018.

BCS newsletter

We produced our first newsletter for the BCS before Christmas, sharing some of our highlights from the year. We expressed how pleased we are to be able to offer digestate producers a choice of three appointed certification bodies and two appointed laboratories. We are happy to be working closely with these organisations, the independent laboratory auditor and the United Kingdom Accreditation Service (UKAS). We are working with UKAS to

develop specific accreditation for the scheme so that the certification bodies can be accredited against the Scheme documents. We will be addressing their report recommendations this year.

Another project we will be focusing on in 2018 is setting up and managing a Research HUB that will support research and development (R&D) projects, enable us to keep informed of relevant technical developments in the industry and keep the scheme documents up to date. To update the scheme documents, we need evidence to support any changes and this evidence would be provided through relevant R&D projects. We are in the process of finalising the details for this Research HUB, including drafting Terms of Reference and agreeing the costs for scheme participants. To fund R&D projects, we will be charging operators an annual Research Fee and these funds will be used to support R&D projects that will benefit them as scheme participants. We will disseminate more information about the Research HUB soon.

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SUEZ Recycling and Recovery



Recycling and resource management company SUEZ serves over 12 million residents and 30,000 business customers throughout the UK. Organics Recycling spoke to **Stuart Hayward-Higham**, Technical Development Director, about our sector



Operating in over 300 locations throughout the UK - from household waste recycling centres (HWRCs) and transfer stations, to energy-from-waste, recycling, composting and secure shredding facilities - SUEZ R&R UK provides an extensive range of managed services. Within these, the company operates a number of organic waste processing facilities, from windrow composting at its old Packington landfill site in the Midlands, to in-vessel composting in Derbyshire and mechanical biological treatment (MBT) in the North East. It is currently building its first AD plant in Surrey.

"In 2016, we produced around 134,000 tonnes of compost materials from our existing facilities, but have extra capacity within these, and new capacity coming online, to double this total volume subject to suitable feedstock," explains Stuart Hayward-Higham, Technical Development Director. "Internally and externally we generally manage between 250,000 and 300,000 tonnes of organic waste per year."

In fact, SUEZ R&R UK has been going through a challenging period of transformation since 2008 to move the business from a waste to a 'resource-focused' company, as Hayward-Higham notes: "This has involved significant changes to our infrastructure, our processes and systems and our relationship with and offering to our customers. We started this journey with our 'Blueprint' strategy, which, through an investment in excess of £2 billion, has moved over 80 per

cent of our customers' waste away from landfill. Going forward, our challenges include: delivering more decentralised treatment solutions; more closed-loop solutions for our customers; and delivering the affordable transition for us and our customers in the journey from linear to circular."

He adds: "In some areas of our business we see increases in competition from illegal operations that undermine our own and other sector operators activities. Further, especially in England, we see a lack of policy as a challenge to understanding the direction of travel required by government and impairs our ability to plan and manage our own and our customers' transitions."

When asked about the farming community, Hayward-Higham comments: "The benefits of recycling organic waste were recognised by farmers well before the waste sector came into existence and, as such, we think farmers have always recognised the benefits. What has been a more challenging journey is the trust they have needed to develop in our sector regarding the quality of the compost and digestate we produce - since they will always take precaution towards the quality of the land over which they hold stewardship.

"We can see that the adoption of quality standards in the management and treatment of organic waste have increasingly made the products more consistently and transparently meet the quality required. We still need more work as a sector in the operation of plants and more importantly in helping waste producers minimise or eradicate contamination in their

organic waste streams. Trust has been hard to gain and will be easy to lose so we should not ease up on our existing activities nor our continual improvement as a sector."

Meanwhile, SUEZ's research, development and innovation activity in the field of organics has worked on new solutions to increase biogas yields in AD and to harvest chemicals such as polyphenols from organic waste prior to their end treatment. SUEZ has also recently supported work in the area of delivering new protein products from organic waste, which resulted in the company investing in Nextalim, which focuses on delivering new sources of protein by the controlled and industrial breeding of Black Soldier Fly larvae from farm and industrial organic waste sources. "This can displace other forms of animal feed protein, reducing land use requirements, water, fertiliser and energy consumption, and potentially deliver financial outcomes better than that from compost or energy alone," explains Hayward-Higham.

He concludes: "We see many other opportunities out there to make more and better use of organic waste.

"We see a slowdown in the growth of the 'weight'-based organic waste solutions as available feedstocks become fully utilised and waste reduction programmes take effect. We also see an acceleration in the use of organic streams to drive new products, be that from algal and insect-based activities through to the extraction of the high value components or production of new higher value products such as the animal protein above."

Fire Prevention Plans: Better safe than sorry

Andrew Goddard of Freeland Horticulture outlines the development of Fire Prevention Plan regulations and how sites can successfully develop their plans

A good Fire Prevention Plan (FPP) should be seen as part of a site's wider management of fire hazard, specifically the risks associated with fire in the waste management activities on site. Fire can be caused by many ignition sources and it is the management of these in relation to waste management operations that is most important, along with the amount of material that can be affected and how that material is contained/segregated.

The problem for site operators is in the dual regulatory nature of these operations, with the Environment Agency (EA) or other applicable regulator wanting to prevent releases to the environment affecting both human and ecosystem receptors, and the fire service focusing on rescue and escape from the building envelope.

Both organisations consider the current frequency and severity of incidents to be unacceptable, not only in the UK but in many other countries including the USA, Ireland, Finland and Australia¹. Both have been actively engaged with operators to improve the situation; the onus has been placed by industry onto the WISH Forum to undertake trials into preventative methods that might be employed.

The latest set of trials has been on methods of early detection and how to minimise impacts by using the best firefighting protocols. Understanding that prevention is better than cure, our product PreventIt measures temperatures in the core of a material and activates an alarm if these rise too high, allowing operators to take action to avoid a fire completely.

The data from the WISH trials will be made available in due course, but the organisation has produced guidance based on its early work (revised in 2017) which is very comprehensive².

When preparing an FPP, the hierarchy of controls proposed by the EA are:

1. Site activities,
2. Prevention, and
3. Minimising impact

There is little doubt that these are sensible primary objectives. However, the pitfalls are in the details and there is some disagreement with operators on what they must do to apply these principles on the ground. Operators are normally stuck with a fixed footprint and are further constrained by the costs of handling waste materials, which have only got worse under the financial austerity imposed on local authorities by the UK government. Some sectors, like the Wood Recyclers Association, have been trying to develop an agreed template with regulators to allow a streamlining of the application process; unfortunately, this has been a very frustrating process.

To have a good chance of making a successful FPP application, it is wise to obtain an FPP that has received the necessary approval from the regulator. A good consultant is OK for the fine detail but I would recommend intensive involvement by the operator in the first plan, unless you want to incur high man-hour costs from consultants and the constant back and forth of document drafts. Remember too that the operator must be able to live with the final document, so it would be sensible for them to do a sense check. Before you start, make sure that you are in scope; for example, AD processes are not required to submit a FPP. A discussion with the REA or CIWM would be helpful in getting hold of the right guidance to do the job properly.

There are a number of key things to consider when preparing an FPP³:

- Remember the primary objectives and the practicalities. There are often many ways of obtaining the

same result.

- The best methods are those that reduce the risk of ignition and/or increase early detection. Good monitoring controls include: temperature measurements in the material; cameras to locate surface ignitions and problems with machinery; and good maintenance systems on equipment.
- The scale of the problem will be minimised by reducing the quantity and age of material on site, or by the use of barriers to prevent spread of the fire.
- Good firefighting practice is important if fire is to be brought under control.
- Training in the details of the FPP is important to ensure people know their role and responsibilities in the event of a fire.

Understanding the health impact

The adverse health effects of fires are most commonly associated with the particulates emitted. Gases are generally forced upwards by the plume from the fire and these compounds disperse readily. A well-oxygenated fire will tend to produce lower quantities of particulates. Those that are produced form two major groups: partially burnt materials (smoke) and fully combusted materials (ash).

It is normally recommended to keep door and windows closed near a fire incident and, when undertaking the FPP, it is important to review whether sensitive receptors are present within the radius of a fire's impact.

References

¹ Documents from other countries:

Australia - <http://bit.ly/2HjadlR>

Ireland - <http://bit.ly/2BvkOtE>

² WISH guidance - <http://bit.ly/2C0GAGI>

³ Writing your FPP - <http://bit.ly/2F5Vr1t>

Concerns over changes to wood classification

Changes to waste wood classification are causing concern within the industry.

Julia Turner, Executive Director of the Wood Recyclers Association, explains why

In November last year the Environment Agency (EA) published an interim Regulatory Position Statement (RPS) outlining the acceptable uses of various grades of waste wood in the UK.

The RPS followed concerns that treated waste wood was being misdescribed as untreated, clean grade-A material and ending up in non-IED Chapter IV-compliant boilers. It's also in preparation for new EU regulations coming in later this year, which are likely to result in a more robust application of the WM3 Technical Guidance on classification of waste.

This means that only clearly identifiable clean untreated waste wood is suitable for animal bedding, composting or non-WID boilers, and mixed waste wood must only go to Chapter IV IED compliant boilers or panel board manufacturing. A precautionary hazardous waste classification and associated consignment requirement will be applied to mixed waste wood loads in any other situation. Waste wood that is currently recognised as hazardous must continue to be segregated as such and

consigned to appropriate facilities.

So what does this mean for the biomass and composting sectors? For the time being it is business as usual for biomass, as it is one of only two end users currently permitted to accept product made from mixed waste wood loads. For compost the situation also remains the same: only grade-A material can be composted.

The RPS is in place until November 2018 and between now and then there is a lot of work taking place behind the scenes to identify the properties of various types of waste wood, so we can be sure that by the end of the year we have scientific evidence to support the different uses of waste wood for varying end markets.

The WRA has been tasked by the EA to lead a waste wood industry group involving waste management companies, representatives from the waste wood industry's major customers, other trade associations, local authority representatives and figures from the EA's technical team. The group is looking to ensure that:

- Waste wood is properly classified at the front-end.

- The people who process the wood further check and maintain that classification.
- Those taking the processed wood ensure they use suitable wood for particular end uses.

We are working closely with our German counterpart, BAV, which will also have to change its guidance on waste wood classification in preparation for the new EU regulations, as will others across Europe. The waste wood sector understands the need for structure, particularly if it helps with regulation. However, there are major concerns that the incorrect classification of waste wood could result in a situation where virtually all wood is classified as hazardous.

It's feared this could lead to a reduction of between two and six per cent in national recycling rates, a significant rise in costs for local authorities and an increase in the amount of recyclable material ending up in landfill. The knock-on effect could see local authorities refusing to take wood at their CA sites, leading to more fly-tipping.

We have seen a huge growth in the waste wood industry over the past five to 10 years, particularly in the biomass sector. In the UK last year 1.6 million tonnes of post-consumer waste wood was supplied to biomass facilities.

Over the next 18 months that figure is set to double. This indicates the success of the UK Renewables Policy, with all forms of renewable energy now accounting for around 25 per cent of the country's energy production and coal just 10 per cent.

With this end market and many others in mind, the WRA and our partners are committed to doing all we can to guarantee that waste wood is properly understood, properly managed and properly classified.



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WARWICK WARD



KCM Waste Management in Yorkshire are now fully self-sufficient in their heating needs thanks to their new Terex Ecotec TDS V20. Phil and Mark Hickling, joint Managing Directors of KCM, saw an opportunity to heat their offices, workshops and recycling facility by utilising waste wood and pallets that were coming into the business. They installed brand new state of the art biomass wood burners and are now able to heat their business and save money at the same time.

The higher speed shredders they looked at created too much dust, so at Warwick Ward's suggestion they opted for the medium speed Terex Ecotec TDS V20. The TDS V20 features a powerful Scania engine with a low operating speed and an efficient hydrostatic drive, creating a very responsive shredding action with protection against unshreddable contaminants. The TDS V20 screen system, which is available in different sizes, comes complete with an intelligent protection system, allowing a desired particle size to be produced whilst still being able to cope with foreign objects to protect the shredding chamber.

Warwick Ward's Sales Director Simon Causier commented: "The TDS V20's ability to produce a controlled product size in one pass is of huge benefit to the operator saving both time and fuel. However, its versatility means it can be used as a primary or secondary shredder if the need arises. The highly

user-friendly control interface shared with the TDS 820, complete with pre-installed programs, allows the TDS V20 to shred difficult materials such as wood waste, green waste, domestic and industrial waste and it is particularly suited to producing SRF."

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Ensuring quality input

In his first column for Organics Recycling, new ORG Chair **Charlie Trousdell** discusses how the organics industry might bring about improvements to input quality



Firstly, I would like to say a huge thanks to Alexander Maddan for his Chairship of ORG over the last few years – I hope I can build on the work he has done for the industry.

Despite starting my first commercial compost operation (on a small farm scale) all the way back in 1996, I remain passionate about composting and in particular ensuring quality compost is produced. The advantage of being an independent consultant means I can now probably say things that are more difficult for those directly employed by a company. With that in mind, we must as an industry get more robust about input quality.

This means negotiating with local authorities along with commercial and industrial sources. It is much easier to take plastic out at the HWRC or indeed at the householder level, whether the local authority collects green waste or co-mingled organics. This is not just the responsibility of the local authority but also of the composter. As an industry we are not very good at rejecting loads

that are excessively contaminated, nor are we good at communicating to households about what not to put in green waste and food bins. Most people do want get it right in terms of putting waste in the correct bin yet don't really know what they should do.

We know local authorities are cash-strapped, but working with them and with other stakeholders on comms can be cost-effective to help reduce contamination at source. To paraphrase the previous Prime Minister (call me Dave), we are all in this together!

Within ORG we have set up a 'Task and Finish Group' to discuss how best to achieve this; volunteers are needed to assist, so please let Jeremy or myself know if you can help.

Plastic is very much in the public eye at the moment so we have a great opportunity to use this high profile issue to help improve feedstocks across the board. This issue is so important and ties in with the PAS review where there is pressure from some stakeholders to further tighten the

plastic limits for PAS 100QP compost. On the whole, the industry is doing a fantastic job, with more than 2.5 million tonnes of PAS 100QP compost being beneficially spread to agricultural land each year, but there has been concern raised in some quarters that too much plastic is getting through. Scotland already has tighter limits than England. Of course, compost supplied to the growing media and landscape market tends to have additional standards applied, but in round terms some 75 per cent of PAS 100QP produced is supplied to the agricultural sector.

We in ORG do not know the outcome of the PAS review yet. The full stakeholder group meets on 8 March, so we should know by the annual conference (15 March) what the outcome will mean for the industry. I hope to see many of you at the conference in Dorking – if you haven't booked yet please do so soon. We have lined up some great speakers and of course the dinner in the evening is a great chance to network and enjoy yourselves.

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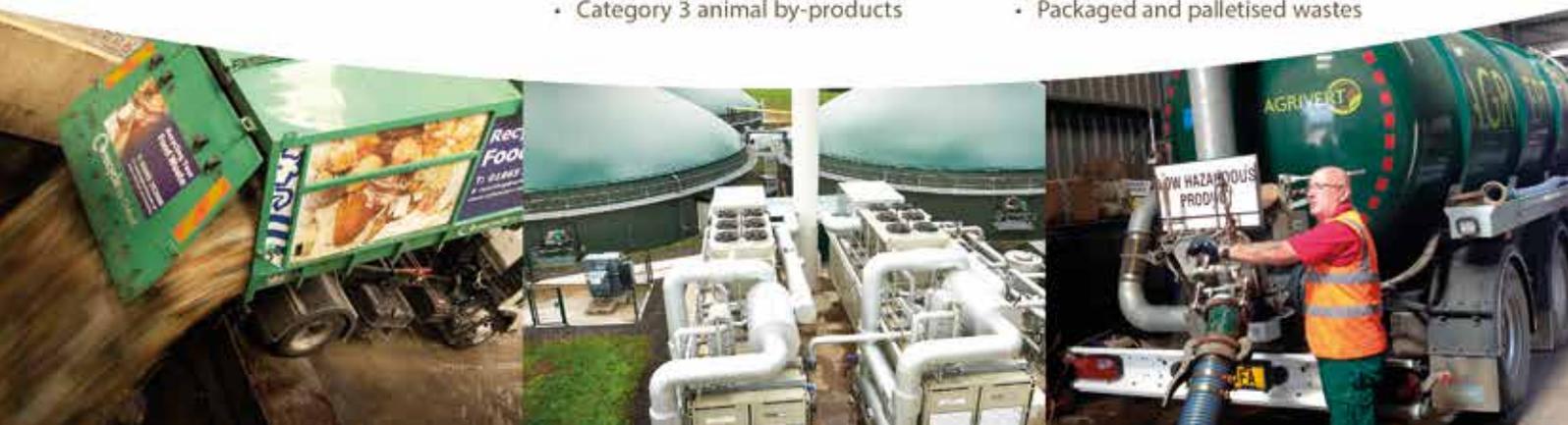
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