

REAA response to EA review of biowaste permits to improve environmental outcomes-Call for evidence.

The Renewable Energy Association is pleased to submit this response to the above consultation and call for evidence. The REAA represents a wide variety of organisations, including generators, biowaste site operators, project developers, fuel and power suppliers, investors, equipment producers and service providers. Members range in size from major multinationals to sole traders. There are over 550 corporate members of the REAA, making it the largest renewable energy trade association in the UK.

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General points

The REAA is pleased to see that the EA recognise the important role that the biowaste sector plays in supporting the health of the UK soils through the conversion of biodegradable materials into valuable soil improvers and biofertilisers. The REAA recognises that much has been done to improve the performance of the sector in recent years through the promotion of best practice and also through training and education programmes. There is still however plenty of scope for improvement and these improvements need to be carried out by working with the regulators so that changes are both affordable to industry and pragmatic in their implementation.

We made our members aware of the call for evidence and ran a webinar outlining the proposals. The views and evidence expressed below comes directly from REAA members who are active in the biowaste sector.

Answers to Consultation Questions

Availability of Standard Rules

Q.1. Do you agree with the proposal to withdraw these standard rules? Do you foresee any problems that might arise from their withdrawal?

A: It is important that if these permits are removed, that an alternative is available that is no more costly to operators than the existing option available. If activities and limits of activities currently covered by these existing standard rules that will be withdrawn are required by operators in the future, will there be an **alternative** SR which encompasses the same wastes and activities, or will this then be considered a bespoke activity? The REAA should like to see some clarity on this. If the latter, then this will place an additional burden on these operators in respect to a requirement to carry out more monitoring and a higher subsistence fee regime.

Q2. Do you have any suggestions for new biowaste standard rules? a. What evidence can you provide of demand for these new standard rules?

A: In certain instances, there will be sites which are located in remote locations with no sensitive receptors and that deal with small volumes of inputs. In these cases, would it not make more sense to have a Standard Rules permit which allows this activity to take place?

Technical Competence and Operational competence

Q3: Do you think that increasing the percentage of operating hours a TCM is required to be present on site would reduce the total risk?

a. If not please give reasons

A: Having well trained operating staff on the site is the key to lowering the site risk rather than putting the onus on one individual. The TCM has more of an auditing role to play and have oversight of the operation. In the absence of the TCM, other competent staff members should be allowed to make key decisions. Increasing the percentage of operating hours will have a direct cost to the business but will not prevent an incident occurring in their absence. Each process or facility needs to be assessed on a case by case basis to determine the optimum balance between cost and risk reduction. There is also a need for a more standardised 'Audit checklist' to be implemented which include staff and the supply chain which covers both training and record keeping. Senior management should ensure that staff are enrolled on a continuous improvement programme to assist in their development which in turn provides greater depth of cover within the organisation.

Q4: Do you consider that requiring operational staff to demonstrate a working knowledge of the facility is an effective way of reducing total risk?

a. if not give reasons

A: Yes, this would certainly help but this can be achieved through a number of ways. Putting someone through Wamitab is not necessarily the most appropriate route to take. On-site training and induction to site-specific procedures, processes and the Environment Management Scheme (EMS) would also be an effective mechanism for achieving a similar outcome. The knowledge that is required to be demonstrated should be in line with the requirements of the individual's role. Site managers/supervisors need a higher level of understanding than operators and this should also include the commercial players within the organisation as they too often demand unrealistic expectations of the front line operational staff which has the potential to cause issues with the plants operation. We believe that it is the site Standard Operating Procedures and EMS that should form the basis of any training provided. It should be a requirement that every 'key' role on site has a minimum of two trained personnel in order to cover for sickness and absenteeism.

Introducing a Fit and Proper Person check (which used to be a requirement under the old WML regulations) would be a mechanism to ensure that relevant staff are suitably qualified to carry out their necessary tasks on the site.

The REA has had sight of a proposal made by CIWM which proposes a formalised, percentage of operating hours' time on site mechanism which is directly linked to the regulator's compliance assessment report banding (CAR). For a BAND A performer there would be a requirement to have the TCM on site for 30% of the time and this increases to 100% for a site which has been scored D,E or F in the previous year. This system is supported by the REA in that it rewards responsible performance by operators.

Q5: Can you suggest alternative measures to reduce the risk posed by a lack of competence?

A: Routine site inspections by the EA would provide an opportunity for the inspecting officer to check the suitability of operating staff as to their competency, however this assumes that the inspector is suitably informed on a specific technology as AD biowaste sites have a range of operational differences. The introduction of a requirement for staff to pass a recognised accredited training scheme could be one way of addressing this issue. Industry is often reticent to share 'good practice', however if there was greater cross-sector operator sharing of experiences with working groups which included the input of the EA and HSE, this would assist in improving standards across the sector.

The REA recognises the fact that poor performance has an impact on the whole industry not just the sites involved in catastrophic events such as tank failures. The REA is keen to see continuous development of employees encouraged and even rewarded through a mechanism linked to annual subsistence fees.

Q6: (Permit Holders) We would like to know more about who covers the technical competence of your site or what examples of training you provide to ensure that day to day operational process is fully controlled and understood.

A: There is a requirement for the COTC holder to be on site for a certain period of time and the REA supports Site Managers having a COTC. If for an interim period the acting site manager does not have a COTC, contracting out this role is a possible solution to providing adequate cover. Operators should also be routinely trained in the critical process controls in order that as many staff members understand the process and key mitigation measure to implement in the event of a process failure.

Construction Standards

Q7. Do you support using a rigorous design, construction and commissioning process to minimise the risk of containment failures?

a. If not, please state why

A: For complex operations and sites the REA support this as a mechanism for preventing containment failures. There are already for AD, requirements in relation to the design and build, however there needs to be greater emphasis on ensuring that these standards are adhered to. Adherence to the principles set out in CIRIA are desirable and should be made a requirement of a permit being granted at the application stage. For simpler operations however such as the storage of sludge cake on small concrete pads with a sealed drainage system this should not be a requirement as the risk is minimal.

The REA believes that it is far too late to make considerations regarding the plant design and construction at the permitting stage, this needs to be done much earlier at the initial consultation phase of the project to prevent costly retrospective changes being forced on the project.

It is also crucial that EA Officers need to be experienced in understanding the complexity of sites that they regulate. EA teams specialising in these common considerations should share knowledge and expertise with the local officers and attend a number of the routine, monitoring visits and meetings. The degressing Government subsidies have led to a rush in sites being developed and somewhat back-to-front when it comes to commissioning CHP engines, gas injection equipment etc. This has led to sites being commissioned (so, semi-operational) and operating before site drainage and secondary containment has been

installed. Early stages of staff training and development are essential and should require accredited training to have been done before a site commissions/operates. In CDM Regs (H&S) terms there is a very risky "grey area" during commissioning as this overlaps the construction phase and the operations/maintenance phase. Much more careful co-ordination, communication and management are needed from an early stage of a new sites operation.

Q8. Can you suggest additional or alternative means of tackling containment failure?

A: Containment must be correctly designed at the construction phase. Location and design should be factors in securing planning and environmental permits. Commercially, it must be right at financial close, as attempting to retrofit adequate containment measures would be extremely expensive and often is a compromise in achieving the best result in respect to environmental protection.

The EA should develop and maintain a list of design features that have caused catastrophic failures and are not acceptable, as well as a list of preferred or exemplar features based on their audits and Compliance Assessment Report visits to sites. This information should be then made available to industry as well as the regulator for future reference.

An REA member has suggested that given the commissioning period and first 3-6 months of operations is probably the most risky for a site, perhaps a Permit Probationary Period (or similar phrase) would be beneficial to check that the staff and management are fully prepared and competent at running the site.

On smaller less complex sites, the application of common sense by the permitting officer at CAR inspections should suffice.

Q9: Would any such requirements be better imposed through permit conditions or stipulated in guidance as a necessary part of a written management system?

A: If there was a requirement within their permit condition to carry this out then permit holders would have an obligation to follow these requirements. It is important that there is transparency in requirements made to operators from the start. What is unacceptable is when conditions are sprung on them or demanded retrospectively as this is costly and not factored into the viability of a specific project.

Permit conditions need to be in place before commissioning (when not all 'peripheral' or site finishing surface containment is complete). The prioritisation on filling / emptying areas being bunded/contained as well as proper, robust tank containment / bunding is an area which needs greater scrutiny. Drainage plans design needs to be completed early on in the process and the Permit application process should have key milestone stages to enforce this with EA Officer with follow up and completion checking. Not all surface drainage may get completed until right at the end of the build and commercial pressures to commission need to be considered in terms of risk level and prioritisation decisions using clear, open communication and management meeting minutes / liaison with the regulator.

Q10: Permit Holders) Could you, if required provide a certification of critical infrastructure in relation to you site? If so who certified this and what qualification did they have? If you cannot you think you will have difficulty meeting an industry standard for your design and build e.g. CIRA 736 for secondary containment?

A: There should be a mandatory requirement for all critical infrastructures to be designed by chartered engineers with thorough inspection throughout the construction phase. A

requirement for the principles highlighted in CIRIA 736 (rather than CIRIA 736 itself) should be considered in the future as a mandatory requirement for new builds.

De-gritting and tank integrity

Q11. (Permit holders) If you operate an anaerobic digester do already carry out regular de-gritting and tank integrity checks?

A: An REA member has stated the following: *'We conduct de-gritting operations when they are commercially required. That is a function of the build-up of grit, rather than of time. For many plants, the direct (tank cleaning) and indirect (power loss) of tank cleaning makes it a very expensive operation. But excessive build-up reduces retention time, and may ultimately impact on operations/power generation. We will de-grit digesters on a 5-7 year cycle'*

A written scheme of examination (WSE) should be considered a part of future permits and also retrospectively applied to existing installations as part of their improvement plan.

The feedstocks may change and seasonal variations will impact on the level of grit accumulation. The Operation & Management team need to be more involved with the design and Permit application process, so it is important that the EMS preparation in this area is covered with the addition of staff training, with checks that cover aspects of ways to improve access, safety and operational techniques for the de-gritting process. In summary, the need for de-gritting may be dependent on the feedstock and should be assessed on a case by case basis and not be a blanket permit condition.

Q12: Do you foresee any issues with making this a more transparent requirement of all anaerobic digestion permits?

A: The REA do not foresee that this should be a problem. AD facilities should be prepared to specify what their policy is for this activity. Tank integrity checks are a necessity and should be carried out routinely to ensure both optimal performance and also plant integrity is maintained.

Non-routine emissions or biogas and auxiliary flares

Q13: (Permit holders) Do you already have a high temperature standby flare at your anaerobic digestion facility? If not would the compulsory requirement for one have significant impact? If so what is the estimated additional capital cost?

A: The REA consider that there needs to be either the use of a standby flare or alternative solution such as a backup boiler which can operate in the event that the flare does not operate due to a power cut. A standby flare may be at risk of not operating in the event of a power cut and this point has been made to the REA by one of its members.

Gas upgrade and gas to grid

Q14: Do you envisage any issues with limiting the flaring of biogas or secure storage of propane?

A: No operators deliberately flare biogas, as this costs money through the loss of biogas.

Operators are already highly incentivised to limit venting and flaring – they do not receive any income for gas flared, and business models are based on high load factors to ensure acceptable returns on investment are made.

However as listed below with gas to grid installations which are more complex, there are instances when flaring is a necessity.

The requirement for the secure storage of propane would not in the REA's opinion be an issue as this is good practice and this should be carried out in accordance with the LPG association technical guidance as well as complying with DSEAR regulations.

Flaring is already standard practice, however it could be a necessary practice under a whole range of situations, some of which are listed below:

- The entry specification for gas-to-grid plants is very tight and gas not meeting the specification has to be flared to avoid any venting of methane which would be very harmful in GHG terms.
- In most cases flaring is of biogas (rather than biomethane) that takes place because the biogas upgrading plant has a technical problem. There can be short periods of flaring of biomethane when a plant re-starts after a shutdown.
- Before gas can be allowed into the gas grid, there has to be around 15 minutes of flow through the Grid Entry Unit to ensure the gas is of consistently acceptable quality. This biomethane is either returned to the digester or it may have a specific flare. The reason for flaring would be that the biomethane would already be enriched with propane to meet the gas grid spec. There may be issues with the upgrading plant if there is significant quantity of propane in the AD having been recycled (e.g. this propane could contaminate CO₂ that is produced for sale).
- There can be examples of flaring due to the gas grid not having capacity, but again this would be biogas not biomethane. Generally the capacity issues are such that they stop a project going ahead (ie there is no capacity) rather than be ongoing problems. There are examples of projects with capacity issues in summer but the operators generally reduce the feedstock loading to make less gas in summer rather than flare it (and receive no income).
- Storage of biomethane on site by compressing it and then releasing it later is not a practical option as if there is a capacity issue it's likely to apply to the time you would want to release the stored gas.

The grid companies should be encouraged to be more flexible with gas entry specification to minimise outages. For example, CO₂ is not a gas safety related parameter but Gas Distribution Networks (GDNs) often assume no biomethane can enter the grid with CO₂ >2.5% If the GDNs allowed short term excursion to 3.5% say (natural gas at St Fergus can be >4%) then this would be helpful. It would be good therefore if EA encouraged GDNs to be **more flexible** where there is no safety issue.

Q15. Permit holders) Would your facility require additional gas storage if such a condition was imposed? If so what will be the cost?

A: One REA member has commented that this would be an issue and have also noted that retrofitting gas storage to existing sites may prove difficult to carry out on account of space constraints, not just financial ones. They worked with the gas network company to increase

gas pressure in the grid to increase the storage capacity and also to ensure that the injection takes the lead signal over the national upstream network. A more acceptable solution would be for the gas network to manage grid capacity in such a way that they guarantee capacity to a site in a similar fashion to the way electricity networks are managed.

Contingency gas storage is beneficial for a number of reasons, including downtime and loss of revenue from flaring. The use of gas bubble (ground level) storage bags is a relatively inexpensive solution.

Nitrogen management and ammonia emissions

Q.16. We propose that in future, ammonia rich feedstocks and digestates should be stored in containers or lagoons which are designed to minimise ammonia loss. What are the technical challenges of such a requirement? a. Have you any data to demonstrate the efficiency of abatement technologies that you have used?

A: According to DEFRA's own data, less than 6% of ammonia emissions comes from AD processing and storage- provided they are well designed and maintained. The vast majority of emissions arise from the spreading process.

Retrofitting covers on existing lagoons can be challenging and expensive to do.

The REA believe that all new farm AD installations should have rigid covers on their storage facilities. The cost of retro-fitting such covers is very expensive, so existing farm AD plants should have the option of installing floating covers which generally are effective but allow rain to mix with the digestate.

The REA believes that AD plants should be able to provide data that demonstrates that gas emissions including ammonia from the plant itself are well contained.

In addition, the REA would like to know if this includes solid based manures such as de-watered digestate and compost storage once it has been transported out to fields for subsequent spreading, as this would pose significant practical issues and significant costs. We do not support any proposal to require coverage of all solid digestate and manure heaps. This would be completely impractical and could cause serious health and safety issues (it would require someone to manually cover and uncover a heap every time it is used or moved, with potential serious risk associated with uncontrolled release of gases).

One member of the REA has noted that if the heaps are covered with old plastic silage sheets, it is possible that pieces of plastics could contaminate the solid digestate/manure and subsequently the soil.

Requiring new storage all to be fitted with covers will add a significant cost to industry and is likely to be viewed as a disincentive to building new capacity. Will this be mandatory for both waste and product material (i.e. PAS 110 and material spread under deployments?)

There are practical issues with covering temporary stock piles in fields such as sewage sludge cake and the subsequent removal and disposal of these covers once the cake has been spread to land. What about the 90+ M tonnes of farm manures, does this apply to these materials as well?

There will not be sufficient margin in existing contracts (or historic contracts) to accommodate covering of existing stores/lagoons. Using organic fertiliser needs to be competitive to chemical or mineral fertilisers and the ever increasing restraints and restricts will put farmers off using these types of materials.

Coverage of stores is important to a certain extent, but ensuring the AD and farming sectors have enough storage capacity in place to be able to store digestate until this can be applied is even more crucial.

New permits being issued to the AD sector place a requirement on ensuring that storage lagoons for digestate are covered. For existing facilities there is a move to retrofit covers where this is feasible to do so; as mentioned above, it can be uneconomic and very impractical in some instances to do this so the REA would like the regulator to take a pragmatic view in these cases.

It is also crucial that challenges faced within the planning landscape are considered in conjunction with any proposals to introduce a requirement for covering stores. Retrofitting stores normally requires significant engineering works, which in turn means planning permission must be obtained. According to our members, in many cases it has proven to be very challenging to obtain planning permission for lagoons that need covers retrofitting.

The recent REA survey of members showed that just under 70% of respondents have covered storage and a number of the others not currently covered, have plans to cover them in the near future.

One of the benefits of covering stores is that this prevents the ingress of rainwater which not only dilutes the digestate and its relative nutrient benefits but also means that there is a need to provide greater storage capacity.

Industry has to take steps to provide greater 'contingency' for storage not only because of less predictable weather patterns and subsequent spreading opportunities but also on account of a change in the EA's stance on autumn applications of digestate to combinable land. This position is accepted by industry but this takes time to implement for the reasons stated above and the REA requests that adequate time is allowed for any transition to occur to a new regime.

Q17: What alternative measures might be considered to reduce nitrogen losses to air?

A: Best practice including low-emission spreading equipment like trailing shoe or trailing hose or injection for digestate application will assist greatly in reducing volatile emissions during application of digestate. There is also emerging technologies for the stripping and dewatering of digestate which would assist in reducing the quantity of storage capacity required, reduce ammonia emissions and provide water that can be re-used in the dilution of incoming wastes.

Q18: Would digestate storage capacity equivalent to two months of production be sufficient to ensure resilience in the digestate production and supply chain.

A: Two months storage is unlikely to be sufficient, but the answer to this question is dependent on how the sector is regulated in respect to autumn application of digestate and low RAN materials to stubbles. If this activity is to be curtailed in line with RB209, then in areas that are dependent on stubbles to empty lagoons before the closed period, 6 months storage may be adequate, two months would certainly not be sufficient. All plants should be able to contractually speak for a minimum of 4 months storage to cope with climate resilience. This spring was an example where due to the prevailing very wet conditions, getting onto the land was delayed by more than six weeks meaning that additional storage capacity was a necessity. It should not be a necessity that storage for a site's digestate is on site, but that there are alternative storage solutions available even though these may be at remote locations.

The REA believes that it is also quite possible that some standard rules permits will not have sufficient space for such a storage requirement (in excess of two months) and as a result have to move to a bespoke permit.

One REA member has suggested that a more flexible solution would be for AD plants to provide a digestate management plan as part of standard rules requirements. This would allow plant operators to involve outside contractors or consider some form of digestate processing. This could also mean that PAS110 compliant plants would also be included. This suggestion would fit with the new farm Water Protection measures.

The REA has concerns that through the EA's desire to aim for efficient nutrient use and restrictions placed on autumn applications of digestate, this will prove to be extremely challenging for industry in the short term until sufficient storage infrastructure is in place which will take time to implement.

Q19: What alternatives to on-site storage might be preferable to deliver resilience?

A: Off-site storage in well-located lagoons or tanks is highly desirable. It enables regular off takes from the producing facility (rather than significant vehicle movements during the spreading period), and facilitates timely application to land through local "campaigning". i.e. more can be spread in a day from a lagoon surrounded by farm land than from a digester many miles away. The use of 'hippo' bags is becoming more popular as they provide a mobile storage solution and add resilience to a sites storage challenge.

There are multiple historical lagoons and storage facilities that cannot be permitted without obtaining a bespoke permit (at considerable cost) due to them being on farm and within 250m of a farm dwelling. The use of off-site lagoons is desirable and should be encouraged wherever possible.

One REA member has suggested the use of digestate evaporation or thickening (using the CHP engine exhaust gas heat) as a mechanism for reducing digestate volumes and providing greater climate resilience.

It has been established above that in well run AD plants, the focus for ammonia emission reduction is in the distribution and land spreading of digestate. On April 2nd 2018 DEFRA introduced new rules that all farmers should have nutrient management plans and carry out regular soil testing. The EA in its role as principal regulator will enforce these rules and has the ability to greatly influence the nutrient efficiency targets farmers would be required to meet. The key nutrients of concern would be nitrogen and phosphorus.

The REA believes that the nutrient targets that farmers may have to meet would feed back to the waste sector. If targets are set high then waste to land operators, including AD plants, will be forced to ensure spreading and storage operations are done with high efficiency. In several scenarios it is quite possible that AD operators may have to consider processing digestate to reduce water content, stabilise nutrients eg. Acidification to reduce ammonia emissions or nutrient stripping e.g phosphate removal in areas of high soil phosphate indices may also be a necessity?

THE REA believes that the EA needs to tread a careful path between environmental considerations and the financial constraints placed on industry.

Q20: Do you agree with these proposals? Please give reasons.

A: As far as the AD sector is concerned the REA believes that the review of the permitting system should focus on ensuring installations are built to adequate standards and can demonstrate they are well run and maintained. In the case of these facilities, they should not pose significant environmental risks.

Spreading of waste to land for agricultural benefit is currently done under mobile spreading permits SR2010No4. Before any waste is spread the permit holder must get EA permission via a deployment. The REA and its members see this as a cumbersome, expensive and time consuming process which needs to be further streamlined and simplified.

Now that the EA has regulatory authority over all farmers so far as nutrient planning is concerned, there should be scope to simplify the spreading permit, on account of the EA being in the unique position of having access to farm records on fertiliser and organics usage.

Q21: If you have experience of issues with abatement technologies we would like to hear from you. Similarly if you have an abatement technology which has worked well and reduced emissions can you describe these and give examples of parameters where efficient abatement is demonstrated? If you have available monitoring data we would like you to share this.

A: One REA member has successfully used their a bio-catalyst product to abate odours on a number of composting sites in England and is currently trialling this material on a 70k tonnes facility which has had significant issues with odour. The REA along with this member proposes to produce case studies for these sites but initial findings have been extremely encouraging. The REA is aware of the scepticism often surrounding 'compost additives' but this appears to be a game changer. This product which uses a Bio-Catalyst technology has been used in Australia and the United States of America very successfully.

Abatement should be in line with the BAT requirements in the revised waste treatment BREF.

Improved water efficiency

Q22: Do you agree with this proposal? Please give reasons

A: The REA do not believe that making this mandatory is the way to go, but that it should be recommended as 'good practice'. As seen this year under drought conditions, water needs to be collected and conserved wherever possible; however there can be some practical issues with this depending on the siting of the building so it should not be mandated in the REA's opinion. Climate change is very likely to impact on biowaste facilities and having sustainable water management will assist with operational efficiency.

The cost of retrospectively engineering drainage to deliver this outcome on an existing site which does not have it makes it impractical/uncommercial to implement.

Q23: What alternative can you suggest?

A: No comment

Location of sensitive receptors

Q24: Which of the two measures do you prefer? Please give reasons. a. Can you suggest any alternative approaches to protecting the water environment?

A: The REA is not in favour of one solution over another, as this will very much depend on the circumstances of individual sites. The cost of fitting secondary containment to all sites within this would be prohibitively expensive but may be feasible for certain sites. The REA is keen to understand what will happen to existing sites that are within the 10M exclusion zone? It would be uncommercial to retrospectively apply these to all existing plants, built under the regulations that applied at the time. For new build plants, you could offer the option of both suggested approaches; however it is crucial that the EA stipulate clearly what Standard needs to be met so there is no confusion in this regard.

Q25: Which combination of measures do you prefer? Please give reasons. a. Can you suggest any alternative approached to protecting the water environment?

A: The preferred option here would be measure 1, ensuring that a qualified engineer signs the drainage infrastructure as being fit for purpose. This should not exclude an operator from using some of the other measures suggested such as using flow meters and shut off valves, however this should not be prescriptive but left up to a qualified engineer to determine the level of risk for each part of the site and ensure that adequate protection in in place. All installations should be constructed in such a manner that there is an impermeable membrane or barrier to prevent groundwater contamination.

Sensitive and protected areas

Q26: Do you believe that these set back distances are appropriate / adequate? Please give reason for you answer

A: These set back distances are already in SR 2012 #7, so the REA does not see the reason why there is a need for this request for change?

Waste types and acceptance

Q27: Waste tonnage- Do you support this approach? Do you foresee any difficulties with this suggestion? Please give reasons

A: This seems like a sensible approach, as long as stated tonnes are reflective of the true design tonnage and are not overstated by the operator. It makes more sense for the planning and permitting conditions to be evenly matched.

The granting of an EA permit however should take into account the plants **safe design** capacity. Local planning authorities are not always best placed to assess this and it should be the EA's remit to assess the maximum permitted level of a plant. The EA is the competent authority on this matter. Defaulting to the planning limit could limit plant's ability to operate although local planning restrictions (e.g. truck movements) which are unrelated to the design capacity of the plant, but will need to be considered as part of the overall project development. However the rules need to be developed by a cross functional technical group to identify the most flexible option to satisfy the objective. This may include ensuring daily peaks in reception do not result in daily peaks of digester loading due to site specific buffering capacity. The constraint may be better applied as a daily feed into AD of volume and organic loading.

Q28: Waste codes- Would you have any concerns if these wastes are removed from standard rules? If so please explain

A: The REA considers that Glycerol waste is a beneficial fuel source for AD. It should continue to be allowed on a bespoke permit provided that the operator can demonstrate adequate control of organic loading rates to the digesters.

Q29: Waste acceptance- Do you think expanding waste acceptance conditions to include pre-acceptance and waste sampling programmes could drive improvements in feedstock quality?

A: There is clearly a significant issue here for composting as sites continue to receive an excess of plastics within their garden waste deliveries. The REA believes that there needs to be greater pressure imposed on the collection authorities to ensure that only target material is collected. Currently the emphasis is all on the operator, when in reality they have to get on and compost what they are supplied with if they are to retain the contract. AD and some IVC sites can be different, as many sites actively encourage the collection and delivery of food waste in a wide array of packaging, as this will be dealt with by the facility on its arrival through sophisticated de-packaging units. Incidental contamination is acceptable but there needs to be greater pressure placed on the waste providers to ensure they are compliant, rather than the processors who receive what they are sent. An active campaign by the EA with local authorities and a more collaborative approach to this would assist in spreading the message. The local authorities have a duty of care to provide fit for purpose material to the biowaste sites if they are to produce a quality output.

Greater reinforcement of the Duty of Care Regulations for the waste producers would be beneficial and although this is already a requirement, it appears there is not sufficient credence given to this by both the regulator and accepting site. Facilities have a responsibility to incorporate stricter demands into their commercial acceptance process before waste contracts are accepted and delivery sampling operational procedures employed. This would assist in driving better standards and behaviour of waste producers in complying with requirements.

The REA believes that Carriers Licence holders are often not diligent enough when it comes to exercising the Duty of Care regulations and neither is the supply chain when it comes to approaching the supplier (i.e. paying customer) about quality, consistency, contamination etc. This will not voluntarily improve and it is too easy to obtain a Carrier's Licence without too much up-front checks and balances. Additional checks need to be enforced in this area to assist in improving the quality of inputs to all waste sites.

Q29a: Would guidance on upstream waste auditing, planning waste acceptance assist?

A: No guidance is required as sites are well aware of what is acceptable feedstock and what is not, What is required is that waste producers separate more effectively (so that the responsibility passes from the receiving waste processor to the primary waste producer) this is where intervention is required.

Q30: Sludge treatment-Would there be any problems with us making the differentiation with treatment activity

A: No comment