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13 April 2009

Dear Sir/Madam

Objections to SITA's PPC licence application to operate an incinerator at Binn Farm, Glenfarg

I wish to submit the following objections to SITA's application to operate an energy-from-waste incinerator at Binn Farm, near Glenfarg. I believe the proposals breach several aspects of Best Available Techniques with regard to waste.

Best Available Techniques

Section 8(2)(a) of PPC Regulations requires that "all the appropriate preventative measures are taken against pollution, in particular through the application of best available techniques." Further detail of this requirement is given at Section 3.4(2) of SEPA's Thermal Treatment of Waste Guidelines 2009:

The applicant must demonstrate that the techniques (including technology) they intend to adopt will comprise best available techniques (BAT). This must also include a description of the main alternatives they have considered.

Additionally, Section 17.11 of the [Practical Guide to PPC Regulations](#) states:

17.11 Operators need only assess those techniques that are "available" as defined. A technique can be considered unavailable if its costs outweigh its environmental benefit or if it is not reasonably accessible to the Operator. *This does not mean that the technique has to be in general use. It would be sufficient if it has been developed or proven at plant or pilot scale, provided that this allows implementation in the relevant industrial context with the necessary business confidence.* [emphasis added]

Clearly the aforementioned guidelines indicate a requirement to show that different technologies have been compared with regard to best available techniques. However the comparison provided by SITA is minimal, being restricted to pyrolysis/gasification and a few variations on types of incineration (fixed hearth, pulsed hearth, rotary kiln).¹ There is no discussion of Mechanical Biological Treatment (MBT) or other Advanced Conversion Technologies such as anaerobic digestion.

SITA claims that pyrolysis and gasification are not commercially proven, and that "a combustion plant will have a more beneficial effect on climate change." However

¹ IPPC application, section 2.1.3 (Furnace types)

according to a report by DEFRA from 2007, Energos has been running gasification plants successfully for a considerable time.²

Also, I have read about [plasma gasification plants](#) burning municipal waste in Japan. This technology eliminates all harmful emissions to air.

Greenhouse gas emissions

According to Peter Jones, waste incineration produces up to two tonnes of CO₂ for every tonne of waste – [see page 5 of his report to Leicester City Council](#). He goes on to say that anaerobic digestion produces only 150-200kg of CO₂ per tonne of waste, or “15% of the ratio for mass burn plants per process tonne.”

Government policy, which now allows 25% of municipal waste to be incinerated, is based in part on SEPA’s Life Cycle Assessment³ of five waste management options, with regard to GHG. However there are three major problems with this report.

First, the five options do not include the option of reducing the amount of waste we produce in the first place. This seems very strange, given the Scottish Government’s repeated pledge to halt the growth in municipal waste by 2010, and reduce it thereafter.

Secondly, none of the five options considers the possibility that more than 70% of waste can be recycled. This is highly questionable. More and more products are becoming recyclable all the time, such as batteries and Tetra Paks. San Fransisco has a policy of eliminating waste altogether by 2020, *without incineration or landfill* (see web page about [San Fransisco’s Zero Waste policy](#)). The planet is in trouble, so we need to apply similarly ambitious targets.

Thirdly, the report fails to consider CO₂ produced by goods *before* they enter the waste stream, i.e. during the production of raw materials, processing, packaging, transporting and marketing.

These three deficiencies in SEPA’s Life Cycle Assessment combine to artificially skew the findings of the report in favour of energy from waste.

Even if we ignore pre-waste stream CO₂, SEPA’s Life Cycle Analysis is limited. A far more comprehensive comparison of different waste treatment methods (and combinations thereof) was carried out by Eunomia for the Greater London Authority in January 2008.⁴ In this study, incineration with CHP came 19th out of 24 methods with regard to minimisation of greenhouse gas emissions. Other combinations of treatment, such as MBT (AD with maturation) with CHP did much better.

Overall, the report shows incineration to be a wasteful and outmoded technology, and therefore in breach of the requirements of PPC regulations, i.e. that “no significant pollution is caused” and “energy is used efficiently.”

Toxic emissions and health concerns

For every report that says incinerators are safe, there seems to be another that casts doubt on this. For example when I wrote to Scotland’s Chief Medical Officer Dr Harry Burns in March 2007 about health concerns regarding incineration, his reply cited a well known report from 1996 by Elliot *et al*, which says that the apparent increase in risk of cancer with proximity to incinerators can (with the possible exception of liver cancer) be

² DEFRA, [New Technologies Demonstrator Programme 2007](#), p8

³ [Life Cycle Assessment of Municipal Waste Management Options in Scotland](#), SEPA, 2007

⁴ D. Hogg, *et al* (2008) [Greenhouse Gas Balances of Waste Management Scenarios](#), Report for the Greater London Authority, Eunomia

explained by socio-economic factors. However, a recently updated report by the British Society for Ecological Medicine (see '[The Health Effects of Waste Incinerators](#)', p22) questioned Elliot's conclusion, arguing that the results were statistically significant, and could not be so easily dismissed.

In 2004, Defra published a report titled *Review of the environmental and health effects of waste management*. Again this report largely discounted health concerns related to incineration. However, the Royal Society pointed out that Defra's report failed to discuss cumulative effects, timelines for exposure, effects of mixtures and synergies of emissions and the additive effects, for example, when combined with other environmental and occupational exposures.

Defra acknowledged these deficiencies in the final draft. However, the Royal Society subsequently stated:

Although the uncertainties have been acknowledged in this report, it is important that anyone using these data takes adequate consideration of its inherent uncertainty (Royal Society's peer review of Defra's report on the environmental and health effects of waste management, March 2004)

I have seen no evidence that the Royal Society's concerns have been addressed, and therefore believe the precautionary principle should be applied.

In general, scientific understanding of the health risks of incineration is increasing all the time. Only in November 2007 SEPA announced new air quality standards for very fine particulates in the PM2.5 range (see *Fine Particulates*, below). Incinerators are known to produce a lot of PM2.5s, which are too fine for the baghouse filters to trap. We cannot tell what health risks may be uncovered by research in the future, in much the same way as the dangers of asbestos and cigarettes have now been revealed.

Poor monitoring and control of emissions

Many people are concerned about the ability of SEPA to keep emissions within safe levels. This concern seems to be justified by a new report by SEPA itself, which lists Scotland's most polluted towns (<http://news.scotsman.com/latestnews/Revealed-our-contaminated-countryside.3691582.jp>). One of these is Brechin, which finds itself fifth in Scotland for NOx because of its rubbish incinerator. The report shows that many Scottish towns are suffering from polluting industries that are supposedly monitored by SEPA.

Incineration produces many hundreds of toxic emissions, but the quality of monitoring is questionable. Take just two of these emissions – dioxins and fine particulates:-

Dioxins: Defra's report acknowledges that it does not cover dioxins in the food chain (stored in the fat of animals), despite being recognised as the primary source of human contamination. Any dioxins emitted from the incinerator would accumulate in the bodies of farm animals downwind.

Dioxins are known to cause many health problems, including cancer, chloracne (an extreme form of acne), and are also suspected of affecting reproductive health, lowering sperm counts, causing behavioural problems and increasing the incidence of diabetes - see BBC report at http://news.bbc.co.uk/2/hi/health/medical_notes/358889.stm.

Dioxins are largely produced in temperatures of between 200°C and 450°C. SITA claims that a complex system of thermocouples and interlocks will prevent anything being burnt below 850°C, thereby ensuring that dioxins are destroyed. Also, SITA

claims “Dioxins in the flue gases are removed by efficient particulate removal, supported by the injection of activated carbon.” (section 2.2.1.6 of SITA’s application).

This would be fine if we could have confidence in the system of monitoring that will be employed. However, there are two reasons why such confidence is not warranted:

First, Scottish Executive guidelines on incineration at Section 5.6 state that monitoring of dioxins is only required at 3-monthly intervals for the first year and 6-monthly intervals thereafter. If something went wrong with the technological ‘fail-safes’ between these inspections, large-scale emissions could go unnoticed for months.

Secondly, the management would be given advance warning of inspections, thereby giving them time to prepare. This is hopelessly inadequate. At the very least there should be continual monitoring of dioxins. How can SEPA enforce the PPC Regulation requiring necessary measures to prevent accidents when accidental emissions of dioxins could take place without anyone knowing?

Fine particulates: According to the European Commission 370,000 people die prematurely each year from air pollution in Europe – 350,000 as a result of exposure to PM-2.5 particles, i.e. particles less than 2.5 micrometres in diameter.⁵ Dr Jeremy Thompson of the British Society of Ecological Medicine claims that even the most modern incinerators emit significant quantities of PM-2.5s, as the filters are unable to trap the finest particles.⁶ He told me that the incinerator at Binn Farm would emit approximately 1.2kg of fine particulates per hour, mostly in the PM-2.5 range. If he is correct, the proposed incinerator would certainly breach the general principle of PPC Regulations that “no significant pollution is caused.”⁷

Dr Thompson’s report states that although there are a variety of sources of fine particulates in the atmosphere, those emitted by incinerators are especially dangerous because they are carriers of heavy metals and other toxins such as PAHs (polycyclic aromatic hydrocarbons).

The site of the proposed plant is in a natural hollow. In winter, when the air is still and cold, there is a strong likelihood that emissions from the stack will fall rapidly to ground level, causing a build-up of particulates in the immediate vicinity. This will be particularly harmful to workers at and around the plant.

The [World Health Organisation Air Quality Guidelines](#) state that there is no safe level of PM-2.5s, and that any increase over and above normal background levels of 3-5µg/m³ can be harmful. It recommends that an upper limit of 10µg/m³ should be applied. The same report states that PM-2.5s are carried 100s, even 1000s of kilometres.

In their Eastern Area Report for November 2007, SEPA state that there is a new air quality standard for PM-2.5s in Scotland of 12µg/m³. *No measurements have been taken so far of ambient levels of PM-2.5s around Binn Farm, or in Abernethy, which is only a couple of miles downwind of Binn Farm. How can we be sure that the levels are not already near the new standard?*

Costs and advantages

BAT (see page xi of the European Waste Incineration BREF) also considers that “available” techniques are those that take into account “costs and advantages.” Smaller

⁵ *Up in the air: EU ambient air quality standards*, <http://www.euractiv.com/en/environment/air-eu-ambient-air-quality-standards/article-159073>

⁶ Thompson, Dr J; Anthony, Dr H: [The Health Effects of Waste Incinerators](#), p9

⁷ *PPC Regulations 2002*, s8(2)(b).

incinerators such as the one proposed at Binn Farm are known to have high running costs – up to £136 per tonne (according to the [WRAP Gate Fees Report](#) of 2008). By comparison, anaerobic digestion (for example) costs £30-£60.

In addition, it must be considered a possibility that incineration will be brought within the scope of the European Emissions Trading Scheme (see fifth bullet point at part v of Peter Jones' [letter to the DTI of 19.12.06](#)). This would add around £30 to every tonne of waste burnt - see [estimates for EU ETS costs](#).

Along with the incinerator itself, the current proposals include plans for a 'Materials Reclamation Facility', known in the trade as an MRF, or 'murf', where recyclable materials will be separated from non-recyclable waste. On a recent edition of the radio programme 'Costing the Earth' (broadcast on 25 April 2007), Nick Francis of [WRAP](#) strongly criticised MRFs because of the way they cause recyclate to be contaminated:

“Currently there's an assumption that collecting all material mixed together and then having it sorted out at an MRF is an economic way of making recycling collections. This is a complete fallacy...It will come back to bite them [local authorities] hard when, in the longer term, this segregated material, due to the inevitable presence of albeit small quantities of unseparable contamination, will not be saleable.”

Other local authorities, such as East Renfrewshire, have heeded this advice and assiduously followed a path of source segregation. By building an MRF, there is a risk that the proposed plant will breach PPC Regulation 8(3)(b) – “energy is used efficiently” – because it will prevent efficient recycling.

Failure of Council to minimise residual waste

According to the waste hierarchy, incineration should be the second-from-last option, behind reducing, reusing and recycling. However in Perth and Kinross many materials that could be recycled are currently classed as 'residual waste', and would be burnt in the proposed incinerator. Take plastics for example.

The only plastics "recycled" in Perth and Kinross are PET1 and HDPE, and only in bottle form. By contrast Western Isles Council recycles many more plastics, including polythene silage and feed bags from farmers, and polypropylene fruit punnets. Currently 12.77% of municipal waste in Perth and Kinross⁸ is plastic bags and film - all of which could be recycled, but won't be if they can just be burnt instead.

According to Friends of the Earth, recycling plastic saves five times as much energy as can be recovered by incineration.⁹ Therefore burning plastic bags and film would be a clear breach of the principles of Best Available Technique, where “best” is defined as the “means most effective in achieving a high general level of protection of the environment as a whole.”¹⁰ It would also breach PPC Regulation 8(3)(b) – that “energy is used efficiently.”

SEPA expects the applicant to provide a detailed list of the amount of waste and waste types that will be treated by the thermal treatment plant, as well as a demonstration that all waste likely to be accepted can be treated to comply with BAT and prevent or

⁸ [Waste Figures for 2008](#), Perth and Kinross

⁹ [Recycling - why its important and how to do it](#), Friends of the Earth

¹⁰ [EU BAT Reference Document for Waste Incineration Plant](#) – European Commission 2006, page xi

minimise the impact on the environment and human health.¹¹ However SITA has not provided any such list.

Other techniques will be able to reduce BMW by the required amount

The Council claims that unless it has a new incinerator to burn waste, it risks failing to meet European targets for reducing the amount of biodegradable municipal waste going to landfill, with the result that it could incur fines of £150 per tonne. However, closer examination of waste figures for Perth & Kinross in relation to the European targets places a question mark on this claim.

As you know, the European Landfill Directive imposes targets on local authorities to reduce the amount of Biodegradable Municipal Waste (BMW) they send to landfill. These targets are as follows:-

- 75% of 1995 levels by 2010
- 50% of 1995 levels by 2013
- 35% of 1995 levels by 2020

The Scottish Executive has translated these targets into annual tonnages, allowing Perth & Kinross to landfill no more than 38,990 tonnes of BMW in 2010 ([Scottish Executive Guidance: April 2007 – Annex B](#)).

BMW comprises 9 separate waste streams. According to figures from SEPA, in Perth and Kinross in 2005/6¹² these waste streams amounted to the following percentages of total municipal waste:-

- Newspapers and magazines - 8.28%
- Other recyclable paper - 0%
- Card and Card packaging - 5.41%
- Non-recyclable paper - 3.28%
- Textiles - 4.1% (but only 2.1% counting as BMW)
- Organic kitchen (catering) waste only - 22.96%
- Organic garden waste only - 5.33%
- Other putrescibles - 0%
- Other combustibles (Wooden boxes, pallets, cork packaging, wood from DIY, wood fencing, carpet, kitchen units and work-tops, all other furniture, combustible flooring, combustible tiles) - 6.48%

If we add these percentages together, we find that in 2005/6 just under 54% of municipal waste in Perth & Kinross was BMW. In 2006/7 Perth & Kinross Council dealt with a total of 107,000 tonnes of municipal waste. If we assume that the proportion of municipal waste falling into the category of BMW remained about the same as in the previous year (54%), this would equate to around 58,000 tonnes of BMW in 2006/7. If the quantity of BMW continues to rise over the following 3 years by about 3% per annum (as the Council pessimistically predicts), this would give us a figure of 63,400 tonnes of BMW in 2009/10 - the year in which the first of the European landfill targets will apply.

Will the Council meet the 2010 target of 38,990 tonnes? Figures released under the Freedom Of Information Act in 2007 ([Click here](#)) indicate that the Council predicts that by composting and recycling it will manage to divert at least 28,221 tonnes of BMW

¹¹ SEPA's Thermal Treatment of Waste Guidelines 2009, s3.4.3

¹² see table B6 in '[Waste Arisings, Perth & Kinross, 2005/6](#)', published by SEPA

from landfill in 2010. If we deduct this from our projected BMW figure of 63,400 tonnes, it leaves a little over 35,000 tonnes that will go to landfill - well within the Government's target for 2010 of 38,990 tonnes.

So far, so good. However, the question then arises as to whether or not the Council will be able to meet the subsequent targets for 2013 (25,993 tonnes) and 2020 (18,195 tonnes). In other words, between 2010 and 2020, will Perth & Kinross Council be able to reduce the amount of BMW that it sends to landfill by a further 17,000 tonnes?

The answer to this question is emphatically yes. The Council is currently rolling out a new 3-bin recycling scheme, which is designed to divert most biodegradable waste away from landfill. This includes *organic kitchen waste*, which amounted to 24,400 tonnes, or 42% of BMW in Perth & Kinross in 2006/7.

The new scheme allows people to put garden and organic kitchen waste into their brown-lidded bins, and dry mixed recyclate (DMR = card, paper, plastic bottles and cans) in their blue-lidded bins. It has been piloted successfully with 1,500 households in parts of Wellshill, Craigie, and the Cleeve and Cherrybank areas of Oakbank. More recently in April 2008 it was extended to 6,800 households in Aberuthven, Auchterarder, Crieff and Tulloch. The scheme will be extended to a total of 56,000 households (out of a total of 61,613) over the next couple of years. For more information about the rollout, please see this [report](#), and this [web page](#).

On examining the Council's report on the piloting of the new 3-bin recycling scheme (see report titled '[Evaluation of New Kerbside Recycling Service 2006](#)'), we find that it *immediately* reduces the amount of biodegradable waste entering the mixed waste bin by around 50%, with the potential to rise to over 80%. Once this is diverted from landfill the Council will easily reach its Landfill Allowance targets for 2013 and 2020. There is simply no need for an incinerator in Perth and Kinross.

How will the Council deal with BMW?

On 2 June 2008 Bruce Reekie, Waste Plan Co-ordinator, informed me about two new projects that the Council was putting out to tender later that year in order to cope with all the biodegradable recyclate that will be collected with the new kerbside scheme:-

1.Processing of garden and kitchen waste mixed together. Although no particular technology will be specified in the tender, Mr Reekie says it will probably be either in-vessel composting or anaerobic digestion.

2.Composting of garden waste specifically from recycling centres, for example by an 'open windrow' process – this is cheaper than the methods required for treating co-mingled garden and kitchen waste.

New Limits on Incineration

The Scottish Government announced in January 2008 that it would impose a 25% limit to the amount of waste that is incinerated, both nationally and regionally. Therefore it is worth having a look at how much waste the three waste authorities in Tayside Region (Dundee, Angus and Perth & Kinross) are already burning.

Table 1 shows incineration figures since 2002, derived from SEPA and the Waste Data Flow websites. As you can see from the figures highlighted in **pale blue** in Table 1, the three local authorities in the Tayside Area Waste Plan area are already burning around 25% of their total waste, which is the maximum allowed under government policy.

If the 25% limit is applied to individual local authorities, the breach will be even more extreme. As part of the Strategic Outline Case of 2006 Perth & Kinross Council claimed it needed to burn 60,000 tonnes of waste each year. This concurs with the Non-Technical Summary of SEPA's Environmental Statement, which states that the purpose of the incinerator is to burn 60,000 tonnes per year of municipal waste collected by Perth and Kinross Council (see section 1.1.1). If the Council goes ahead with this plan (which SITA's proposals appear to depend on), it will be burning 56% of its municipal solid waste.

Table 1

Tayside Waste Area	Incinerated in 2002/3*	Incinerated in 2003/4*	Incinerated in 2004/5*	Incinerated in 2005/6*	Incinerated in 2006/7*	Total MSW* 2005/6
Dundee	42047	39191	40764	44250	57720 Oct06-Sep07	95669
Angus	19730	15563	15262	17404	15096 Oct06-Sep07	73381
Perth & Kinross	1245	1499	1214	1461	987 Apr06-Mar07	103231
Totals for Tayside	63022	56253	57240	63115	73803	272281

*SEPA website

*www.wastedataflow.org

*MSW = Municipal Solid Waste

In his [letter of 11 September 2008](#) (see page 2), Jim Valentine states that in 2006 the Council was “informed” that the DERL incinerator didn't have enough capacity to meet its needs, hence its need for a new incinerator. However, if DERL was so short of capacity, how did Dundee manage to increase incineration at DERL by almost 14,000 tonnes in 2006/7? (see figures in Table 1 highlighted in yellow) And why did Perth and Kinross simultaneously *reduce* the amount of waste it incinerated by a third to just 987 tonnes? Something doesn't add up.

Why does the Council claim that it needs a new incinerator?

Claims by the Council that new incineration facilities are required are based on a prediction that municipal waste in Perth and Kinross will grow by around 2.5% every year up to 2020 – see page 49 of the [Strategic Outline Case of 2006](#). However even if this comes true (and it seems highly unlikely given the Government's commitment to halt the growth in municipal waste by 2010¹³), there would still be sufficient capacity at the existing DERL incinerator in Dundee right up to 2020 – see pages 1 and 2 of the [BPEO Compliance Self-Assessment Form](#), completed by Perth & Kinross Council in 2006.

Furthermore, the Scottish Executive has given Perth & Kinross Council an aspirational target to halve its residual waste to 30,000 tonnes per annum – see [Report to Environment Committee, 13.6.07](#), s4(1). If the Council abides by this, the incinerator will have to take waste from outside the area in breach of the proximity principle.

¹³ See Column 5492 of [Scottish Parliament report of 24 January 2008](#)

Breach of Best Practicable Environmental Option

The draft version of the Tayside Area Waste Plan makes it clear that the three Tayside waste authorities had rejected the option of acquiring a new Energy-from-Waste facility to treat municipal solid waste – see pp26-31 of the [Draft Tayside Area Waste Plan](#). Instead they decided that the Best Practicable Environmental Option (BPEO) was simply to increase recycling while sharing the DERL incinerator in Dundee to burn ‘residual’ waste, i.e. waste that could not be recycled (see reference to sharing DERL at p32 of the final published version of the [Tayside Area Waste Plan](#)).

The following paragraphs summarise the findings of the Draft Tayside Area Waste Plan.

The Draft Tayside Area Waste Plan (DTAWP) lists 8 options for managing Municipal Solid Waste, at page 26. Two paragraphs later, at the top of page 27, it states that after an initial appraisal, three of these options were short-listed:

Option 3 – High Recycling Kerbside Collection

As much pre-sorted, recyclable waste as possible collected from separate kerbside collections; taken to a ‘clean’ recycling facility; sorted; packaged and sent for reprocessing. The level of composting would be increased.

Option 6 – High Energy from Waste Kerbside Collection

Another energy from waste plant is built to incinerate more waste; some recyclable waste collected from separate kerbside collections packaged and sent for reprocessing.

Option 8 – Anaerobic Digestion

As much of the biodegradable waste as possible is collected from the kerbside and broken down in an anaerobic digester. Some waste is collected at separate kerbside collections, packaged and sent for reprocessing.

The DTAWP says this initial appraisal/short-listing was followed by a stakeholder consultation. It could be argued that the stakeholder consultations drew mixed comments on EfW. However the subsequent ‘Option Appraisal’, which comprised a sophisticated analysis of all the consultation data by Price Waterhouse Cooper, Envirospire Consultants and ERM Consultants, came to the following conclusions (see page 31 of DTAWP):-

*An analysis of the three options indicates that **Option 3** performed best over the range of decision criteria. This option produced a better than average return against the environmental criteria and it performed particularly well across the economic, social and practicability criteria. Strong support for Option 3 also emerged from the public consultation*

***Option 6** performed well in the environmental criteria, but generally poorly in terms of the economic, social and practicability factors.*

***Option 8** was average in relation to environmental considerations and while there were positive outcomes related to economic and social criteria, the technical feasibility of this option reduced its overall capability. This option was also the least favoured by the public.*

This clearly represents a rejection of Option 6 (‘another energy from waste plant’) in favour of Option 3 – the high recycling option – as Best Practical Environmental Option. It is therefore entirely consistent that the DTAWP goes on to define the Best Practical Environmental Option as follows:-

The Best Practical Environmental Option (BPEO) for the management of municipal solid waste in Tayside is option 3. This is the high recycling option and the key elements of this option are set out in figure 3.1. The BPEO sets out what is considered by Tayside WSAG to be the most appropriate option for dealing with MSW in Tayside and will meet the Landfill Directive diversion targets.

The BPEO requires improved collection systems and increased levels of recycling, recovery and composting of waste.

In this definition of BPEO there is no suggestion of building another energy from waste (EfW) facility. Nor is it mentioned in the section titled 'BPEO Implementation' (at page 36), where only the DERL plant is referred to.

The DTAWP then lists various requirements (Table 3.8) and four actions that it deems necessary to implement the BPEO (at page 37). None of these mentions new EfW facilities. This is also the case in the final TAWP.

Similarly, none of the 22 proposals and recommendations in the Action Plan at page 56 of the TAWP mention the possibility of building another EfW plant. The only reference to EfW is in the context of the DERL plant at Action 12, which calls on the relevant parties:

To report on the feedstock wastes that are most appropriate for combustion in the DERL energy-from-waste plant (EfW)

From start to finish, the DTAWP and the final TAWP are consistently clear that EfW is only to be used in the context of the DERL plant. This is confirmed in the final TAWP at 3.2.5, and again at 3.2.6, which states:-

MSW that is not recycled, composted or treated in the energy from waste plant (DERL) will be disposed of to landfill.

Energy recovery

SEPA strongly recommends that a detailed Heat and Power Plan is produced as part of the PPC application. However SITA has only given a few sketchy ideas, with very little detail.

One of SITA's suggestions is to grow non-indigenous food. However, can this really be said to be an efficient use of energy? The owner of Binn Farm told me last week that the plan was to build polytunnels. Surely heating polytunnels in the depth of a Scottish winter to grow out-of-season and exotic food would be just as wasteful of energy as importing the same food from warm countries where it can be grown outdoors.

The proposal to build a wood pellet plant is equally vague, with various 'options', but no firm commitments and very little detail. For example, how can SITA be sure of a sufficient supply of material to make these pellets? Where will that material come from? If it comes from a wide area, surely this would not be fuel-efficient, and would result in a great increase in traffic.

The third option of building a 5km pipe to take heat to a proposed development in Bridge of Earn is so vague and uncertain that it cannot be taken seriously.

Requirement for SITA to return the site to a satisfactory state

Sita has not provided a proper plan for the decommissioning of the plant at the end of its life. Rather, it has provided a list of factors to be considered in such a plan. This is

hardly surprising given that it is so vague about the infrastructure that it will employ to make use of heat.

Disposal of waste generated on site

SEPA's guidelines state that applications must show the proposed disposal (including recycling/reuse) route for wastes generated on site using best available technique.¹⁴

SITA's application fails to explain where the fly ash and flue gas residues will be taken, saying only: "The residues will be transported by road to an appropriate treatment facility." (see section 2.5.3 of SITA's application).

The application is equally vague with regard to recovered materials. For example: "Any ferrous material recovered will be recycled." (section 2.6.2)

In the case of bottom ash, SITA claims that it will be used in the construction industry. However, they claim: "...it is not possible to come to firm commercial agreements with aggregate companies before the plant has begun construction." I find this very worrying. Can we be sure that there is sufficient demand for bottom ash in the construction industry?

To sum up, I believe that, for the following reasons, SITA's application for a PPC licence should be rejected.

- 1.SITA has not properly considered alternative technologies with regard to minimising harm to human health and to the environment.
- 2.Regulations for the monitoring of toxic emissions such as dioxins is inadequate.
- 3.SITA has not provided a credible plan for using waste heat.
- 4.SITA has failed to show how waste generated on site will be disposed of.
- 5.SITA has failed to show a real need for new incineration facilities in Perth and Kinross.
- 6.With regard to efficient use of energy, waste entering the proposed plant would contain many materials that could be recycled, such as plastic bags and plastic film.
- 7.SITA's proposals will breach Scottish Government limit of 25% on the incineration of waste at regional level.
- 8.SITA has failed to show that its proposals are cost effective.
- 9.The proposals breach the terms of Best Practicable Environmental Option, as described in the Draft Tayside Area Waste Plan.
- 10.SITA has failed to provide a detailed list of of the amount of waste and waste types that will be treated in the plant.

Yours sincerely

Michael Gallagher

¹⁴ SEPA's Thermal treatment of waste guidelines 2009, s3.4.4

