

From: [EIP Internal Correspondence \(Energy Security\)](#)
To: [Abel-Unokan, Erere \(Energy Security\)](#)
Subject: FW: *Not a constituent* FW: Medworth EfW CHP Facility - Additional Concerns from Judi Knights
Date: 22 January 2024 11:48:32
Attachments: [Concern for Wisbech.doc](#)
[image001.png](#)
[image002.png](#)

Hi Erere,

Please find the attached additional concerns from Judi Knights to add to the response your in the process of pulling together.

Best wishes,
Lawrence

From: BEIS Correspondence [REDACTED]
Sent: Monday, January 22, 2024 10:55 AM
To: [REDACTED]
Cc: EIP Internal Correspondence (Energy Security) [REDACTED]
Subject: FW: *Not a constituent* FW: Medworth EfW CHP Facility

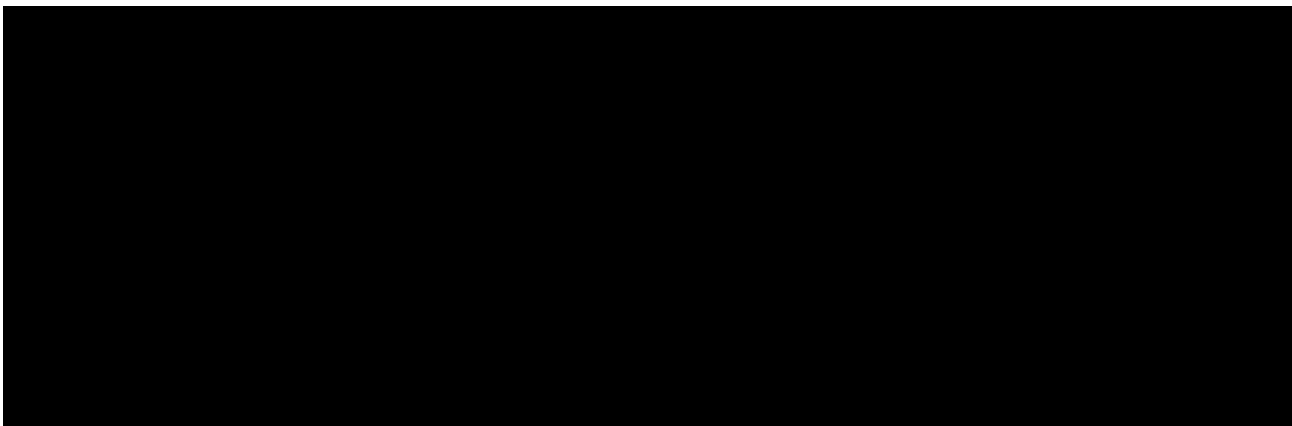
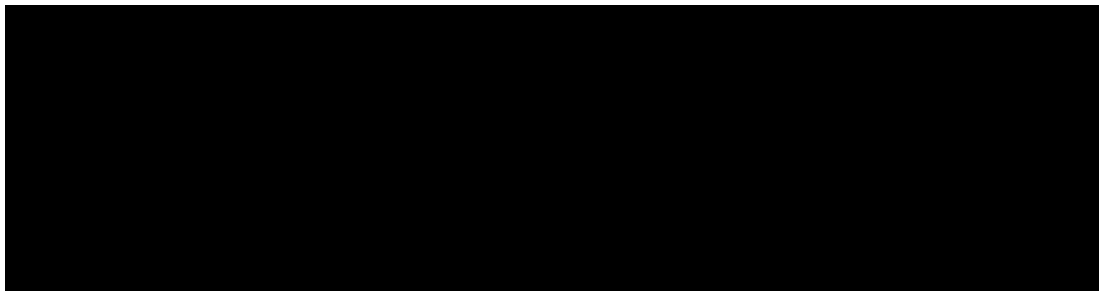
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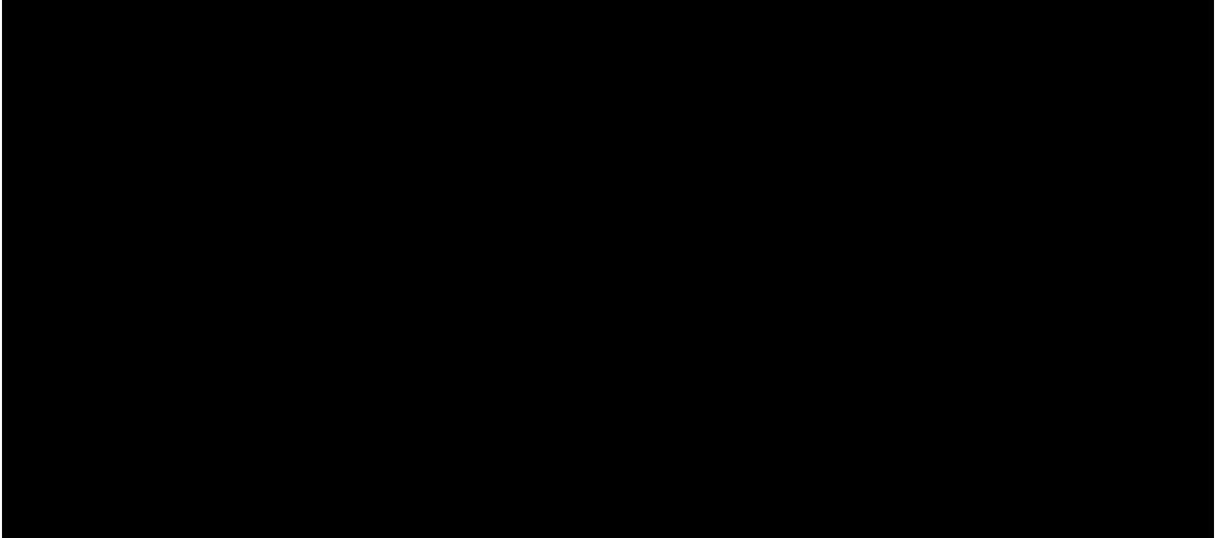
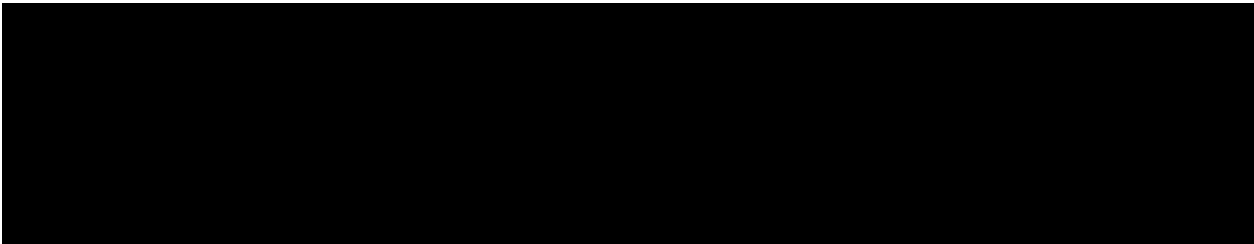
Hi team EIP

Please see email below and attached with further info from Judi Knights for this case.

Thanks

Jo



From: judi knights <[REDACTED]>
Sent: 19 January 2024 23:13
To: COUTINHO, Claire C [REDACTED]
Subject: Medworth EfW CHP Facility

Dear Claire Coutinho,

MEDWORTH ENERGY FROM WASTE CHP FACILITY - WISBECH

I write to you in your capacity as Secretary of State, as I have a few more points to add please concerning this proposal, having sent an email to you on 15/16th January. Please see the attachment.

Thank you for your kind attention.

Kind regards,

Judi Knights

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Judi Knights (was ref no 20033381 at Planning Inquiry)_Medworth Energy from Waste [EFW] CHP Facility – EN010110

19th January 2024

Dear Claire Coutinho,

Medworth Energy from Waste CHP Facility- Wisbech, Cambridgeshire

Potential for harm

This is in addition to what I sent to you on 15th January by email with regard to opposing the above proposal. I believe that numerous lives would be blighted by this proposed huge incinerator in Algores Way in the town of Wisbech, so close to schoolchildren, patients, clinicians, residents, shoppers and business workers. It is hugely concerning, not least because MVV's UK chief, Paul Carey claimed at the Planning Inquiry that the emissions to come out of the incinerator would be 'clean'. Yet, MVV's own emissions listing for the Inquiry includes amongst other things **mercury, cadmium, arsenic, hydrogen fluoride**. There is still no emissions dispersion map provided by MVV, despite someone's request at a public meeting in July 2021 for one and it being promised

It is hardly surprising that MVV don't feel they need to provide this, and feel confident everything will go ahead. They will know that it is standard practise for the health consultee to be asked their opinion on the safety or otherwise of an incinerator, and that it has become standard practise for that consultee to defer to the regulator for their opinion, and the following 'reassurance' is given for them to give out by the regulator, almost word for word, for many years now:

'while it is not possible to rule out adverse health effects from modern, well regulated municipal waste incinerators with complete certainty, any potential damage to the health of those living close-by is likely to be very small, if detectable'

The reason the health consultee is supposed to be consulted is because, once upon a time, they were expected to offer their own expertise. It seems they always now provide a standard answer - regardless of how large the incinerator, or whether or not anyone is checking each item being burnt, and regardless of whether or not the planned temperature is suitable or not for preventing denovo dioxin formation following combustion.

In the Wisbech area are several car scrapyards. A few years ago a huge amount of shredded automotive residue was discovered, illegally buried in a pit at the Whittlesey brickworks. Could this form part of the Commercial and demolition waste? Tyres are not easy to burn and in order to prevent denovo dioxin production from them they require a very high temperature. Certainly a lot higher than the 850 degrees Celsius.

There is also something else to be factored in. Where other sources of air pollution arise then secondary particulates [particles] can form from the mixing of the different pollution sources. For example, at Whittlesey, just a few miles upwind of Wisbech, there are foul smelling emissions. These could add to the cocktail of pollutants. I don't know if among those pollutants is hydrogen fluoride, HF, which was known to come from the brickworks when there was monitoring of it there. HF is one of the listed pollutants on the list of emission from the incinerator. The actual level of HF emissions from the proposal would not be known for sure, as MVV's Continuous Emissions Monitoring System, CEMS, of flue gas, would be checking for a few pollutants but apparently not be regularly checking for levels of HF. Background levels would not be known either as there is no requirement for the authorities to measure HF as it is deemed too expensive to do so. HF is known to prevent magnesium from working. Magnesium is required for over 300 processes by the body and its lack has even been linked to Alzheimer's Disease. And, according to research by Sun et al 2016, fluoride pollution causes an increase in the body's production of a gene product known as Endothelin -1 (ET-1), which is described as the most powerful vasoconstrictor ever known, and so greatly increases blood pressure. Li et al 2012 detail how Endothelin-1 can cause Pulmonary Hypertension. Since the application for the proposal was made, in 2019, a research paper has come out by Maheshwari et al 2020, entitled 'Fluoride enhances generation of reactive oxygen and nitrogen species, oxidizes haemoglobin, lowers antioxidant power and inhibits transmembrane electron transport in isolated human blood cells'. And this is just one of the many pollutants acknowledged to be emitted.

There have been very few studies on potential effects from UK incinerators and not all were done with the knowledge that particles begin to fall to the ground after a distance of ten chimney heights away, so for a 90m high chimney it means $90\text{m} \times 10 = 900\text{m}$, so only just under a kilometre. Also, it has now been found that the emissions travel further than previously thought, especially the finer fraction particles, which can travel many miles, depending on weather conditions. Where health effects were being looked for in the past was not always the right places and patterns of ill health were easily missed. It is hard to hide the rising cancer rate nowadays, with it being said to be one in every two people, and over the years incinerators have been built in many, many places in the UK. Is not possible that there is indeed a link? It is known that cancers can take sometimes ten or twenty years or so to be noticeable.

Incinerator Bottom Ash

Another major problem is what to do with the hundreds of tonnes of ash, which would fall every week from the incinerator grate, incinerator bottom ash, IBA (which is around 23.5-26% typically of the waste input). Most other companies process theirs on site over several weeks to stabilise it, before disposal or limited use as IBA Aggregate, IBAA. It was once used for concrete or roads, but in recent years it has been found IBAA concrete can contain bubbles, weakening it, and IBAA roads could crack. Apart from pipe fill, there are few uses for it. MVV in the UK has had a problem with its IBA from the start:

By the time MVV's first UK incinerator, in Plymouth, was operational, **MVV still did not have an effective plan to deal with the Incinerator Bottom Ash, IBA produced.** After local uproar, MVV contracted Dutch company Rocksolid to have their IBA transported to Holland by boat for processing and disposal, with Dutch company Rocksolid being paid on a monthly basis. **MVV said it was not a permanent solution as they could not fulfil condition 8 of their planning permission by not recycling the IBA for local infrastructure and ensuring a landfill diversion factor of at least 95%.**

2017 – 6th January - An article, by Scottish Housing News, a few months later, said that MVV were planning to build **another incinerator**, this time on the Dundee recycling site, [DERL], siting it close to the existing Baldovie incinerator, which was then in other hands. However, it seems, from piecing information together, that MVV wasn't allowed to build, as it was deemed the expected emissions could have a cumulative and detrimental effect on air quality in combination with the existing Baldovie incinerator. MVV appeared to change tack. They would now seek to run the Baldovie incinerator.

13th January – Meanwhile, IBA from MVV's Plymouth incinerator was being regularly taken and, presumably disposed of, in the Netherlands, by Rocksolid. This fateful day the IBA waited in the ship's hold, having been loaded over the previous day or so in heavy rain. Hatches were then battened down, but before the ship even left port, aluminium in the incinerator bottom ash, having got wet, reacted with calcium hydroxide in the ash, forming Aluminium Hydroxide, which gave off hydrogen gas, which can easily ignite if there is a source of ignition - which there was. The ensuing explosions blew the extremely heavy locks off the hatches, and blew the hatches open. The resulting fire reached a temperature of 1000 degrees Celsius. The chief engineer, in the hold at the time, sustained first degree burns to his face and second degree to the rest of his body, and had to be cut out of his coat, which had melted to his skin. He was airlifted to hospital and survived. An investigation began to be carried out by the Marine Accident Investigation Branch (MAIB), which would months later publish their findings.

24th March - Just two months after the explosions, **MVV received permission to run the Baldovie incinerator** in Dundee. Things did not go well and there were problems with compliance with the emission levels.

27th November - MVV, still wondering what to do with their IBA from their first incinerator, in Plymouth, hoped to get permission to process it at the Chelson Meadow Transfer Station. The Plymouth Herald wrote that 'a year long commotion could come to an end if plans are accepted to use Chelson Meadow Transfer Station to process incinerator waste'.

December 2017 - the MAIB (Marine Accident Investigation Branch) published the results of their inquiry into what happened to cause the explosion on the ship carrying IBA. Because IBA had been classified as 'non-hazardous' by industry/regulators it had been accepted onto the ship without anyone on the ship being aware that it might be hazardous under certain conditions, and

without considering that it is not homogenous but heterogenous, [differing in its composition depending on what is being burnt on any particular day]. It was found that MVV had not properly sorted the waste. It was also found that unless there is ventilation that wet IBA's hydrogen production could pose a danger if there was an ignition source.

2018 – spring – Permission was declined for MVV to process its IBA at Chelson Meadow Transfer Station.

29th March – MVV, having non-compliance with their emissions from the Baldovie incinerator in Dundee turned their attention to retiring it, **seeking permission to build a new incinerator** on the DERL estate in Dundee, saying that they would dismantle the Baldovie incinerator. (MVV, in the form of MEB Environment Baldovie Ltd, applied to have a Permit to officially vary the Pollution Prevention Control (PPC) Permit of the Baldovie EfW incinerator Permit No PPC/A/1003157, swapping it in effect for the operation of an EfW CHP facility located to the south side of the current installation building [the Baldovie]. They said it would replace the existing MEB EfW facility [the Baldovie ...also known as DERL EfW facility] – as they said *'The existing facility is close to the end of its economic life and is unable to operate in CHP mode'*.)

Whilst constructing their new incinerator alongside the Baldovie incinerator, **MVV discovered apparently that the Baldovie incinerator could work effectively after all, and so wouldn't need dismantling.** SEPA [Scottish Environmental Protection Agency] said **MVV could run both incinerators in parallel (giving the Baldovie a reprieve for ten more years).**

(SEPA published a document after this, saying of the Baldovie incinerator [the older, Fluidized Bed incinerator], *'...the FB plan is now running more continuously and efficiently, and no longer has the constant issues with compliance and shutdowns for maintenance...The Operator has taken the decision to run the existing FB plant for up to 10 more years, in parallel with the new MG [moving grate] plant, which is currently under construction, to help with any short to medium term capacity shortfall, locally or nationally. The existing Permit...does not allow for both plants to operate at the same time...This is purely because the MG plant was initially being constructed purely to replace the existing FB plant, as part of the Angus and Dundee Waste Strategy, driven by the local authority. The air dispersion modelling for the purpose of that previous variation had therefore not taken into account both plants operating for consideration of the impacts on air quality, as once the new MG plant was fully operational, the FB plant was going to be de-commissioned...Planning Condition 17..also stipulated that the existing EFW plant and the new EFW CHP plant may not both burn waste at the same time. An application to change this was made to DCC at the same time as the PPC application and an amendment to Condition 17 was agreed by DCC on 09 November 2020 allowing for parallel operation up to 31 January 2031.'*)

So, extra emissions, and extra IBA needing a place to go.

11th September 2018 - Angus Council (tied together with Dundee Council in a contract with MVV) approved a planning application by DJ Laing Homes for processed 'non-hazardous' **IBA from the DERL site in Dundee, to be deposited on agricultural land** adjoining the Petterden Den Landfill Site, Tealing, and so creating a **10m high 'upfill'**, which would be landscaped on top. Any runoff water from the unsealed surface would be monitored by MVV and results passed to the Scottish Environmental Protection Agency, SEPA. **MVV was reported as saying 'At present while the IBAA treatment process is successful, at this point in time the scope is very limited for subsequent use of post treated material...SEPA national policy staff are currently working to develop and issue a regulatory position statement on the use of Incinerated Bottom Ash Aggregate (IBAA) within the construction industry'.**

12th June 2019 - RockSolid applied to process IBA on behalf of MVV at Hill Barton Business Park, Exeter (most of the IBA to come from MVV's Plymouth incinerator). They said **'Previous locations to manage the IBA have not been forthcoming and the material is currently sent to the Netherlands for processing'**.

3rd December 2019 - Even before there was a decision on where MVV's IBA from its Plymouth incinerator, built years earlier, could go, **MVV submitted a scoping report to the Planning Inspectorate for yet another incinerator, one of the biggest in Europe, this time in the town of Wisbech, Cambridgeshire.**

24th December 2019 - RockSolid received a permit to process up to 100,000 tonnes per annum IBA (60,000 tpa from MVV's Plymouth incinerator) at Hill Barton Business Park, Exeter. IBA was to be stored outside in 10m high piles till ready for processing inside, when the doors of the plant were to remain closed.

4th June 2020 - MVV won its appeal against liability for the shipping explosion as the Plymouth IBA was legally no longer their responsibility once it had left their premises, having been handed over to RockSolid to take away, despite apparently not having warned them or the shipping company of any potential harm.

Summer 2021 - MVV's scoping report for their Wisbech incinerator was publicly available.

Present Day - Could IBA accumulate in Wisbech? Even if MVV were able to have their IBA accepted somewhere, would they have a carrier? Even if they did, in recent years there has been difficulty with finding enough HGV drivers, and another time with a lack of fuel at service stations. It would not take a lot to see an environmental problem building up in the area with such a huge amount of IBA to shift due to such a large size incinerator. MVV may have already considered this as it appears they have looked at **requisitioning** nearby land for the time the incinerator would be in use, and have said that the land would be **returned to the owners afterwards**. If IBA were to be stored on the land, with the chance to blow, or to leach into it then it could be a big problem. The

economy locally is dependent on keeping farms and soil in good order and having confidence in the safety and saleability of the produce. This is a very impractical proposal and I ask please that this proposal not be given the go-ahead.

Kind regards,

Judi Knights