MEDWORTH INCINERATOR PROPOSAL: EN010110

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Doc Ref 6.2 Chapter 13 Environmental Statement – Geology, Hydrogeology and Contaminated Land

Re: the proposal to build the incinerator on a level 3 flood plain

I refer you to the **National Planning Policy Framework document of July 2021, chapter 14 'Meeting the challenge of climate change, flooding and coastal change', particularly para 164**. **'… it should be demonstrated that:**

- **a) the development would provide wider sustainability benefits to the community that outweigh the flood risk and**
- **b) the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, reduce flood risk overall.'**

Regarding a) We hope we have demonstrated that the real risks to our community, (e.g. highways degradation, extra traffic affecting local schools, companies and the health of people of Wisbech, Fenland landscape values destroyed, etc.) outweigh the benefits of allowing this incinerator to be built on this level 3 floodplain. The benefits projected by the Applicant do not stand up to scrutiny – the heat is not wanted by local companies, and the energy will not benefit local households. The Proximity Principle does not apply.

Regarding b) It's very doubtful that the development will be safe for its lifetime, given the real risks of rising seawater, and the deleterious effects the massive mitigation measures to make the incinerator safe to operate.

Why build a NSIP project on a Level 3 floodplain?

I refer you to the Environment Agency's Factsheet on Flood Plain 3 https://www.norfolk.gov.uk/-/media/norfolk/downloads/rubbish-recycling-planning/flood-and-water-management/environment-agency-east-anglia-flood-zone-3-fact-sheet.pdf

You will note that the project has been designated on a 3a floodplain (**Flood Zone 3a High Probability – Land having a 1 in 100 or greater annual probability** for river flooding) and not Floodplain 3b (a functional floodplain)

Any developments on a level 3 flood plain are deemed very vulnerable according to the Environment Agency. An incinerator of this size will increase the likelihood of local flooding despite proposed mitigations.

Wisbech and surrounding fens are now **extra susceptible** to flooding due to being at the head of the tidal river Nene, at or below sea level, tidal flats geology (spongy soil), the rapid increases in unusual weather events caused by climate change, such as storm surge, and intense rainfall over long periods. See Wisbech Strategic Flood Risk Assessment: https://www.fenland.gov.uk/media/6654/E-1-2-0-Breach-Depth-200-CC-Overall/pdf/E_-_1-2-0_-_Breach_Depth_200_CC_Overall.pdf?m=637269616147570000

Rising Sea Levels

By 2050 sea levels around the UK coast are projected by the Environment Agency to rise by **36cm (over 1 foot**). One of the key reasons for this acceleration is climate change**.** The incinerator will take 5 years before it is operational – 2029 – a mere 21 years before 2050. **By 2070 the projected rise is 20+ inches.** By the time the incinerator is decommissioned in 40 years' time (approx. 2070) most of the area will be under water.

Many maps show the extensive flooding projected for the Fens and Wisbech, by 2050. The Government's own flood risk early warning website specifically mentions Wisbech as a flood risk.

https://assets.publishing.service.gov.uk/media/60378c448fa8f5048f78a5cf/Exploratory_sea_level_projections_for_the_UK_to_2300_-_report.pdf

Other extreme events: Storm Surge

Wisbech experienced major flooding events in 1978, 1996, 2014 and 2020. Present flood protection from the river Nene is in danger of being overcome – local Flood Wardens have reported narrow escapes for Wisbech as floodwaters threatened to overtop the floodgates.

Other extreme events: Intense Prolonged Rainfall over long periods

In December 2020 the Middle Level Commissioners reported that hours of heavy rainfall had submerged whole areas of the Fens, including properties in Wisbech, March, and Doddington. Fenland District Council records show flooding in some parts of the Fens in most years.

Increased rainfall from climate change can cause **groundwater levels** to rise suddenly. In this area groundwater is quite shallow and can rise to the surface quickly.

The incinerator itself will cause extra danger of flooding of local roads and businesses from

- The loss of natural ground absorption caused by construction works.
- Excess rainwater flow off the huge building potentially causing overflow of any collecting tanks into drainage ditches.
- Extensive use hard surfaced areas in building compounds causing run-off.

The Govt recommends water storage: "Where flood storage from any source of flooding is to be lost as a result of development, on-site level-for-level compensatory storage, accounting for the predicted impacts of climate change over the lifetime of the development, should be provided." Paragraph: 048 Reference ID: 7-048-20220825 https://www.gov.uk/guidance/flood-risk-and-coastal-change#para49

In any flooding events the incinerator may not be flooded, but local roads and the main A47 bringing waste in will be flooded. See: https://www.fenland.gov.uk/media/6654/E-1-2-0-Breach-Depth-200-CC-Overall/pdf/E_-_1-2-0_-_Breach_Depth_200_CC_Overall.pdf?m=637269616147570000

Local Geology – the wrong substrate for a mega build

The incinerator is proposed to be built on 'tidal flats (local Fenland geology) which are very unstable geological conditions comprising peat and clay and sand, with high groundwater levels interspersed within the layers. It contracts and swells with weather and seasonal ground conditions. The construction of such an enormous building will be extremely demanding on materials – many mitigation factors will be necessary.

In addition, because of unstable ground conditions, local roads are extremely fragile, constantly requiring repair. Repeated cycles of saturated and drying out ground cause dangerously uneven surfaces. The A1101 from Littleport to Wisbech is a prime example of our dangerous road surfaces. This would be a direct route to Wisbech for waste HGVs from Essex coming via the A10. Incidentally, the A1101 is closed each winter by flooding on the Welney

Washes. Locally, water pipes fracture and sinkholes occur (particularly in Weasenham Lane area leading to Algores Way) fairly regularly due to unstable ground.

Mitigation Measures Add to the Problem

The major mitigations necessary to stabilise ground for this mega building project, means groundwater pumping 24 hours a day, the use of thousands of extra tons of concrete raising the bed an extra 10 feet, extra deep pile-driving, (incidentally increasing the noise and vibration nuisance inflicted on the neighbours). None of this would be necessary had they chosen another site.

The huge nature of the build and construction weight of the many thousands of tons of concrete will initially displace natural groundwater. Removal of the clay and peat during construction (which naturally collects water) will potentially raise the groundwater level in the surrounding area despite a mitigation strategy of pumping into nearby ditches.

Will those ditches and French drains be able to cope with the release of extra water if the water storage tanks fill up too quickly in a storm?

The development has the potential to cause an increase in impermeable ground area, an associated increase in surface water run-off rates and volumes, and a consequent potential increase in downstream flood risk and overloading of drainage infrastructure.

Built-in mitigation efforts will cause further damage to the local environment and climate through need for extra construction methods – lengthy pumping activities, pile driving, greater consumption of construction materials, extra traffic etc.

There is no mitigation offered for the level of CO2 released into the atmosphere by its extra construction needs.

Crisis of Water Shortage

On the other hand, there will be increased demand for potable water during operations. Cambridgeshire is facing a crisis of water shortage in years of drought. Water Resources East report there is a 30 million litre-a-day water shortage in the East of England which will rise to 600 million litres a day by 2050 – can the Fens water system cope with the extra demands to supply a huge incinerator? This is an area with very limited rainfall.

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According to Fenland District Council Fenland Level 1 Strategic Flood Risk Assessment June 2022: 'Sustainable development in Fenland needs to take into account the risk of flooding and ensure that the water supply and sewerage system have sufficient capacity.'

Conclusion

We can no longer comfortably think in terms of major and catastrophic flooding as a 1:100-year event which won't happen to us. We can see how often centres of population living on the coast across the globe are caught out by nature's ferocity. On 11th February 2023 there was yet another earthquake off the Norfolk coast in an area where gas drilling is prevalent in the South North Sea. In the event of another more major earthquake event, even a small tsunami of just a few feet combined with other adverse weather conditions could be catastrophic. Human activity is increasing the risk from natural catastrophic events.

The incinerator won't prevent any flooding and may add to the risk.

We in Wisbech already face so many challenges and an uncertain future. Building this incinerator will just add to that uncertainty. In an already deprived area an incinerator will never enhance our quality of life. We will see increasingly poor physical and mental health outcomes for the population. Our town will be sacrificed to deal with other regions' waste.
