Updated representation from Kings Lynn Without Incineration (KLWIN) on the proposed Medworth incinerator.
For reference, the original (12 Oct 22) submission points are shown in bold

The Medworth proposal will.…

Significantly contribute to CO2 emissions which will harm UK National efforts to meet its National and International climate change targets and undertakings. That the Medworth project and the wider parent group state that they are on course for carbon neutrality is ludicrous. Such a claim can not be based upon carbon capture technologies which while much discussed are either yet to be developed, yet to be proven or yet to be demonstrated as cost effective industrial scale possibilities. Indeed HMG has recently announced a multi billion pound multi decade project to try to establish such technologies.
The developer may believe or wish the Inspectorate to believe that by combusting 600,000 tonnes of waste in their incinerator the CO2 output will be less than if that same waste went to landfill, which is incorrect on several levels.
1 The direct comparison of incineration and landfill implies that waste treatment is a binary option which is not the case. Mechanical and Biological treatment plants (MBTs) are an example of an alternate processing technology.
2 Residual waste which is the fuel for incinerators is essentially composed of a percentage of materials of recent biological origin which can burn or decompose, a percentage of inert non-combustible materials such as metals and rubble, and finally high energy materials such as plastics which will burn but not decompose. Biogenic materials burnt in an incinerator and used to generate power are poor fuels with low calorific values and high moisture contents. Landfilled or in MBTs they decompose to methane which is collected then burnt to generate power and or heat in commercial or domestic settings eventually releasing CO2. The CO2 from biogenic materials, incinerated or landfilled makes no contribution to climate change as they are essentially renewable and should be discounted in this debate. The high energy non biodegradable (largely plastic) materials are the prime fuel component for energy generation by incinerators. Such materials when burnt generate approximately one tonne of CO2 per tonne of material in contrast to that same material going to landfill were it will not decay and not generate greenhouse gases. In effect land filling such material is a practical effective carbon capture technology available now! KLWIN maintains that the Medworth proposal will be a significant contributor to national CO2 generation and worse than alternatives such as landfill.
3 The Inspectorate should be minded to check the appropriateness of any landfill emissions data that may have been used by the developer in their calculations. KLWIN is aware that other incinerator applications have employed very poorly designed, constructed and operated European landfills especially in the low countries in order to provide themselves with the worse case emissions so as to cast themselves in the best possible C02 light. UK landfill sites are strictly regulated both in terms of what can be disposed of into them but also the site capping and capture of gasses.

Significantly contribute to the already high National excess waste combustion capacity which is over and above HMG targets.
Burn materials that should be recycled. HMG has published a breakdown of waste with regard to the levels of ease/ difficulty with which fractions can be recycled. Since 2019 the UK has been progressively combusting increasing amounts of those fractions that can and should be recycled. The Medworth plant will add significantly to this problem and move the UK further from the circular economy.
The Defra Resources and Waste Strategy Report 2020 states that of the UK residual waste (the fuel for Medworth type incinerators) 53% was actually readily recyclable and a further 27% was potentially recyclable. On this basis the UK has been adding incinerator capacity to a waste market

that since 2019 has only been able to satisfy the incinerator sectors demands for fuel by supplying increasing amounts of recyclable materials. This is counter to common sense, environmental protection, Government policy and the public interest. Recommending that Medworth gains planning consent will simply add to the scale of the problem, in this case for another 40 years.

Discharge levels of harmful pm2.5 particulates to the atmosphere which are underestimated by expressing such discharges by MASS not particle NUMBERS. Clinically the mass of particulates is not important but size, number and composition are. Even a small total mass of pm2.5s constitutes a large number of individual particles because of their small size and mass. The most recent published research has demonstrated the mechanism by which pm2.5s can trigger predisposed but inactive cancer cells to proliferate. PM10 particles are not clinically dangerous, are easily filtered out and account for the greater part of the particulate MASS captured by incinerator filters. In contrast PM 2.5s are very clinically dangerous, can evade filters and their NUMBERS in the air are the real issue. KLWIN feels that the inspectorate should be minded to consider the unwarranted use of this simple but effective MASS v NUMBERS tactic used by proposers and filter manufacturers to understate the issue of pm2.5 particulate releases. If an incinerator bag filter is rated at for example 95% efficiency at capturing particulates BY WEIGHT the 5% that escape will by definition include huge numbers of pm2.5s. The contributions of pm 2.5s to public health problems are becoming increasingly recognised in peer reviewed medical research. There is a very real risk that pm2.5s will become the new asbestos of the future and there is no known safe minimum dose of these particles for human beings.

The proposal has bypassed local democratic planning procedures by claiming a power output which just exceeds the 50 Meg Watt threshold for qualification as a Nationally Significant Infrastructure Project. Given the existing, planned and proposed competitive incineration and recycling facilities in the area and the lack of support from the surrounding Waste Disposal Authorities there must be doubt as to the chances of exceeding the 50 Meg Watt output and hence supporting the NSIP status of the proposal. The total residual waste arisings from Cambridge and Norfolk County Councils will in total, amount to the stated capacity of the Medworth facility. The developer has claimed in open session to have been in talks with Norfolk County Council (NCC), a claim that NCC has put on the record as not having taken place. Further the developer claims that by proving a local incineration service Medworth could prevent the export of residual waste from Norfolk and hence support the proximity principal, however no such export shipments occur! On an area defined by the developer's 2 hour HGV radius of waste collection the Medworth plant would compete with a number of other incinerators. It is and should never be the role of applications for significant national infrastructure projects to propose facilities which will simply commercially compete with existing provision in an overcapacity marketplace.

Given the 40 year plus operating life of the proposal there would appear to be no adequate regard given to the environmental and biological accumulation of harmful elements and compounds discharged by the Medworth facility and distributed down wind of it. Twenty million tons of waste over 40 years may generate only small amounts of individual toxic materials PER YEAR but those prone to accumulation will progressively become more dangerous. Base line survey and monitoring stations, upwind and in close proximity to the site are unrepresentative and meaningless. KLWIN maintain that credible extensive short, medium and long range DOWNWIND monitoring for toxic elements and compounds associated with incineration processes should be an essential part of a responsible application for a plant of the Medworth type. Provision for air, soil, water and human receptors to be monitored using equipment specified, operated, maintained and reported on by a third party (which has the confidence of all parties) should have been clearly identified.