To Whom It May Concern,

It is with upmost concern that I am writing to you in objection to the submission for the proposed Genesis, Energy from Waste site in Eastern Creek.
I can only think that the Energy from Waste model has been proposed for consideration purely motivated by waste for profit completely sacrificing human health with huge detrimental risk for the high density residential population living in the proximity of the proposed plant.

I live in the neighbouring suburb of Minchinbury merely 700 metres to the site. Minchinbury is a dense residential working class community, primarily made up of young families. I myself have 2 children of very young ages. The closest residence in Minchinbury to the proposed site is 500 meters (not 1km - oversight or under exaggeration on Fitchers risk assessment stating the closest resident is less than 1 km -infact 50% less)

The proposal is of grave concern for the nearby residents. The submission proposal for the construction and operation of an energy from waste site for the thermal treatment of up to 1.35 million tonnes of waste PER Year to include a boiler house, steam turbines for electricity generation and stacks for air emissions. With the primary concern obviously being the human health and safety aspect of nearby residents. These effected areas spread to other neighbouring residential suburbs including Minchinbury, Mount Druitt, Rooty Hill (Blacktown Council), Erskine Park, St Clair (Penrith Council), Horsley Park (Liverpool Council) making up over 25,000+ effected residents. It is unclear to suggest the radius of impact although it is noted through the findings of the Wollongong cancer cluster the exposure decreases only after 20kms away from the emitting site.

Studies that have been documented to show a very high increase of cancer for people residing near waste incinerators with fatal outcomes.
I ask a question, with such studies available at the cost of other peoples lives, why are we even considering such a plant so close to residential premises???

I will further speak about my friends personal loss in the Wollongong Cancer Cluster to her close relative who passed from Leukaemia in August 1996 at the young age of 21. I would have hoped that our governments act responsibly with the impact to human health at the forefront of the decision and immediately oppose an energy from waste site in this area, to avoid another

catastrophic event, one which no family should ever have to experience.

Whilst the Wollongong cancer cluster is linked to the BHP steelworks, the hazardous emissions are the same.. Take Benzene - proven to be linked to Leukaemia there is no safe level of exposure to benzene. Studies have found that the smallest doses can trigger the formation of leukaemias, with the highest risk among children, the aged and the ill. Benzene is one of the emissions noted on the Fitcher Assessment that will be emitted from the EfW site not to mention a cocktail of other hazardous substances, some of which I have noted with the potential human health effects below.

I would hope the lives that were lost in Wollongong due to exposure were not lost in vain and that lesson is learnt for all to ensure such events are never repeated.

Using Port Kembla as an example on the potential human health outcomes from hazardous emissions, there is a direct correlation of these cancer victims and the hazardous emissions from the steelworks in Port Kembla. There was a study undertaken of six postcode areas for which stable population data were available, the average rate of leukaemia was some 10 times higher at Berkeley (4 km from the Port Kembla site), than at Minnamurra, 18 km away. The cancer rate at Berkeley was 4 per 1,000 people over 22 years; and at Minmumurra it was 0.47.
These analyses, conducted by environmental scientist Chris Illert and mathematician Daniela Reverberi, confirmed the pattern detected earlier when a leading Wollongong oncologist, Dr Paul Clingan, supplied postcode details of the 1,325 cancer cases he treated from 1986 to 1996. Those results showed that the average rate of cancer was three times higher near the steelworks and the smelter than it was 20 km away.
Similar conclusions were reached by one of the largest studies of childhood cancer and leukaemia conducted anywhere in the world. Professor George Knox of Birmingham University examined the 22,000 cases of those who died before the age of 15 across Britain from 1953 to 1980. He found that children born within 5 km of an industrial source had a 20 percent greater likelihood of contracting cancer or leukaemia before reaching adulthood. The pattern persisted over three decades, regardless of population movements.
In Wollongong, further statistics obtained from the Cancer Council revealed an unusually high rate of leukaemia among children and teenagers since at least 1974. Moreover, they indicated two distinct peaks of this rare disease among young people — from 1981 to 1983 and from 1989 to 1992.
Both these peaks followed incidents involving **benzene related**

emissions.

In 1989 there was a six month period in which the EPA apparently ceased monitoring the emissions from the site however when asked to explain this suspicious gap in its records, the EPA director general replied that monitoring was suspended to reduce costs. Yet another six month gap occurred in late 1994 and early 1995, just before several months before the Warrawong High students were diagnosed one of which was unfortunately my friends cousin. This proves that the monitoring of such dangerous sites is far from an adequate option to protect nearby residents.

There is concern about the technology and the ability to deliver the claimed levels of emissions and of course the self regulated monitoring and not to mention the poor record Dial a Dump Industries have in regard to environmental breaches.

Australia does not currently have a national industrial regulatory framework to manage waste incineration. Virtually all regulation of industrial emissions occurs at State level where 'industry self regulation' is common. Under this model 'Smokestack' industries pay for their own consultants to monitor their stack emissions and then jointly prepare reports, which are provided to environmental agencies on a periodical basis. State regulators issue environmental licences to industrial facilities with significant atmospheric emissions for a **fee** with a licence to stipulate emission targets and limits for specified pollutants. The licences require the facility operator to report instances of 'non-compliance' where conditions of the licence (including emission limits) have been breached. The regulator then has the option of taking enforcement action against the facility operator in the form of prosecution and a fine.
Many environmental reports are provided annually to regulators **resulting in long periods when pollution can be occurring undetected by authorities** . It has also been commonplace for industrial regulators to raise emission limits in environmental licenses when industry exceeds the original levels set in the permit. Not to mention that is known that many facilities have licenses that do not include some of their most harmful emissions.
The hazardous waste incinerator burning chlorinated waste in Port Hedland, Western Australia does not have any reference to dioxin emissions in their licence, even though these emissions have serious effects to human health.

Are we prepared to expose nearby residents to self monitoring by an organisation that has already had several breaches including water contamination, dumping of asbestos and other irresponsible

and risky occurrences?

The prevalence of incineration (for example the Martin Grate combustion technology) infrastructure in the 1980s and 1990s has resulted in wide spread concerns from Europe and Japan as to its carbon and toxic pollution (dioxins and heavy metals) footprint.

It is concerning that high emission technology is even being considered in a region surrounded by residential dwellings.

The release of toxic air emission from incinerators can have a significant impact on human health. Waste incinerators release a diverse range of toxic substances to the atmosphere, some are short lived whilst others are persistent and ALL have varying degrees of toxicity. Once released toxic emissions can be carried large distances. Toxic emissions have a significant lag time before human health impacts become obvious, there is a issue of latency of onset of symptoms after exposure which can take decades. Only recently have scientific studies emerge that acknowledge the scale of public health impacts directly from waste incinerators. These public health impacts directly associated with incinerator technologies have been documented by internationally recognised scientists.
The British society for Ecological medicine concluded the following in relation to incineration

'Typically this decision is based on an inexact method called risk assessment. They tend to rely almost exclusively on this type of assessment and often have little understanding of its limitations. Risk assessment is a method developed for engineering but is very poor for assessing the complexities of human health. Typically it involves estimating the risk to health of just 20 out of the hundreds of different pollutants emitted by incinerators.'

The consideration of this EfW plant has a high impact on human health creating a public health risk. This has been studied and concluded in multiple countries in the world.

Japan

Japan now has dioxin contamination levels ten times higher than any other industrialised country. Japan has identified increased symptoms associated with proximity to waste incinerators, particularly in children.
"The findings suggest that proximity of schools to municipal waste incineration plants may be associated with an increased prevalence of wheeze, headache, stomach ache, and fatigue in Japanese children, but worse another study investigated that an area in Japan near a waste incinerator had high levels of dioxin contamination in

soil and an unusually high rate of cancer in residents. This study tested blood samples from 13 women and 5 men living within 2 km of the incinerator. Levels of dioxins were raised considerably in the residents compared to background levels found in the general population. For example, women had an average blood level of 149 pg TEQ/g lipid and men 81 pg TEQ/g lipid, whereas the background level for the general population is in the range of 15 to 29 pg TEQ/g lipid. The authors commented that increased exposure in the residents was considered to be due to direct inhalation of dioxins from the stack.

Spain

A 2013 study investigating health impacts from waste incineration and hazardous waste treatment plants in Spain concluded,
"Our results support the hypothesis of a statistically significant increase in the risk of dying from cancer in towns near incinerators and installations for the recovery or disposal of hazardous waste"
Those townships in the proximity of waste incinerators had the highest excess cancer mortality for populations of all the towns studied.

France

France also has a high proportion of waste incinerators compared to most other countries. Researchers conducted a study in the area of Doubs, eastern France, to investigate clustering of two types of cancer, soft tissue sarcoma and non-Hodgkin's lymphoma, near to a waste incinerator. The study was undertaken following a report of high dioxin emissions from the incinerator. The study found highly significant clusters of both cancers in areas close to the incinerator but not in other surrounding regions.

The Fitcher Energy from Waste human health risk assessment for the Genesis Eastern Creek EfW Site, has noted
"The key issue is the release of substances from the proposed EfW to atmosphere which have the potential to harm human health. The Facility is to be located in Eastern Creek, approximately 36km west of the Sydney CBD and surrounded by the residential areas of Minchinbury, Mt Druitt and Rooty Hill to the northwest. The closest of these residential areas is approximately 1km **(this is inaccurate, in fact it is 500 metres)** to the north of the facility. Due to the proximity of the residential receptors there is the potential for emissions to impact upon human health.

Some of these pollutants listed in the Fitcher assessment include:

Nitrogen Dioxide ***- Irritation of eyes, nose, throat, and lungs, nausea, shortness of breath, respiratory problems, reduced oxygenation of body tissues, and a build-up of fluid in the lungs***

particulate matter - ***Increased respiratory symptoms, decreased lung function, aggravated asthma, development of chronic bronchitis, irregular heartbeat, non fatal heart attacks, and premature death in people with heart or lung disease***

Carbon Monoxide ***- Chest pain, cardiovascular effects, vision problems, reduced ability to work or learn, reduced manual dexterity, difficulty performing complex tasks, and respiratory problems***

Mercury***- Brain, kidney, and developing fetus damage, lung damage, nausea, vomiting, increased blood pressure, and ocular and dermal irritation***

Cadmium ***- Severe lung damage, kidney disease, stomach irritation, increased bone fragility, and increased risk of lung cancer***

Arsenic ***- Sore throat, irritated lungs, nausea, vomiting, decreased production of red and white blood cell s, abnormal heart rhythm, damage to blood vessels, darkening of skin, skin irritation, and increased risk of skin, liver, bladder, and lung cancers***

Lead ***- Adverse effects on nervous system, kidney function, immune system, reproductive and developmental systems, and cardiovascular system, and neurological effects (especially in children)***

Dioxin and furans; - ***Chloracne, increased risk of cancer, increased risk of heart disease, and increased risk of diabetes***

Dioxin like PCBs; ***- Increased risk of cancer, specifically rare liver cancers and malignant melanoma, immune system damage, reproductive system damage, nervous system damage, endocrine system damage, dermal and ocular effects, and elevated blood pressure, serum triglyceride, and serum cholesterol***

Polycyclic aromatic hydrocarbons (PAHs). ***- Increased risk of cancer***

Benzene ***- Benzene is a well established cause of cancer in humans. 1,3 The International Agency for Research on Cancer has classified benzene as carcinogenic to humans (Group 1).1,3 Benzene causes acute myeloid leukaemia (acute non-lymphocytic leukaemia), and there is evidence that benzene may also cause acute and chronic lymphocytic leukaemia, non-Hodgkin's lymphoma and multiple myeloma. Individuals who have experienced benzene poisoning requiring treatment show a substantially increased risk of mortality from leukaemia.***
3. Chronic exposure to benzene can reduce the production of both red and white blood cells from bone marrow in humans, resulting in aplastic anaemia

Dioxins are highly toxic at extremely low levels (effects have been reported in the parts per quadrillion range) making claims of 'low dioxin emissions' from incinerators somewhat meaningless.
Incinerator proponents commonly claim that dioxin emissions were only ever a problem with 'old' incinerators and that 'new' incinerators have overcome these problems.
However, there is no definition of new or old incinerators and most current proposals are merely variations on the same technologies that have been in use for decades.
What has changed is the branding of these technologies.
Proponents are now well aware that the public has a very negative perception of any technology with very good reason, called an incinerator and associate it with dioxin pollution.
In order to avoid this association the industry has been advised to use a range of new terms for incinerators including : Waste to Energy
Despite this re-branding, a range of recent studies and incidents conclude that dioxin emissions remain a problem for incinerators.

This proposal is a serious health concern to the local communities. I hope the rejection of the application in light of the human health risks are prioritised above and beyond any unstable concept that is a risky business venture with no security to succeed as seen in other EfW sites…
Brightstar Environmental's SWERF plant in Wollongong. This operation closed after 3 years of trials in 2004 without having become operational and with many emission breaches. The parent company Energy Developments Ltd lost around $160 million along with the local community investment of $1.5 million.
Harrisburg, the capital city of Pennsylvania is on the verge of filing for bankruptcy with up to US $345 million in debt mostly associated with the city's waste to energy incinerator.

Kind Regards

Liz Duss