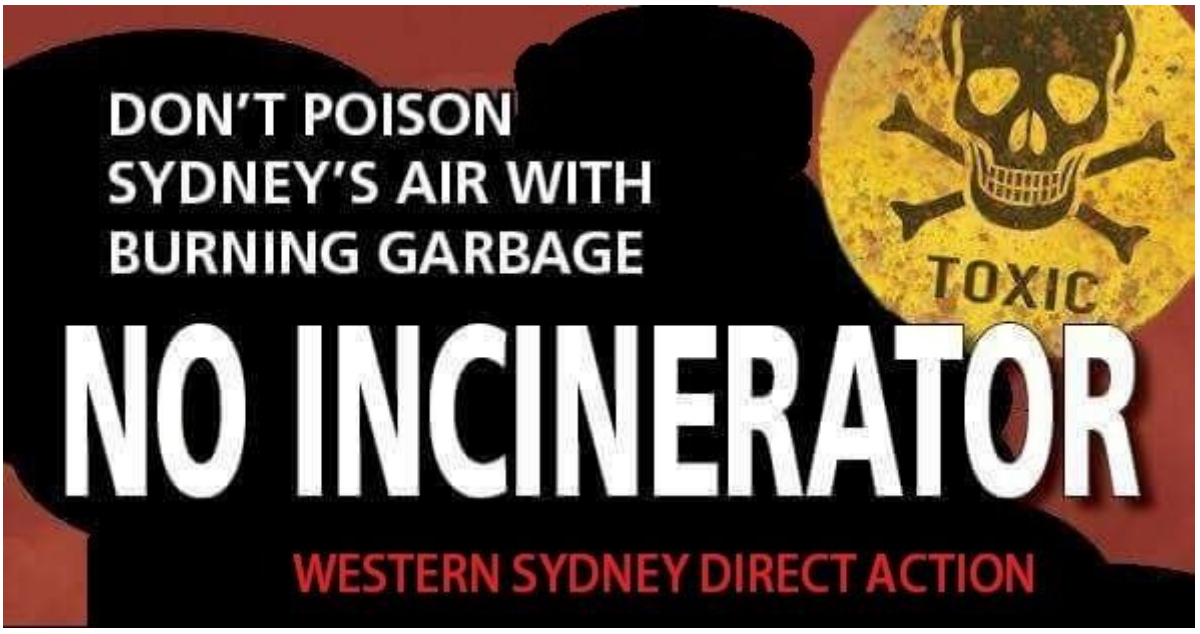

Western Sydney Direct Action Incorporated

Contact Details:	wsdaction@gmail.com
Project:	State Significant Development (SSD) 10395
Proponents:	Cleanaway and Macquarie Capital (Group)
Site:	The site is located at 339 Wallgrove Road Eastern Creek in the Western Suburbs of Sydney NSW, approximately 36km west of the Sydney CBD, 18 km west of Parramatta and 12 km east of Penrith.

Proposal description:
This project is essentially a large incinerator which will burn up to 500,000 tonnes per year of residual municipal solid waste (MSW) and residual commercial and industrial (C&I) waste products and the heat is used to generate electricity. The Incinerator would operate 24/7 for the next 35 years and employ 55 people on completion. This project will cause a cumulative air pollution threat to the Blacktown and surrounding communities. There is no comfort in claims that predicted emissions will meet air quality protection standards while the Federal government postponed action on our air quality protection standards undermining the ability of state regulators to ensure smokestack industries such as this project, ensure the protection of air quality in the Blacktown area and Sydney.

Our Position: Oppose the Cleanaway Incinerator
We are opposed to Cleanaways; Western Sydney Energy & Resource Recovery Centre (Incinerator)
WSDA has made no political donations to anyone ever.

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1) Studies Confirm Waste to Energy Incineration is harmful to health

The proposal to build the Cleanaway & Macquarie Capital Incinerator at Eastern Creek, is a recipe for disaster. The public health claims made by proponents at their citizen panel are challenged by the experiences of communities around the world where these incinerators are already operating. There is a wide body of scientific study world wide that shows Waste Incineration is dangerous to health, please find some below;

- A 2020 Study "The Health Impacts of Waste Incineration: A Systematic Review in Austraia" states: A range of adverse health effects were identified, including significant associations with some neoplasia, congenital anomalies, infant deaths and miscarriage, but not for other diseases. Ingestion was the dominant exposure pathway for the public.

- Another 2020 Study on Incineration proves the associated health problems, such as premature mortality, cardiac hospital admission, respiratory hospital admission, chronic bronchitis and cancer. YOLL stands for Years of Life Lost (last column). Vlachokostas.C 'et al.', 2020, 'Externalities of energy sources: The operation of a municipal solid waste-to-energy incineration facility in the greater Thessaloniki area, Greece' *ScienceDirect, Vol 113, PP 351-358*

Table 3
Concentration – Response Functions and sources per stressor.

		Source	Stressor	*YOLL or incidents or days/year × receptor × μg/m³air*
Impact	Premature mortality *(total population)*	Vlachokostas et al., 2012	PM_{10}	$R_{AM,PM10} = 4.0 \times 10^{-4}$
	Cardiac Hospital Admission (CHA) *(total population)*	Vlachokostas et al., 2012	PM_{10}	$R_{CHA,PM10} = 1.14 \times 10^{-5}$
	Respiratory Hospital Admission (RHA) *(total population)*	Vlachokostas et al., 2012	PM_{10}	$R_{RHA,PM} = 1.31 \times 10^{-5}$
	Chronic Bronchitis (CB) *(aged 27 +)*	Vlachokostas et al., 2012	PM_{10}	$R_{CB,PM10} = 2.65 \times 10^{-5}$
	Restricted Activity Days (RADs) *(aged 18 +)*	Vlachokostas et al., 2012	PM_{10}	$R_{RAD,PM10} = 9.4 \times 10^{-2}$
	Cancer *(total population)*	Berry et al., 1995	Heavy metals, Dioxins	$R_{CANCER,hm} = 2.57 \times 10^{-5}$ $R_{CANC,dioxins} = 6.02 \times 10^{-1}$

- Sydney will have high levels of pollution if five incinerators go ahead. This current Harvard Study proves regions with high levels of air pollution are more likely to have a higher death rate from COVID 19 than less polluted areas. This current 2020 study is the first to look at the link between long-term exposure to fine particulate air pollution (which is known to be released from incinerators) (PM2.5) And COVID 19.

- There is an increased risk of out-of-hospital cardiac arrest (OHCA) even from short-term exposure to low concentrations of fine particulate matter PM2.5, such as that produced by Incinerators. This current 2020 nationwide study in Japan, chosen for its superior monitoring, population density and relative air quality, is believed to be by far the largest of its kind. It provides comprehensive evidence of the relationship between PM2.5 and cardiac arrests, using a sample three times larger than all previous research combined and demonstrating the impacts on groups such as the elderly.

- The Study "An Industry Blowing Smoke," disputes claims by proponents of waste to energy Incinerators, that the advanced system they use to convert solid waste to renewable energy is both good for the environment and step toward energy independence. "The core impacts of all types of incinerators remain the same: They are toxic to public health, harmful to the economy, environment and climate, and undermine recycling and waste reduction programs" .

- A study by Dr George D. Thurston of New York University School of Medicine in November 2017 found that living near a waste to energy incinerator carries the same health risks as secondhand smoke. "The increase in lung cancer from long-term exposure to fine particulate matter is roughly the same as the increase in lung cancer of a non-smoker who breathes passive smoke while living with a smoker, or about 20 % increase in lung cancer risk".

- Waste-to-energy incineration is also a source of mercury emissions. The increased mercury levels have been recorded in fish living in the reservoirs for hydroelectricity. The adverse effects of mercury exposure on human health have been indicated in a number of studies, and there seems to be no 'zero effect' exposure level. As a result, the mitigation of mercury emissions is gaining more and more attention. The danger of mercury pollution drew widespread attention after the cause of the Minamata disease (Ekino et al., 2007) was identified as a severe case of mercury poisoning. Mercury compounds are generally more toxic than the compounds of other nonradioactive heavy elements (Pushie et al., 2014). Mercury can easily vaporise in combustion processes and be released into the atmosphere as mercury vapours. Moreover, combustion temperatures are usually high enough to decompose mercury compounds and release Hg0 vapour (metallic Mercury).
  Elemental mercury has a very low solubility in water, which makes it challenging to remove elemental mercury by commonly used methods for flue-gas cleaning. Human exposure to metallic mercury takes place mostly by swallowing contaminated foods or drinks or breathing in mercury vapours. When ingested, only a very small amount of metallic mercury (less than 0.01% of the dose) is absorbed through the gastrointestinal tract (Da Broi et al., 2017). Inhaling of mercury vapours is much more dangerous as mercury enters the bloodstream through the lungs. The density of saturated mercury vapour strongly depends on the temperature. Charvat. P 'et.al., 2020, 'An overview of mercury emissions in the energy industry - A step to mercury footprint assessment', *Journal of Cleaner Production*, *ScienceDirect*, Volume 267, No 122087

- It has recently been reported that Ultra fine Particulates, which are emitted from Incinerators in high quantities - are associated with an increase in blood pressure in schoolchildren, with the smallest particles inducing the largest effect. Source: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4492263/

- A Study was completed; "Relationship Between Distance of Schools from the Nearest Municipal Waste Incineration Plant and Child Health in Japan" In Japan, the main source of cancer causing dioxins are incinerators. This study examined the relationship between the distance of schools from waste incineration plants and the prevalence of allergic disorders and general symptoms in Japanese children. Study subjects were 450,807 elementary school children aged 6–12 years who attended 996 public elementary schools in Osaka Prefecture in Japan. The study showed that a positive association with fatigue was pronounced in schools within 4 km of waste incinerators. The findings also suggested incineration near schools may be associated with an increased prevalence of wheezing, headaches, stomach ache, and fatigue in Japanese children. https://link.springer.com/article/10.1007/s10654-005-4116-7

- A recent study that looked into a medium sized city in southwestern Sweden, clearly identified their new modern incinerator as the single most significant source of PM2.5's. http://senedd.cynulliad.cymru/documents/s7994/Yr%20Athro%20Vyvyan%20Howard%20Papur%202.pdf

- A study published recently in the American Medical Association's Jama Pediatrics journal is the first to examine the impact of particles of 1 micrometre (PM1) – a millionth of a metre – or smaller on health. It found an increase in PM1 of 10 micrograms per cubic metre over the entire pregnancy led to a 9% increased risk of a preterm birth. This research confirms - There is no safe concentration of fine particle pollution.

- Two large American studies confirm that Waste to Energy Incinerators increase particulates therefore increasing the risk to health. The studies proved that fine (PM2.5) particulate air pollution causes increases in all-cause mortality, cardiovascular mortality and mortality from lung cancer, after adjustment for other factors. A more recent, well-designed study of morbidity and mortality in postmenopausal women has confirmed this, showing a 76% increase in cardiovascular and 83% increase in cerebrovascular mortality in women exposed to higher levels of fine particulates. These fine particulates are primarily produced by combustion processes and are emitted in large quantities by incinerators.

- L M Brown and his colleagues have pointed out that "long-term exposure to even low concentrations of fine particles may be associated with reduced life expectancy" [Brown L.M., Collings N., Harrison R.M., Maynard A.D. and Maynard R.L. Ultrafine particles in the atmosphere: introduction. Philosophical Transactions of the Royal Society of London A 358 (2000) 2563-2565].

- The Environmental Protection Agency cites health studies indicating that particles smaller than 2.5 micrometers (PM2.5) (and emitted from Incinerators) are "the major contributor to serious health problems like respiratory illness and premature mortality"

[http://www.crwi.org/textfiles/partem.htm]

- Another recent study (Mao, et al. 2007) found that the concentrations of PM2.5 and PM10 in the study area located downwind of the incinerator were significantly higher (between 220% and 700% higher) than the study area upwind of the incinerator. The study indicated that the air had “significant contamination by air pollutants emitted” from a waste incinerator, representing a public health problem for nearby residents, despite the facility being equipped with a modern air pollution control system.

- Many studies, old and new, show that communities all around the world, living close to incinerators, even modern facilities, suffer higher rates of cancer and respiratory problems (e.g. http://tinyurl.com/y7dteo). The recently released Paris Appeal Memorandum, supported by the European Standing Committee of Doctors (representing 2 million doctors), urged a moratorium on building any new incinerators (www.artac.info/static.php?op=MemorandumParisAppeal.txt&npds=1).

- This study “Toxic ash contaminates our food supply”’ Ash and other residues from waste incineration contain dioxins, furans (PCDD/Fs) and a range of other highly toxic POPs at levels which are a threat to human health and the environment. Current management practices and regulatory threshold levels for POPs that contaminate incinerator residues are not preventing releases of POPs into agricultural settings, the food chain and the broader environment. http://ipen.org/sites/default/files/documents/ipen-toxic-fly-ash-in-food-v1_4a-en-web.pdf

- The study “Public health impacts associated with incinerators – a compilation” results support the hypothesis of a statistically significant higher risk, among men and women alike, of dying from all cancers in towns situated near incinerators and hazardous waste treatment plants, and specifically, a higher excess risk in respect of tumors of the stomach, liver, pleura, kidney, and ovary. Furthermore, this is one of the first studies to analyze the risk of dying of cancer related with specific industrial activities in this sector at a national level, and to highlight the excess risk observed in the vicinity of incinerators and installations. https://zerowasteoz.org.au/wp-content/uploads/2017/12/Public-health-impacts-associated-with-incinerators.pdf

- A recent study by The Small Area Health Statistics Unit has revealed and area in Dundee, Scotland, near a waste incinerator has one of Europe's largest cancer clusters. There were 81 more cases of non-Hodgkin's lymphoma than average and evidence of clustering for myeloid leukemia, around the incinerator. https://www.whatdotheyknow.com/request/matters_relating_to_the_incinera

2) Air Pollution from the Incinerator

Cleanaway states in their own Incinerator Scoping Report that "Air emissions from the stack have the potential to impact on human health", therefore admitting it is dangerous to our health.

Health Studies Prove Particulate Pollution is Deadly

The “Health Risk Assessment of Air Pollution in Australia” Report proves particulate pollution is deadly. An Incinerator will increase ultra-fine nano particulate pollution, there is no current technology available to capture or monitor these particles. They are so small they are able to breach the blood brain barrier.

On 3rd August 2017 a health study was published by the National Environment Protection Council that stated;

- “Ongoing exposure to air pollution will cut months from the life expectancy of Sydneysiders”
- Long-time city residents will have their lives reduced by an estimated 72 days for men and 65 for women by ongoing inhalation of fine particle pollution.
- Particulate pollution causes an estimated 520 deaths in Sydney every year, based on exposure to 2008 levels, as well as being linked to cardiovascular and asthma hospitalisations.
- Sydney's air kills more people than traffic accidents.
- A study published in the *Environmental Research Letters* journal found that 2.1 million people die prematurely each year because of fine particle pollution, particles less than 2.5 micrometres in diameter. Most deaths were from cardiopulmonary disease and a smaller percentage from lung cancer.

Further Health Studies on Particulate Pollution

- Cardiovascular morbidity and mortality [Miller K.A., Siscovick D.S., Sheppard L., Shepherd K., Sullivan J.H., Anderson G.L. and Kaufman J.D. Long-term exposure to air pollution and incidence of cardiovascular events in women. New England Journal of Medicine 356 (2007) 447-458]

- Cardiopulmonary mortality [Pope C.A. Mortality effects of longer term exposures to fine particulate air pollution: review of recent

epidemiological evidence. Inhalation Toxicology 19 (2007) 33-38]

- Respiratory, immunological, haematological, neurological and reproductive / developmental problems, sometimes with long time-lags between exposure and health effects [Curtis L., Rea W., Smith-Willis P., Fenyves E. and Pan Y. Adverse health effects of outdoor air pollutants. Environment International 32 (2006) 815-830]

- Every 10 µg/m3 increase in fine particulate levels was associated with a 4% increase in deaths from all causes, a 6% increase in deaths from cardiopulmonary illness and an 8% increase in lung cancer mortality [Pope C.A., Burnett R.T., Thun M.J., Calle E.E., Krewski D., Ito K. and Thurston G.D. Lung cancer, cardiopulmonary mortality, and long-term exposure to fine particulate air pollution. Journal of the American Medical Association 287 (2002) 1132-1141]

- There is particular concern about the effects of particulate pollution on infants. Increases in infant deaths from respiratory causes with a 10 µg/m3 increase in PM2.5s have been identified [Woodruff T.J., Darrow L.A. and Parker J.D. Air pollution and postneonatal infant mortality in the United States, 1999-2002. Environmental Health Perspectives 116 (2008) 110-115]

- A 10 µg/m3 increase in PM2.5s was related to a 5% increase in the risk for wheezing bronchitis [Pino P., Walter T., Oyarzun M., Villegas R. and Romieu I. Fine particulate matter and wheezing illness in the first year of life. Epidemiology 15 (2004) 702-708]

The "State of Global Air 2020" Report

The “State of Global Air 2020” Report said more than 90% of the global population experienced fine particle air pollution that exceeded safety guidelines from the World Health Organization.

This study said 476,000 newborn babies died last year due to pollution. "Air pollution is linked with an increased risk of low birth weight and preterm birth," it states. "Babies born too small or too early are more susceptible to health problems such as lower-respiratory infections, diarrheal diseases, brain damage and inflammation, blood disorders, and jaundice."
Source:
https://www.upi.com/Top_News/World-News/2020/10/21/Air-pollution-killed-nearly-a-half-million-newborns-last-year-study-says/9551603289509/?fbclid=IwAR3Ksat-tvCIyrCsyio5MB0BWbnhe98zCpkMVvXPSbqsZmpi7d6xC__bcUY

Health Problems caused by Particulate Pollution

Incinerators produce ultra-fine particulates of nano particulate size, there is no technology available to capture particles this small.

There are many health effects from exposure to particulate matter. Numerous studies have shown associations between exposure to particles and increased hospital admissions as well as death from heart or lung diseases. Despite extensive epidemiological research, there is currently no evidence of a threshold below which exposure to particulate matter does not cause any health effects. Health effects can occur after both short and long-term exposure to particulate matter.

Short-term and long-term exposure is thought to have different mechanisms of effect. Short-term exposure appears to exacerbate pre-existing diseases while long-term exposure most likely causes disease and increases the rate of progression.

Short-term exposure (hours to days) can lead to:

- Irritated eyes, nose and throat
- Worsening asthma and lung diseases such as chronic bronchitis (also called chronic obstructive pulmonary disease or COPD)
- Heart attacks and arrhythmias (irregular heart beat) in people with heart disease
- Increases in hospital admissions and premature death due to diseases of the respiratory and cardiovascular systems

Long-term exposure (many years) can lead to:

- Reduced lung function
- Development of cardiovascular and respiratory diseases
- Increased rate of disease progression
- Reduction in life expectancy
  https://www.health.nsw.gov.au/.../particulate-matter.aspx

3) Cleanaway' EIS Confirms the Incinerator will release emissions from the stack

- "Operation of the EfW facility will produce air emissions from the stack" (Pg 27 EIS).

- “In this case the predominant particles being emitted by this facility are those that are less than 2.5 microns (PM2.5)" (Page 63 Human Health Risk Assessment)
- A study published in the *Environmental Research Letters* journal found that 2.1 million people die prematurely each year because of fine particle pollution, particles less than 2.5 micrometres in diameter. Most deaths were from cardiopulmonary disease and a smaller percentage from lung cancer. Source
- There are homes 1km from the Cleanaway incinerator putting families at risk from ultrafine particulates released from the stack.

4) Cleanaway’ EIS Confirms the Incinerator Will Release Dangerous Ultra fine Particulates

Cleanaways EIS confirms

- “In this case the predominant particles being emitted by this facility are those that are less than 2.5 microns (PM2.5)" (Page 63 Human Health Risk Assessment)
- “Gases (and fine particles) are emitted at around 60-70oC from the stack and they are pushed out of the stack using fans (i.e. at some speed) so these gases (and fine particles) rise up into the air from the top of the stack as the gases (and fine particles) cool and slow down a bit they begin to interact with the wind above the stack (i.e. >76.5 m high). This mixes the gases (and fine particles) into the atmosphere”.
  ” (Health Risk Assessment Page 23)

- Unlike many other pollutants, particulates comprise a broad class of diverse materials and substances, with varying morphological (shape), chemical, physical and thermodynamic properties, **with sizes that vary from less than 0.005 microns to greater than 100 microns**. (Page 48 Human Health Risks Assessment)

- There is no technology available to capture 0.005 micron particulates. Airborne particles are classified according to their size. Particles with a diameter of ≤ 10 microns (1 micron (1 μm) = 10^{-6} metre) are potentially dangerous because they are small enough to be drawn into the lung; such particles are designated PM10s. Particles with a diameter of ≤ 2.5 microns are more dangerous because they can be drawn deeper into the lung; they are designated PM2.5s. Even smaller particles are considered by many to be even more dangerous. The Environmental Protection Agency cites health studies indicating that particles smaller than 2.5 micrometers (PM2.5) are “the major contributor to serious health problems like respiratory illness and premature mortality” Source

- There are currently no state or national air quality standards, license conditions or other regulatory measures to protect the Australian community from ultrafine particulates.

5) Failure of Waste to Energy Incinerator Filters

Information from a multi-national waste management company (Veolia) confirms Incineration baghouse filter collection efficiency as the following;

- 95-99% for PM10s
- 65-70% for PM2.5s
- 5-30% for particles smaller than 2.5 microns

Source: Howard C.V. The health impacts of incineration. Proof of Evidence submitted to East Sussex and Brighton and Hove Local Plan Public Inquiry, 2003

These Incineration filter bags tear. The Sunday Herald (Scotland) discovered a major incident on 19 June 2001 which led to Dundee Energy Recycling Limited filing a formal report with Scottish Environment Protection Agency (SEPA). “A spokesman for SEPA said that a lot of black dust had poured from the incinerator for an hour after filter bags suddenly burst. The pollution emission dials went off-scale, so there were no readings for the amounts that were discharged. The incinerator was shut down and the operators are trying to find out why the filter bags, which were new, had failed” Source

6) PM2.5 & PM10 background level concentrations already exceed the safety limits

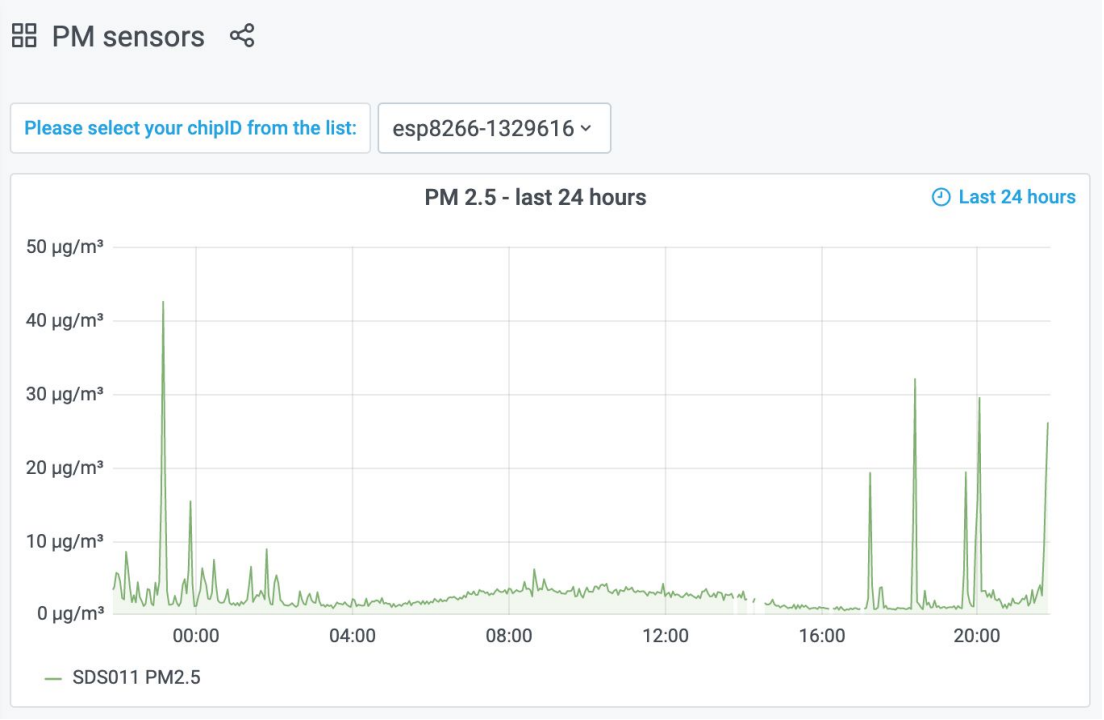
“Cleanaway confirms in their EIS “All predicted impacts associated with all emissions from the proposal are within the applicable emission limit values and impact assessment criteria, apart from cumulative ground level $PM_{2.5}$ and PM_{10} concentrations, due to the existing background levels which already exceed the criteria”.

7) Independent Air Monitors Shows Particulate Pollution near Incinerator Site Already Exceeds Safety Limits

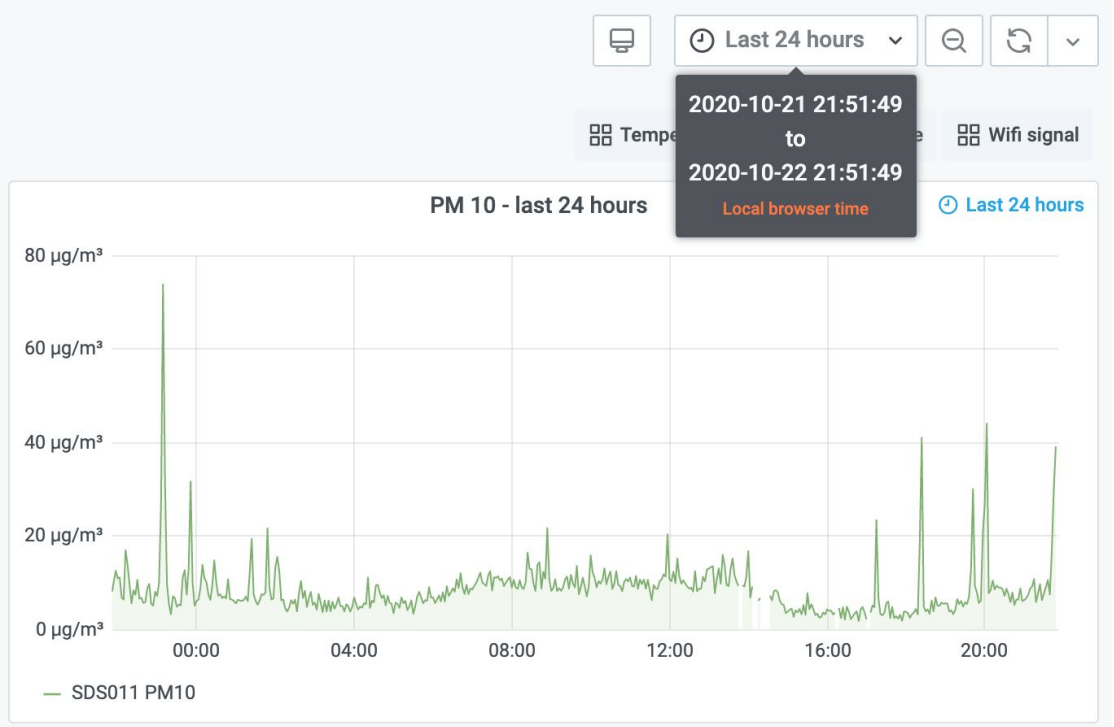
We have a real time air monitor operating in Blacktown to collect baseline air emissions for particulates PM2.5 and PM10.

The safety standard for particulate pollution was set in 1997, The annual standard was set at 15 micrograms per cubic meter(µg/m3).

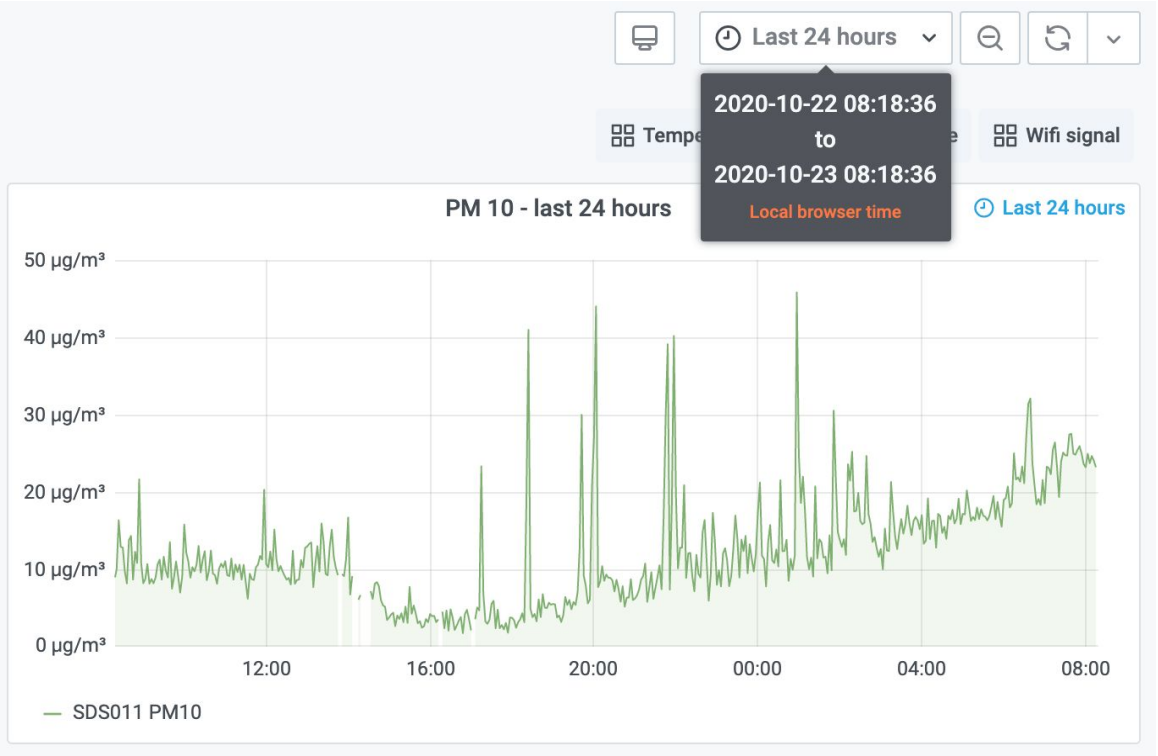
This real time air monitor below shows ambient air already exceeded the safety standard for PM2.5 on the 21/10/2020 at 40(µg/m3).



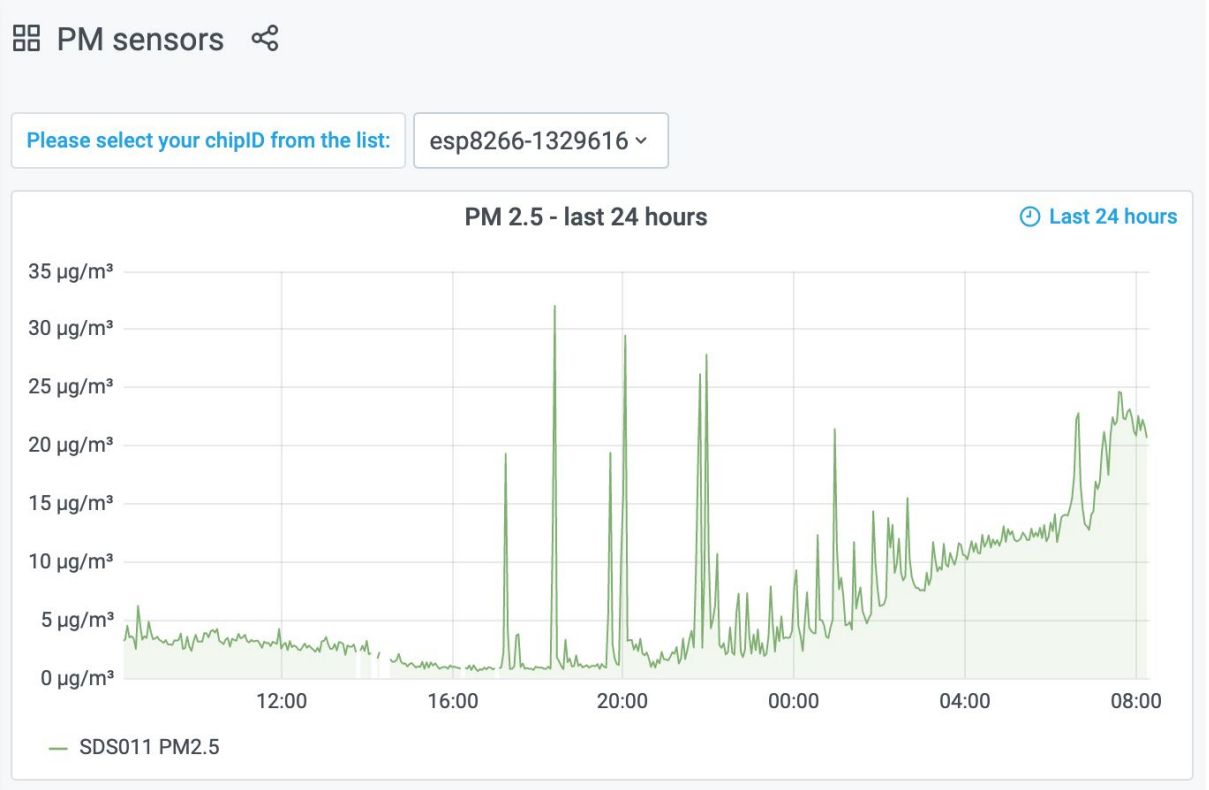
This real time air monitor below shows ambient air exceeds the safety standard for PM10. On the 21/10/2020 recorded at 80(µg/m3).



This real time air monitor below shows ambient air already exceeded the safety standard for PM10 on the 23/10/2020 at 45(µg/m3).

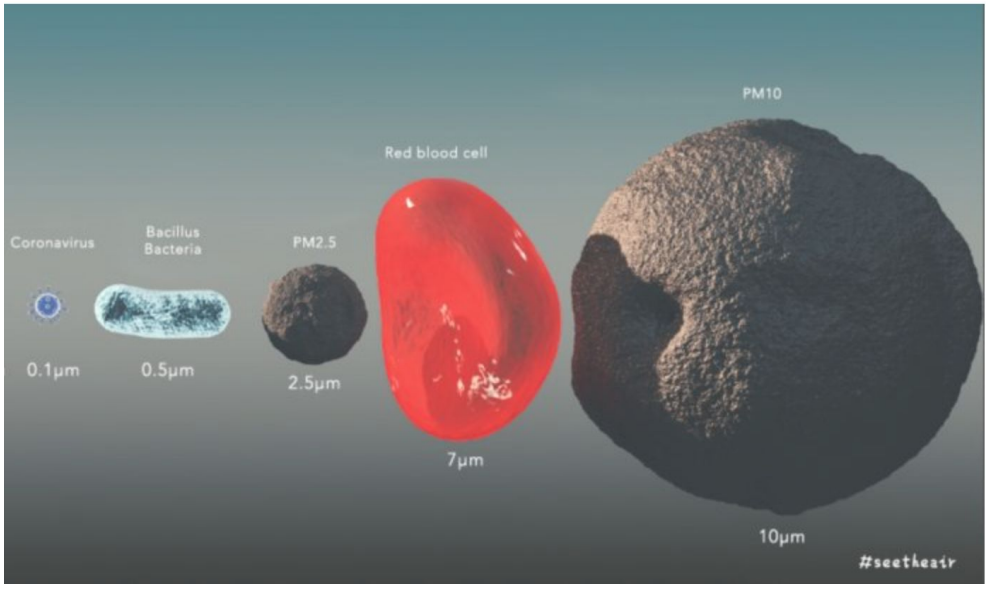


This real time air monitor below shows ambient air already exceeded the safety standard for PM2.5 on the 23/10/2020 at 32(µg/m3).



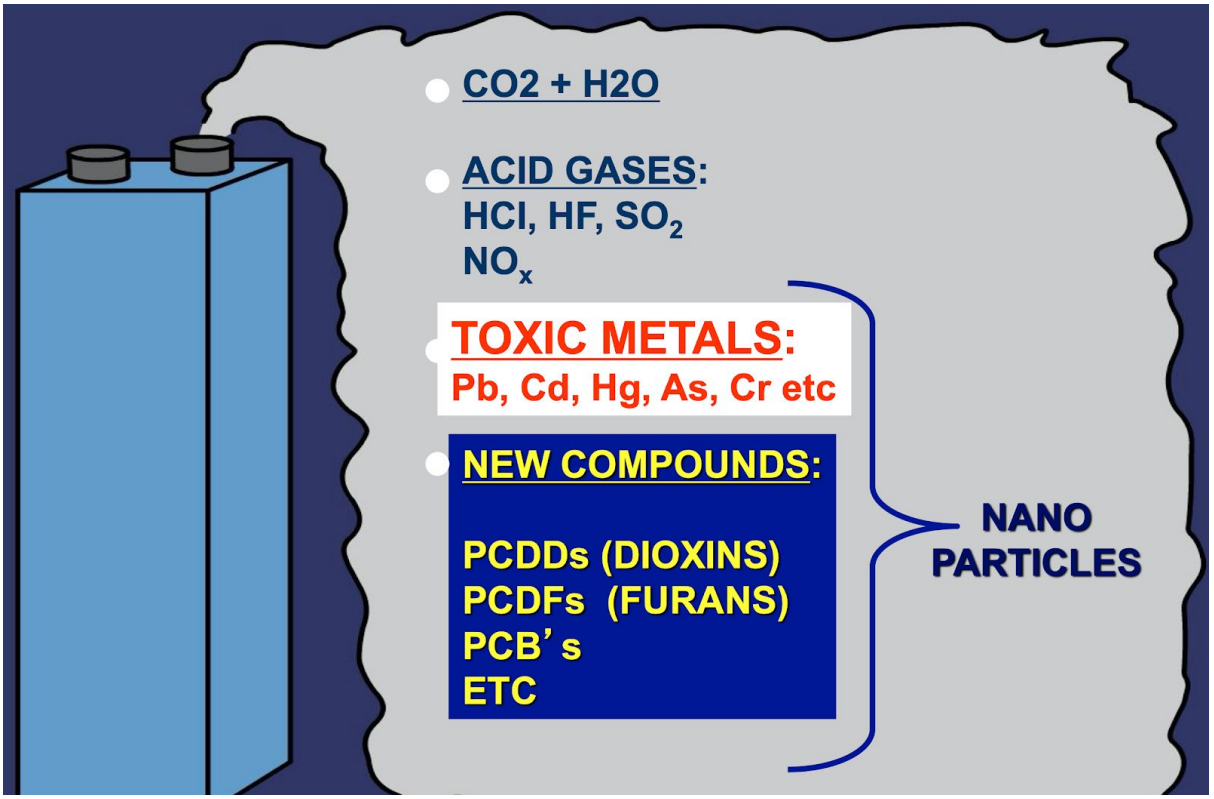
8) There Are No Regulations For Ultra-Fine Particulates Emitted From Incinerators

- There are no regulations for particles smaller than 2.5PM.
- Nanoparticles and Ultra-fine Particles are not efficiently captured by air pollution control devices.
- Ultra-fine particles travel long distances and remain suspended for long periods of time.
- Ultra-fine particles penetrate deep into the lungs.



Nano Particulates are smaller than the Coronavirus

Source: “Incineration, Nanoparticles & Health”, (Howard 2009). Statement of Evidence Particulate Emissions and Health proposed, Ringaskiddy, Waste to Energy Incinerator.



Paul Connet PHD, "Incineration Doesn't Make Sense in the 21st Century", AmericanHealthStudies.org

9) False Statement in EIS Regarding Volume of Waste Reduction

- "the EfW process typically leads to a 95% reduction in the volume of waste that would otherwise go to landfill." (Human Health Risk Assessment Page 1)

  This statement in Cleanaways Human Health Risk Assessment (Pg1) is incorrect. "**After incineration** approximately 26 - 40% of combusted solid **waste** will **remain** as solid residues. Source

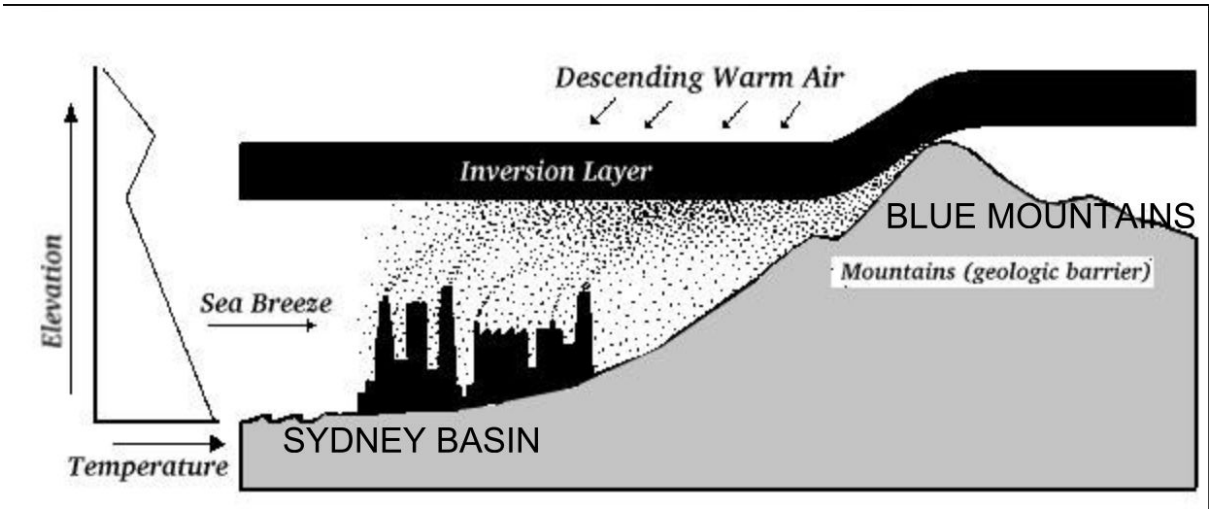
10) False Statement in EIS Regarding Renewable Energy Source

- "the proposal will enhance energy security for NSW by providing a renewable base load energy source and an alternative to traditional fossil fuel generation".
- Zero Waste Europe (ZWE) has published a policy briefing on the carbon intensity of energy-from-waste (EfW) processes, revealing that it is around twice as carbon intensive (580g CO2 equivalent per kWh) as the current EU average electricity grid intensity and significantly greater than energy produced through conventional fossil fuel sources

such as gas (340g CO2 equivalent per kWh). Proving energy from waste incineration is not renewable energy.

11) Sydney's Basin shape causes it to trap pollution.

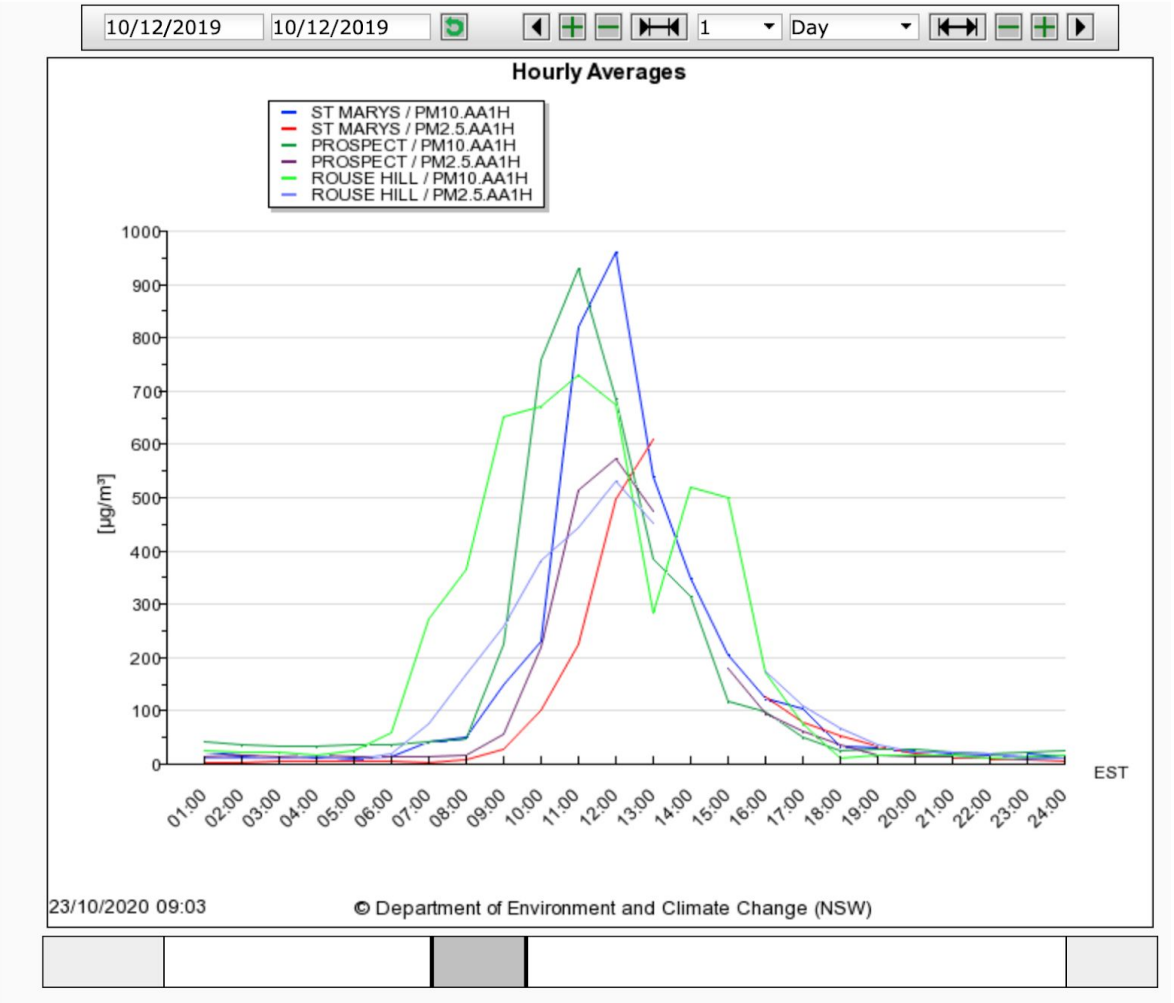
In summer cool overnight air drains off the mountains and moves towards the sea picking up air pollution. Morning sea breezes then push it back over urban Sydney areas collecting more pollution and creating Sydney' smog. Sydney's air quality frequently exceeds the national health standard on particulates PM2.5, PM10, Nephelometer levels and Ozone levels.



"Areas with heavy pollution are prone to unhealthy air and an increase in smog when an inversion is present because they trap pollutants at ground level instead of circulating them away".
Source: https://www.thoughtco.com/temperature-inversion-layers-1434435

On the 10th December 2019 BAM Air Monitoring recorded particulate levels between 900(µg/m3) and 1000(µg/m3). The safety standard was exceeded for PM 2.5 and PM10 see graph below.
Source: https://bit.ly/1UGgcUH

The addition of Cleanaways incinerator at Blacktown would further add to our poor air quality. This Incinerator would release ultra-fine particulates and substances such as arsenic, cadmium, nickel, polycyclic aromatic hydrocarbons and Persistent organic pollutants (POPs) into the Sydney Basin.



Dangerous Particulate pollution recorded on the 10th December 2019

12) Cleanaways Reference Facility "Dublin" Breached Environmental Licence In First Week Of Operations

Dublin's Poolbeg Incinerator is named by Cleanaway in their EIS as their reference facility. This incinerator breached its environmental protection licence during its first week of operation. This proves these incinerators can not be run safely. This choice of incinerator as the reference facility just reinforces the community's concerns about Cleanaways proposal for an Incinerator.

- The Poolbeg Incinerator had a total of 37 notifiable incidents referred to the EPA in the first year of operation, resulting in a total of 14 non-compliance notices being issued by the EPA.

  Source:
  https://www.thejournal.ie/poolbeg-incinerator-fine-3925667-Mar2018/?fbclid=IwAR2I5yY131FxTER4hmDL3CRiyJ_IhG0AaTxRtOuWPjG834jNuKuSgOzHT-s

- On 08/06/2017 Eleven people were hospitalised after an uncontrolled release of a cloud of Lime at this Waste to Energy Incinerator.
  Source:
  https://www.irishtimes.com/news/ireland/irish-news/eleven-hospitalised-after-incident-at-dublin-s-poolbeg-incinerator-1.3112097?fbclid=IwAR3GWfka3bRrydNsDkCX_rooqJ9kT5nM3M2IbRQmGIlC15oidNQYE0g9IBE

- In 2017 Poolbeg Incinerator was issued with an order from the Health and Safety Authority to cease operations pending an investigation into an uncontrolled release of a cloud of Lime that injured eleven people.

- There were Three further serious incidents at Poolbeg Incinerator on 1st, 5th and 8th June 2017. The first involved problems with a filter used to control pollution, the second and third incidents involved non-compliance over the dropping of temperatures to below an agreed level of 850C on three occasions and then failing to notify the EPA of the breach.
  Source:
  https://www.dublinlive.ie/news/dublin-news/three-further-serious-incidents-poolbeg-13255511?fbclid=IwAR1vJz22blqpKL3kaO5kQN7CB7qgLstIF63T4BNyGHLTJshiZ4IFGX3QN8U

- The proponent of the Poolbeg incinerator in Dublin was fined €1,000 and ordered to pay €14,000 in costs after they breached their environmental protection licence during the first week. Source:
  https://www.thejournal.ie/poolbeg-incinerator-fine-3925667-Mar2018/?fbclid=IwAR3U8pFFUsF9nicMccCZUPsxT8oQzYts0J3cPaiWknCI5ttjxP29lXPTh7s

13) Continual Fires at Cleanaways Reference Facility "Filborna Oresundskraft" Incinerator in Sweden.

Filborna Waste Incinerator only treats 200,000 tonnes of waste per year, Cleanaway would treat 500,000. Cleanaway chose Filborna Waste Incinerator in Sweden (as per their EIS) as their reference facility to demonstrate that the proposed technology can achieve a reliable and acceptable environmental performance.

Filborna Oresundskraft (Filbornatippen) has had numerous out of control fires at its waste to energy incinerator proving it doesn't have a reliable or acceptable environmental performance at all.

- On the 15th October 2013 A large garbage fire broke out at Filborna in Helsingborg. Source

- On the 7th August 2013 A large garbage fire broke out at Filbornatippen in Helsingborg. The rescue service was alerted shortly after 4 pm and when they arrived at the scene the fire was so extensive and they initially had no one to control it. 20 firefighters from Helsingborg and Höganäs worked with the extinguishing during the evening. Probably the cause of the fire is the same as during Tuesday's garbage fire (a regular occurrence at Filborna Incinerator), ie that a large amount of garbage is out in the heat and drought.Source

- On the 7th December 2016 There was another fire at Filbornatippen

Filborna Oresundskraft Garbage Fire 15/10/2013

14) Cumulative impact assessment shows 0 for dial a dump - Not Completed

Cleanaway state in their EIS (Pg 27) “The assessment covered a range of scenarios, including a cumulative impact assessment incorporating the predicted emissions from other proposals including the Dial a Dump Industries (DADI) Next Generation Proposal, which confirms impacts are within criteria”.

As you can see below the impact of The Next Generations Incinerator for Blacktown is Nil. There is no way another incinerator would have Nil impact.

Table 13 shows the comparison of modelled NO_2 levels and the relevant NEPM guidelines for the facility alone, the facility plus the existing/background levels and this facility plus the proposed Next Generation facility as well as the existing/background levels.

Table 13: NO_2 impacts from the project

Parameter	NO_2 (µg/m³)	
	1-hour average	Annual average
Guideline (NEPM 2016)	246 (0.12 ppm)	62 (0.03 ppm)
Maximum off-site location		
Contribution from project	174	1.47
Project + background	200	22
Project + background + Next Generation facility	200	22
% contribution of project to NEPM	71%	2.3%
Maximum residential location		
Contribution from project	48	1.21
Project + background	109	22
Project + background + Next Generation facility	109	22

15) The Cleanaway Incinerator Proposal Fails To Meet The Basic principles of the NSW Energy from Waste Policy Statement - No Social Licence for Incinerator

- Our community fought off a Waste to Energy Incinerator in 2018 proving they do not want this toxic industry to be established here in NSW.
- 12,000 People signed petitions to the Legislative Council and Legislative Assembly against an Incinerator going ahead.
- Over 500 people have completed our own community survey 99.6% are against the Cleanaway Incinerator going ahead.
- This proves, Community acceptance to operate has not been obtained.

16) The Cleanaway Incinerator Proposal Fails To Meet The Basic Principles of the NSW Energy from Waste Policy Statement - Eligible Waste Streams

Cleanaway' EIS states "Most plastic received will form part of the fuel for the EfW process." Plastic is not an eligible waste stream under the NSW Energy from Waste Policy Statement.

17) The Incinerator fails to meet the basic principles of The Renewable Energy (Electricity) Act 2000

The main objectives of Incinerator developments are "To offer a viable alternative to the burning of fossil fuels by utilising a green and renewable energy source." These objectives will not be met by burning plastic waste based on petrochemicals (which are fossil fuels). Burning plastics derived from fossil fuels does not create 'green' energy – it is simply burning fossil fuels in another form. This does not comply with "The Renewable Energy (Electricity) Act 2000, which specifically excludes fossil fuel-based materials such as plastics.

18) The Cleanaway Incinerator Does Not Meet The European Standards BREF on Incineration

- This EIS (both the ARUP EIS doc and HRA) do not include continuous emissions monitoring (CEM) for dioxin. Despite ARUP and EnRiskS claims that they are abiding by the new EU standards, failing to conduct Continuous Emissions Monitoring for dioxin means they are not compliant with the new EU BREF.

- Cleanaway is seeking an increase in the allowable EfW-eligible fraction of mixed waste which goes through the pre-processing facility to 95% of the mixed waste received for pre-processing. This is permitted through Note 1 to Table 1 of the EfW policy. This does not meet the EU BREF.

- Cleanaway states in their EIS "This would be relevant to approximately 60% of the WSERRC target feedstock in the short term, decreasing to approximately 20% of WSERRC expected feedstock in the longer term, as both councils and businesses move towards greater source separation. If approved, this increase in EfW-eligibility for pre-processed mixed waste would improve overall landfill diversion without undermining the recovery of valuable materials that have a genuine market outlet. Overall, less mixed waste feedstock would need to be directed through the pre-processing facility, potentially allowing more space for other resource recovery operations at this site and supporting competition in the putrescible waste management market".

  Cleanaway are trying to capture waste that hasn't been adequately source separated. This is to ensure they capture the most plastic residual wastes and organic waste (paper and food) for the calorific value that incinerators need. This does not meet the EU BREF

standards.

- Cleanaways EIS states "Most plastic received will form part of the fuel for the EfW process." This does not meet the EU BREF.

19) The Paris Appeal Memorandum, Urged A Moratorium On Building Any New Incinerators

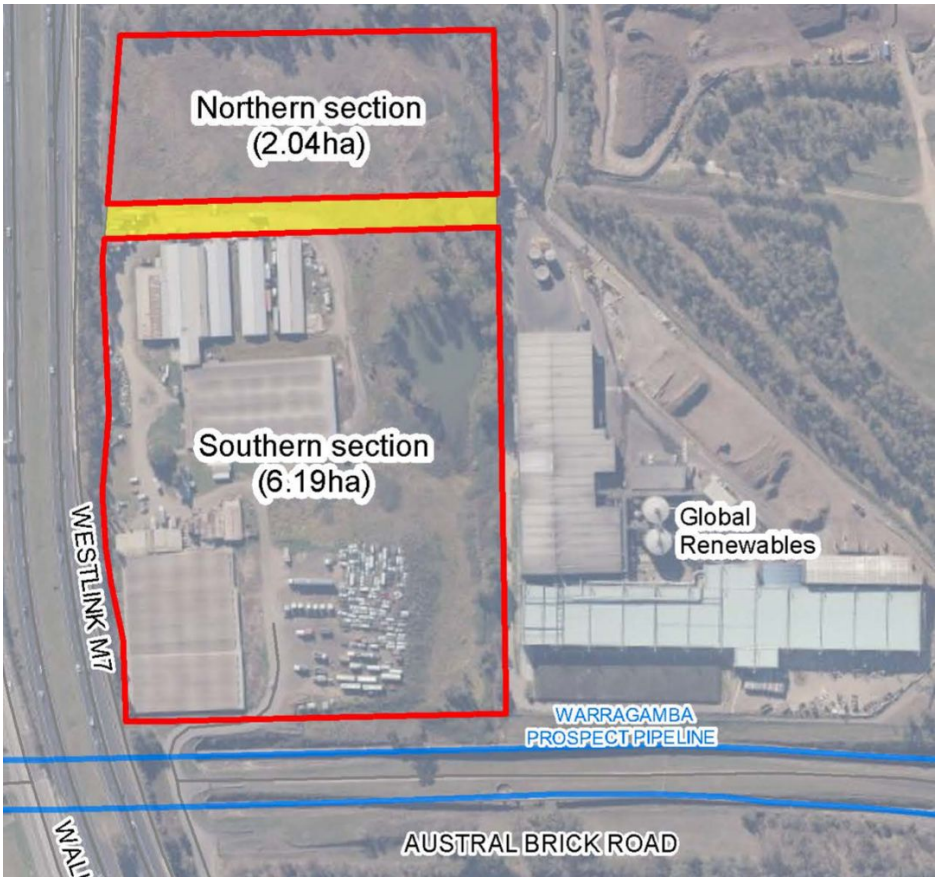
The Paris Appeal Memorandum, supported by the European Standing Committee of Doctors (representing 2 million doctors), urged a moratorium on building any new incinerators. Source

20) Condemnation Of Waste Incineration In Open Letter to European Commission

Over 50 environmental, social justice and human rights NGOs have sent an open letter to the Commission Expert Group working on an EU Sustainable Finance Taxonomy. The letter, published on Monday (16 September 2019), highlighted the fact that waste incineration is an activity that 'undermines upper-tier activities of the waste hierarchy which are more protective of the climate'. Source

21) Cleanaway Incinerator too Close to our Water Supply

The incinerator site has Warragamba Pipelines running adjacent to the southern boundary of the site. Prospect Reservoir is only 1.7km away.



Dioxin can get into drinking water from:

- Air emissions from waste incineration and other combustion, with subsequent deposition to lakes and reservoirs
- Deposition from air to soils that erode into surface waters used for drinking water
- Dioxins are highly toxic and can cause cancer, reproductive and developmental problems, damage to the immune system, and can interfere with hormones.
  Source

The WHO, "Exposure & Health Risks of Incineration", states; The 'indirect exposure pathways' for air pollutants may pose significant health risks in certain settings. These pathways may include, for example, ***from deposition directly into water bodies*** or onto soil and runoff into surface waters with subsequent uptake in fish. Indirect exposure pathways can be important for dioxins, furans and other emissions if lakes, ponds, or other surface drinking water sources have a local catchment area.

Particulate Matter (PM) can get into drinking water:

Incinerators release particulate matter (PM), which can be found in solids, ***liquids (like our water supply)***, and suspended within the air.

PM has been found to:

- Increase the risk of respiratory death in infants
- Affect cough and bronchitis in children
- Increase death rates from cardiovascular and respiratory diseases including lung cancer and asthma.

22) Cleanaway Incinerator Too Close to Homes & Schools

This site is very close to homes, schools and preschools. Horsley Park Public School is around 2 km south of the site. A childcare centre is located only 1 km to the west of the site, while homes are located only 1km away.

A Study was completed; "Relationship Between Distance of Schools from the Nearest Municipal Waste Incineration Plant and Child Health in Japan" In Japan, the main source of cancer causing dioxins are incinerators. This study examined the relationship between the distance of schools from waste incineration plants and the prevalence of allergic disorders and general

symptoms in Japanese children. Study subjects were 450,807 elementary school children aged 6–12 years who attended 996 public elementary schools in Osaka Prefecture in Japan. The study showed that a positive association with fatigue was pronounced in schools within 4 km of waste incinerators. The findings also suggested incineration near schools may be associated with an increased prevalence of wheezing, headaches, stomach ache, and fatigue in Japanese children. https://link.springer.com/article/10.1007/s10654-005-4116-7

15 Schools Near The Site Proposed For Cleanaways Incinerator

Children should not have to breathe in toxic incinerator emissions while they learn at school.

1. Horsley Park Public School
2. Marion Catholic School
3. Erskine Park Primary School
4. Erskine Park High School
5. Clairgate Public School
6. Minchinbury Public School
7. Eastern Creek Public School
8. Minchinbury Early Learning Centre
9. Tyndale Christian School
10. Bethel Christian School
11. Sacred Heart Primary School
12. Rooty Hill Public School
13. Walters Road Public
14. Blacktown West Public
15. St Patrick's Primary School

23) Proximity to Public and Social Infrastructure

Customers and staff at the following business will be affected by incinerator emissions in the sacrifice zone (within 5km of the Incinerator).

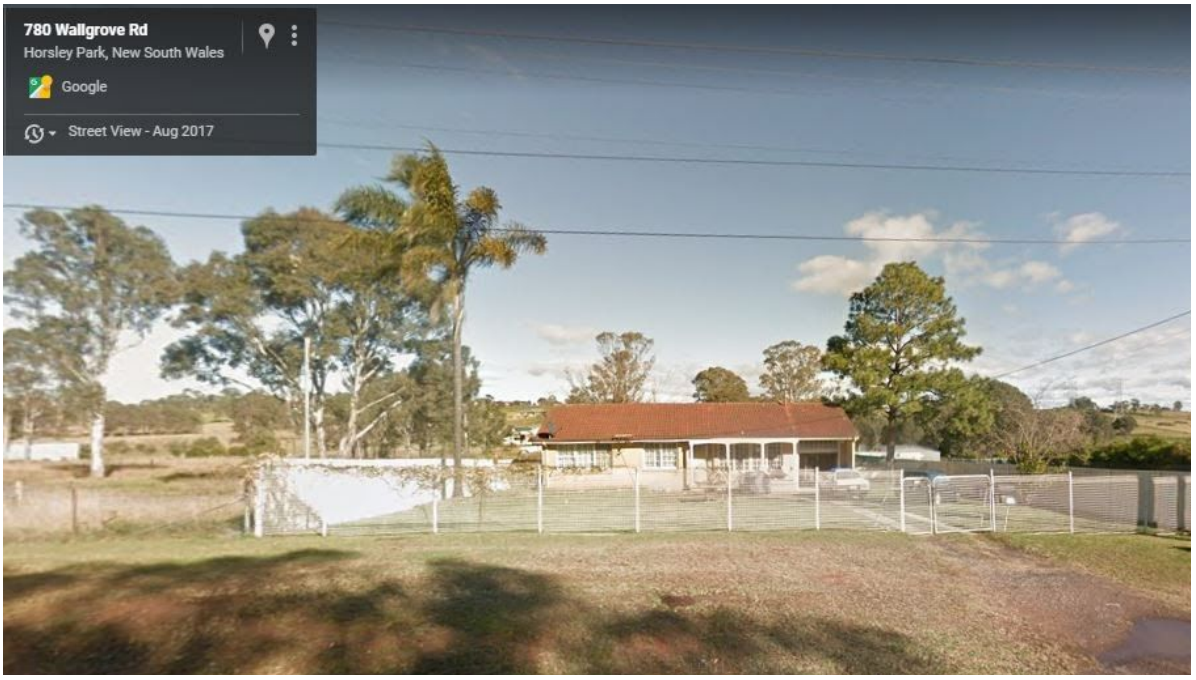
- The Sydney Motorsport Park located at only 1.4 km north-east,
- The Drift School Australia, a driving school, only 1.5 km north-east and
- The Western Sydney International Dragway, drag racing facility, only 1.4 km east of the site.
- Western Sydney Parklands publicly accessible area is located about 1 km north of the Cleanaway Incinerator site.

24) The Incinerator “Sacrifice Zone”

The Incinerator “Sacrifice Zone” includes the area within a 5km radius of the Incinerator site. The sacrifice zone is a geographic area that has been permanently impaired by environmental damage or economic disinvestment.

These zones are most commonly found in low-income and minority communities.[1] Commentators including Chris Hedges, Joe Sacco, and Stephen Lerner have argued that corporate business practices contribute to producing sacrifice zones. https://en.wikipedia.org/wiki/Sacrifice_zone

25) Family Homes within the "Sacrifice Zone"




664 Wallgrove Rd
Horsley Park, New South Wales
Google
Street View - Aug 2017


749 Wallgrove Rd
Horsley Park, New South Wales
Google
Street View - Aug 2017
Google


529 Wallgrove Rd
Horsley Park, New South Wales
Google
Street View - Aug 2017


680 Wallgrove Rd
Horsley Park, New South Wales
Google
Street View - Aug 2017
Google


648 Wallgrove Rd
Horsley Park, New South Wales
Google
Street View - Aug 2017

26) EIS Confirms Horsely Park Rural Residents Will Be Impacted

Cleanaways EIS states “Once operational, the impacts of the proposal on all assessed LCAs will be low to negligible. ***Except for one LCA identified as the Horsley Park rural residential LCA, which is assessed to have a moderate-low impact”*.**

Any impact to families living in these homes is unacceptable.

27) Incinerator Site Contaminated with Asbestos

Asbestos has been found on site as described in the EIS (Pg 28).

How do we know the asbestos won’t be burnt? Cleanaway Waste Management's self-professed "zero harm" safety philosophy has been called into question by the NSW government's Environmental Protection Authority, which has blasted the company over concerns about its "management of its operations" and the approach and knowledge of employees about environmental safety.

Cleanaway’s compliance issues were exposed following two major chemical spills. The NSW Government Environment Protection Authority (EPA) has raised serious concerns over the lack of environmental safety and has issued licence conditions, show cause notices, warning letters and advisory letters after uncovering “consistent areas of concern.” The EPA inspected 27 Cleanaway sites (including Eastern Creek, Blacktown, St Marys and Penrith) and raised issues regarding inappropriate chemical storage, poor

maintenance of stormwater controls, as well as other issues which are being further investigated.
Source

Cleanaway can not be trusted to clean up Asbestos correctly or operate an incinerator, they have a track record of operating outside the law.

28) The precautionary principle has not been applied

- In Australia the precautionary principle is specified in the Intergovernmental Agreement on the environment which was signed on the 1st May 1992 by the Federal, State and Territory governments and the Australian local governments association. The precautionary principle was stated in cl 3.5.1 of the agreement in these terms; ***Where there is threat of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.***

- In the application of the precautionary principle, public and private decisions should be guided by; careful evaluation to avoid serious or irreversible damage to the environment.

29) The Incinerator fails to meet the basic principles of the "European Human Rights Convention"

- Waste to Energy Incinerators contravene basic human rights as stated by the United Nations Commission on Human Rights

- The foetus, infant and child are most at risk from incinerator emissions: their rights are therefore being ignored and violated, which is not in keeping with the concept of a just society. Nor is the present policy of locating incinerators in deprived areas where their health effects will be maximal.

30) The Incinerator fails to meet the basic principles of the "Stockholm Convention on Persistent Organic Pollutants"

- The Stockholm Convention is a legally binding international instrument that aims to eliminate or restrict the production and use of persistent organic pollutants (POPs).

- Waste to Energy Incineration goes directly against the directive of the Stockholm Convention by releasing persistent organic pollutants (POPs) such as Dioxin and Furans into the environment. These

carcinogenic substances enter our bodies and the food chain and never leave bioaccumulating.

31) Both Cleanaway & Macquarie Capital (Group) fail to meet the "Fit and proper person test under section 83 of the "Protection of the Environment Operations Act"

Cleanaway & Macquarie Capital both have a history of operating outside the law. Both proponents have contravened environment protection legislation making their corporations an unfit person under the Act. Below lists some of their EPA violations. This is why our community has no faith in them building and operating an incinerator near our homes. Cleanaway (Over 35 EPA violations) and Macquarie Capital can't be trusted to keep our air quality clean.

32) Cleanaway EPA Violations

Cleanaway has over 30 EPA Violations, this proves they can not be trusted to operate an incinerator under the law. The community has no confidence in Cleanaway doing the right thing to protect our air quality.

- 16/11/2018 - Failed to comply with condition 330-155 of the environment authorisation 50320 in that you did not take all reasonable and practicable measures to prevent dust leaving the Premises. An EPA Authorised Officer recorded failure of site operatives to use the dust suppression hoses at the site whilst handling wastes with the onsite machinery. At the same time the under roof dust suppression misters were observed not to be operating. By failing to use the appropriate dust suppression controls you have caused or permitted dust to leave the Premises in contravention of condition 330-155.

- 2008 - 2013 Transpacific (Cleanaway) are among companies in NZ which have been prosecuted for injuries including death- 2 convictions

- 2011 - Transpacific (Cleanaways old name) have a history of not protecting their workers' health and safety. In 2011 Transpacific (Cleanaway) were fined $363,000 after a fatal accident in Perth breaching federal work health and safety laws. The penalty is the largest against an employer as a result of a single court proceeding by Comcare. It is also the first time multiple breaches of Commonwealth work health and safety laws have been found against an employer in regard to an ongoing risk to health and safety.

- On the 2nd September 2009 at the Wagerup Refinery (owned by Cleanaway) an employee, Paul Herbert Fry, fell through one of the

open manholes to his death. Transpacific breached the OHS Act by its failure to take all reasonably practicable steps to protect the health and safety at work of its employees. There was a court case, pursuant to cl 4 of Pt 1 of Sch 2 of the OHS Act the respondent was convicted and paid a $170,500 penalty to the Commonwealth of Australia.

- 14/082008 - Death of Colin Arthur GREAVES who died from multiple injuries sustained when he fell through an open hatch on the top of Settler tank 6 at the Queensland Alumina Ltd plant at Gladstone, owned by Transpacific (Cleanaways old name). There was a coronial Inquest into the death of Colin GREAVES, Transpacific prosecuted and pleaded guilty to a **breach of the Workplace Health and Safety Act 1995 (QLD)**

- 2011 Transpacific (Cleanaway) were fined $110,000 after an employee was exposed to hazardous chemicals

- 29/03/2001 - Cleanaway (previously known as) Transpacific EPA Order Allowed waste to be stored outside of concrete bunded areas at the site in breach of a licence condition. *Also received waste from interstate, for the purpose of treatment by incineration, when the waste was physically unsuitable for incineration.*

- 25/03/1997 - Transpacific (Cleanaways old name) Failed to comply with conditions of a licence to undertake the following prescribed activities of environmental significance: incineration of chemical, medical and solid trade waste, waste depot and activities producing listed wastes.

- 07/05/2002 - Brambles Australia (owned by Transpacific, Cleanaway old name) Caused an environmental nuisance in the form of odour from the depot.

- 3. June 2010 – Transpacific (old cleanaway name) who owned Rutherford Oil Processing and Recycling Plant were fined $70,000 – for emitting benzene at levels in breach of environmental protection licence during March and Aug 2008.

- 4. June 2010 – Transpacific (old Cleanaway) **fined for supplying false information – whiting-out emission test results** (the subject of the above breach) in its annual return for its oil recycling facility to NSW EPA

- Since Nov 2010 – VIC EPA has issued 18 Pollution Abatement Notices in an attempt to address odour impacts on the Clayton / Dingley area of VIC administered by Kingston City Council. Of these, 8 were issued to Transpacific (Cleanaway) companies (TWM & Baxter Business P/L).

- In Aug 2011 Transpacific (Cleanaway), in contravention of its EPA licence, set up a treatment trial to deodorise "Elf Atochem Spotleak" an odorous compound added to natural gas and LPG. The offensive odour was discharged beyond the boundary of the company's Portland site and reported by 130 residents who complained of nausea, throat irritation and general illness. Fined $80,000 and Court costs $10,000.

- Feb 2011 – VIC EPA Notice of Contravention Transpacific (Cleanaway) Deals Rd Landfill (Clayton South), putrescible / municipal waste – off-site odour (landfill closed 2010, matter ongoing)

- Feb 2011 – VIC EPA Notice of Contravention Transpacific (Cleanaway) Fraser Rd Landfill (Clayton South) – off-site odour (matter ongoing)

- Jan 2011 – VIC EPA Penalty Infringement Notice Transpacific (Cleanaway) Victory Rd Landfill / Green Waste Transfer Station (Clayton South) – penalty paid

- April 2012 – Transpacific (Cleanaway) agreed to pay up to $35million (before tax) to settle a class action – over claims it misled investors about the true state of its accounts between Aug 2007 and Feb 2009.

- Dec 2012 – VIC EPA Pollution Abatement Notice Transpacific (Cleanaway) Fraser Rd Landfill (Clayton South), putrescible / municipal waste – surface emissions (matter ongoing)

- Dec 2012 – VIC EPA Pollution Abatement Notice Transpacific (Cleanaway) Victory Rd Landfill (Clayton South), C&D waste – progressive site rehabilitation required (matter ongoing)

- Aug 2012 – VIC EPA Pollution Abatement Notice TPI Fraser Rd Landfill (Clayton South) – poor leachate management (matter ongoing)

- Aug 2012 – VIC EPA Pollution Abatement Notice TPI Victory Rd Landfill (Clayton South) – poor leachate management (matter ongoing)

- Aug 2012 – VIC EPA Pollution Abatement Notice TPI Henry St Landfill (Heatherton), C&D waste – poor leachate management (matter

ongoing)

- Aug 2012 – VIC EPA Pollution Abatement Notice TPI Henry St Landfill (Heatherton) – progressive site rehabilitation required (matter ongoing)

- Aug 2012 – VIC EPA Pollution Abatement Notice TPI Carol Rd Landfill (Clarinda), C&D / green waste – poor leachate management (matter ongoing)

- Aug 2012 – VIC EPA Pollution Abatement Notice TPI Carol Rd Landfill (Clarinda) – progressive site rehabilitation required (matter ongoing)

- 2. Dec 2012 to March 2013 (4 months) – 155 pollution reports made by residents to Kingston City Council. Two Notices of Contravention and one Penalty Infringement Notice ($6,000 penalty) were issued to Transpacific (Cleanaway) companies. Offensive odours and other licence breaches were detected either on-site or within residential areas. As a result, the sites are subject to ongoing monitoring by EPA and stakeholders including Kingston City Council to ensure day-to-day obligations of site management are met.

- 1. April 2013 – VIC EPA Conviction of Transpacific (Cleanaway) for air pollution and licence breach

- On 15 April 2013, Transpacific (Cleanaway) was convicted on 2 charges brought by VIC EPA for pollution of atmosphere and breach of licence.

- Transpacific (Cleanaway) were fined $30,000 for illegally discharging Coal Seam Gas Wastewater, into the sewer system from its treatment site.

- Kingston Ratepayers To Pay Millions For Landfill Clean Up

- 25/11/11 - 3 separate workplace injuries in which Transpacific (Cleanaway) employees were injured; Each incident was found by Comcare to be caused by failures of Transpacific (Cleanaway) to appropriately assess risks for the tasks being undertaken and to provide appropriate information, instruction, supervision and training to its employees in relation to the tasks. The enforceable undertaking targeted every level of the Transpacific (Cleanaway) hierarchy, requiring Transpacific (Cleanaway) to make extensive improvements to their WH&S systems. The undertakings operated until the end of 2013. Comcare accepted court enforceable undertakings from Transpacific

(Cleanaway) in relation to 3 separate workplace injuries in which Transpacific (Cleanaway) employees were injured;

i) Mandurah WA,
ii) Olympic Dam SA
iii) Airport West, Melbourne.

- 5 Feb 2011 – Comcare filed 3 enforcement proceedings against Transpacific (Cleanaway) in the Federal Court of Australia (SA) for breaches of the OHS Act (employee injuries);
  i) acid burn injuries Dec 2008
  ii) hand burn Sept 2008
  iii) foot crush / toe amputation Aug 2008

- June 2006 - Transpacific (Cleanaway) Conviction for wastewater discharge from sewer into Dry Creek wetlands in SA. Charge: Material environmental harm, section 80(2), EP Act 1993. ERD Court. Guilty plea. Convicted and fined a total of $15,000 plus $650 prosecution costs awarded and $120 victims of crime levy.

- 28/06/06 - Convicted of material environmental harm Section 80(2) EP Act 1993. They were fined $15,000 plus prosecution costs.

- 5. Dec 2009 – VIC EPA Pollution Abatement Notice Transpacific (Cleanaway)l Western Ave Landfill (Tullamarine) - Infiltration of rainwater and formation of leachate within the landfill had resulted in a mound of leachate forming above the water table beneath the landfill, and leachate was radiating from the site precluding the beneficial use of groundwater within a broadly defined area with risk to Moonee Ponds Creek. This resulted in the establishment of an extensive monitoring and management regime on the part of EPA VIC and the company.

- ALL SOURCES & FURTHER EPA VIOLATIONS HERE: https://www.epa.sa.gov.au/data_and_publications/completed_prosecutions_and_civil_penalties

33) Macquarie Capital (Group) Financial Misconduct & Tax Fraud

Macquarie Capital (Group) are Cleanaway' JVP, they are being investigated overseas for financial misconduct and tax fraud and should not be allowed to be a property developer in Australia. Both proponents have contravened environment protection legislation making their corporations an unfit person

under the Act.

- Macquarie group is currently being investigated for massive tax fraud in 2018, across several European countries over long periods. Macquarie's internal documents, reviewed by a collaboration between 17 European media, show that Macquarie continued to make money available for speculation and fraud with dividend tax after their legal advisers expressed concern.

- Macquarie Group through its subsidiary Macquarie Equipment Rentals was criticised by the Australian Competition and Consumer Commission for suing 300 small businesses caught up in misleading telephony bundling deals.[46]

- In 2017, Macquarie, via a deal in which it acquired Thames Water, a private utility company responsible for public water supply and waste water treatment in the London region of the UK, was found to have transferred to Thames Water £2bn of debt before selling its stake in the company. These disclosures followed scrutiny of the possible financial causes of Thames Water's extensive pollution of the Thames, and other rivers, with untreated sewage between 2012 and 2014, for which Thames Water was fined a record £20m.[47][48]

- Macquarie Group did business with a British hedge fund investor who has been accused by the Danish government of orchestrating a large-scale alleged tax fraud

- Top executives of Macquarie Group were among 30 staff likely to be classified as “suspects” as part of a German tax investigation over a 2011 deal. Macquarie Group chief executive Nicholas Moore and his successor, Shemara Wikramanayake, were involved in approving deals that are now at the centre of an investigation by German prosecutors into an alleged tax fraud scandal.

- Danish Fund refuses to do business with Macquarie Group. PFA, which oversees about $90 billion in assets, is refusing to enter new deals with Macquarie Group Ltd. amid a national campaign in Denmark to fight **financial misconduct**. Macquarie is one of a number of banks being investigated by German authorities in connection with alleged dividend tax fraud. In November, Danish Tax Minister Karsten Lauritzen said his country was also looking at the Australian firm’s conduct. That came amid a broader crackdown on tax fraud in Denmark after offshore financiers stole almost $2 billion from state

coffers in a fraudulent rebate scheme. “Before we see a settlement on this and can see a stronger commitment from them on a new way of conducting business, we cannot do new business,” Allan Polack, the chief executive officer of Copenhagen-based PFA, said in a phone interview

34) Sydney is a C40 City Which Goes In Direct Opposition To Incineration

Sydney is a C40 City and should be leading the way on renewable energy projects to reduce climate changing emissions like C02 and improve the health of communities. The Cleanaway incinerator will emit more C02 than coal and gas as well as dangerous emissions such as dioxins and furans that are cancer causing. This is in complete opposition to what a C40 city should be doing.

35) Incineration is not Renewable Energy

Incineration cannot be classed as Renewable energy due to the high pollution levels created. One objective of the The Renewable Action Plan states “Our vision is for a secure, reliable, affordable and clean energy future for NSW. We are working towards an energy system that is less polluting and attracts new jobs and investment to NSW at the lowest possible cost.”

Mass combustion Incinerators rank as one of the dirtiest known forms of energy production. Incinerators release 2.5 times Co2, 28 times more dioxin, twice as much carbon monoxide, 3 times as much nitrogen oxides (NOx), 6-14 times as much mercury, nearly six times as much lead and 70% more sulphur dioxides than Coal, Oil and Gas. Source: http://www.energyjustice.net/incineration/worsethancoal

Funding Of Incinerators In NSW

ARENA' true purpose is supposed to be to provide funding for renewable energy projects like wind and solar, instead they are now funding incineration which is more damaging to the environment than coal and gas. Source:

ARENA has provided $118 million in funding to support the development of bioenergy technologies, including several waste-to-energy projects. The European Union is no longer subsidising the Incineration industry as Renewable Energy unlike Australia.

36) There are Better Alternatives to Incineration that don't affect health

Incinerators and landfills are not the answer to waste management. New technology and innovation has provided alternative options that do not affect the public health or environment in the way incinerators and landfills do:

Source Reduction.

Researchers estimate that 70% of all current waste and emissions from industrial processes can be prevented at the source by using technically sound and financially profitable procedures. New Jersey mandates pollution prevention planning based on the tracking of materials throughout each industry. Ultimately, saving companies a total net sum of $105 million per year.

Recycling and Composting.

An analysis of recycling potential (including composting) found that 72.8% of waste reclamation was possible. Recycling facilities produce more than twice the number of jobs provided by landfills and incinerators combined, as well as profitable for companies.

Other technologies that offer safer and cleaner methods exist

45% of medical waste can be sterilized and reused through autoclaving, and the remaining materials can be treated and reduced through microwave disinfection and steam sterilization. Biomass and household waste can be handled through a process called thermal desorption and vitrification

Sources:
http://www.energyanswers.com/our_company/mission_&_philosophy/index.php
http://www.epa.gov/oaqps001/combustion/

37) Health Effects of Dioxin

National Toxicology Program (NTP) classes Dioxin as a Group 1, known to be human carcinogen (Causes Cancer)

- Risks to health from eating home-grown food, drinking rainwater and skin absorption of pollutants emitted from the Incinerator. Present safety measures ignore the fact that many of the pollutants bioaccumulate, enter the food chain and can cause chronic illnesses over time and over a much wider geographical area.

- I would also like to highlight recent research which has demonstrated the very high releases of dioxin that arise during start-up and shutdown of incinerators. This is especially worrying as most assumptions about the safety of modern incinerators are based only on emissions which occur during standard operating conditions. Of equal concern is the likelihood that these dangerously high emissions will not be detected by present monitoring systems for dioxins. Source: https://www.ncbi.nlm.nih.gov/books/NBK233627/

- The only method to eliminate and minimize dioxin formation from waste management is to avoid incineration and adopt alternatives.

- For Australia to comply with its international obligations under the Stockholm Treaty on Persistent Organic Pollutants, it should not approve any incinerators.

The adverse effects of dioxin exposure are well-established following accidental releases of dioxins into people, the environment and food chain. “In addition, studies of wildlife, as well as domestic and laboratory animals, have furthered the understanding of potential adverse outcomes of exposure”. [Source].

“In the Great Lakes area, which has been extensively polluted with dioxin and dioxin-like compounds, multiple species of birds, fish, reptiles, and mammals have exhibited developmental toxicity, reproductive impairment, compromised immunologic function, and other adverse effects correlated with these exposures. Specific observations correlated with dioxin or dioxin-like compound levels in multiple vertebrate species included hyperplasia of the thyroid and adrenal glands, porphyria, suppressed T-cell-mediated immunity, mammary and ovarian pathologies, reduced viability of offspring, congenital malformations, growth retardation, and an edematous syndrome among the offspring of fish-eating birds comparable to chick edema disease [Source]. Humans in this area also consume much local fish, and have shown signs of both developmental and immunologic consequences of exposure to these persistent organic pollutants, via dietary fish intake” [Source, Source].
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2788749/

The ‘indirect exposure pathways’ for air pollutants may pose significant health risks in certain settings. These pathways may include, for example, consumption of locally produced meat, eggs, and dairy products, consumption of fish from local waterways that are contaminated by air pollutants, and dermal contact with contaminated soils. These pathways are important for persistent pollutants that can bioaccumulate into food, a result of the deposition of toxic emissions onto plants and soil with subsequent ingestion

by farm animals, or, in the case of fish contamination, from deposition directly into water bodies or onto soil and runoff into surface waters with subsequent uptake in fish. Indirect exposure pathways can be important for dioxins, furans and other emissions if:

- Food is grown near the incinerator.
- Animals are raised on fields near the incinerator.
- Lakes, ponds, or other surface drinking water sources have a local catchment area.
- Subsistence fishers or farmers in the area obtain most of their food from local sources.
- Children play in dirt subjected to significant atmospheric deposition.

https://www.who.int/water_sanitation_health/medicalwaste/en/smincinerators4.pdf

38) Dioxins Will Not Be Continuously Monitored at Cleanaway Incinerator

Cleanaway' EIS shows that Dioxins will not be continuously monitored. Cleanaways EIS states "For those pollutants with levels so small that they are below any possible limits of detection and/or for which online measurement is not technically possible or sufficiently accurate, a periodic sampling and testing regime will instead be created" .

This monitoring system for Dioxin is not acceptable considering exposure to Dioxins is dangerous to health. Exposure to Dioxin and any addition of these persistent organic pollutants, however small, to the Sydney Basin airshed compromises our health, particularly our children.

"Article 10 of the Stockholm Convention requires that the public be given full access to information on POPs (Dioxin) sources and how they are impacted by them".

Cleanaways EIS Confirms Dioxins Quantitative Assessment not completed

Cleanaway states in their Health Assessment; "Methods for the analysis of these chemicals (POPS, DIOXIN) in air are not routinely available (HEPA 2020). There is no requirement for analysis of these chemicals in emissions from similar plants in Europe due to the difficulty in undertaking such analysis. (**This is not true as continuous dioxins monitoring is needed to comply with the EU BREF on incineration**).

Cleanaway has completed no Dioxins modeling as they state, there is no monitoring data available and it is not currently possible to undertake a detailed quantitative assessment." (Health Risk Assessment Pg 42)

***Dioxins need to be continuously monitored due to the serious health concerns for the surrounding community. Cleanaways spot check method is not acceptable. If they can't be monitored they should not be released under Australia' obligations under the Stockholm Treaty*.**

39) Toxic Incinerator Ash Poisons Our Food Chain

"Ash and other residues from waste incineration contain dioxins, furans (PCDD/Fs) and a range of other highly toxic POPs at levels which are a threat to human health and the environment. Current management practices and regulatory threshold levels for POPs that contaminate incinerator residues are not preventing releases of POPs into agricultural settings, the food chain and the broader environment.

Waste incineration is often proposed by industries as a "solution" to waste management problems and a superior alternative to landfill. However, burning waste creates large amounts of toxic ash and other residues (approximately 30% by weight of the original waste volume) which are either dumped in landfill, on open ground and in some countries deep in underground voids".
Source: https://ipen.org/news/toxic-ash-poisons-our-food-chain

40) Cleanaway's EIS states the Incinerator Will Create Hazardous Ash

"The proposal will require the use of dangerous goods and will create ash by-products from the EfW process, some of which are categorised as hazardous". EIS Pg 32).

Western Sydney Residents do not want toxic fly and bottom ash stored onsite. Overseas this ash is stored like radioactive waste, underground in salt mines, and even then there have been problems with dioxins leaching out of the mine. "Metal leaching from residues after final disposal may continue for thousands of years. Although the actual consequences cannot be determined today, the potential impacts from this long-term release should be assessed and accounted for".
https://www.iswa.org/uploads/tx_iswaknowledgebase/Management_of_APC_residues_from_W-t-E_Plants_2008_01.pdf

41) Cleanaways Plan To Put Toxic Incinerator Ash Into Construction Products

Cleanaway state in their Human Health Risk Assessment (Pg 15) “The project’s intention over the long term is to create an opportunity in New South Wales to beneficially re-use this bottom ash within construction products.”

Cleanaway state in their EIS (Pg ii) “The applicant is exploring options to reuse the IBA in construction products.”

“Overseas ash has been incorrectly thought to be benign resulting in its use in agricultural settings and construction leading to significant POPs exposure potential. Incineration destroys valuable resources and converts non-toxic material into toxic ash”.
Source: https://ipen.org/news/toxic-ash-poisons-our-food-chain

“In the past, even in industrial countries, improper use of fly ashes from waste incineration has led to contamination of soils rendering them unfit for livestock” (Pless-Mulloli et al., 2000).

“In developing and transition economies, ash management is a contemporary and increasing challenge leading to environmental pollution and food contamination from the incineration ashes” (Petrlik & Bell, 2017;Petrlik et al., 2018).

Cleanaway must not be allowed to use the incinerator fly and bottom ash in construction materials, the dangers to health are too great. It does not comply with the precautionary principle.

Re-Use of Incinerator Ash Exceeds Safety Limits recommended by the Basel Convention

The standards set overseas for the “useful” application of bottom ash residue are based on outdated regulations on toxicity, and may result in disastrous impacts. Notably, Weber et.al show in their publication, that animals foraging on soil which has been contaminated with bottom ash residues, can have highly toxic impacts across the food chain.

Source: Weber et al (2015), High levels of pcdd/f, pbdd/f and pcb in eggs around pollution sources demonstrates the need to review soil standards, organohalogen compounds vol. 77, 615-618.

Waste incinerators generate highly toxic compounds which are released as residues/ash (e.g. heavy metals, dioxins, and other persistent organic compounds). These residues are then often used in so called “useful”

applications as “green” solutions throughout the construction sector. However, the content of hazardous compounds in those solutions exceed the safety limits recommended by scientific researches and the amended Basel Convention. Specifically, regulations are based on outdated data, posing a significant threat to human health and the environment. A truly green deal means taking all efforts to minimize the impact of hazardous compounds such as dioxins.

In the past, even in industrial countries, improper use of fly ash from waste incineration has led to contamination of soils rendering them unfit for livestock (Pless-Mulloli et al., 2000). In developing and transition economies, ash management is a contemporary and increasing challenge leading to environmental pollution and food contamination from the incineration ashes (Petrlik & Bell, 2017;Petrlik et al., 2018)

Dioxins Contaminate The Food Chain, Environment & Humans

“This study shows how the current weak Low POPs content Level for dioxin is resulting in poor management of waste incineration ash, allowing transboundary movement of wastes and contamination of food products such as eggs which exceed EU standards and tolerable daily intakes for humans”.

KEY FINDINGS OF THE REPORT INCLUDE:

- The amount of dioxins released (contained) in waste incineration fly ash is highly underestimated, making current exposure and risk assessments unreliable.
- Fly ash contains a wide range of other POPs including undestroyed POPs treated by waste incinerators.
- Fly ash is reused for different purposes on a broad scale, and is getting out of control and leading to POPs recycling on a massive scale through ash distribution.
- The use of incineration ash as a food additive for poultry (see the Toxic Egg Scandal in Taiwan), for agricultural use as fertilizer, or as a soil amendment is contaminating the food chain.
- Regulatory efforts to reduce dioxin levels in incineration ash are non-existent.
- Using fly ash for backfilling, embankment, and remediation of contaminated sites is creating new POPs- contaminated sites, which

will each cost millions of dollars to remediate.

- Weak Low POPs Content Levels (LPCL) are allowing transboundary movement of contaminated ash with virtually no controls, spreading the contamination problem around the globe.

- Leachate tests fail to predict dioxin leaching from incineration wastes.

- There are a wide range of alternative waste management practices and waste disposal (use) technologies and techniques that can prevent formation of dioxin as occurs in waste incineration.

- Even the most strict proposal by consultants of the EU for a Low POPs Content Level (1 ppb) is under- estimating the true risk, as it does not include dioxin-like (DL) PCBs in the modeling and ignores the fact that lower levels of dioxin in soil (4 – 75 pg TEQ g-1) can lead to serious exceedances of the EU standard for eggs.

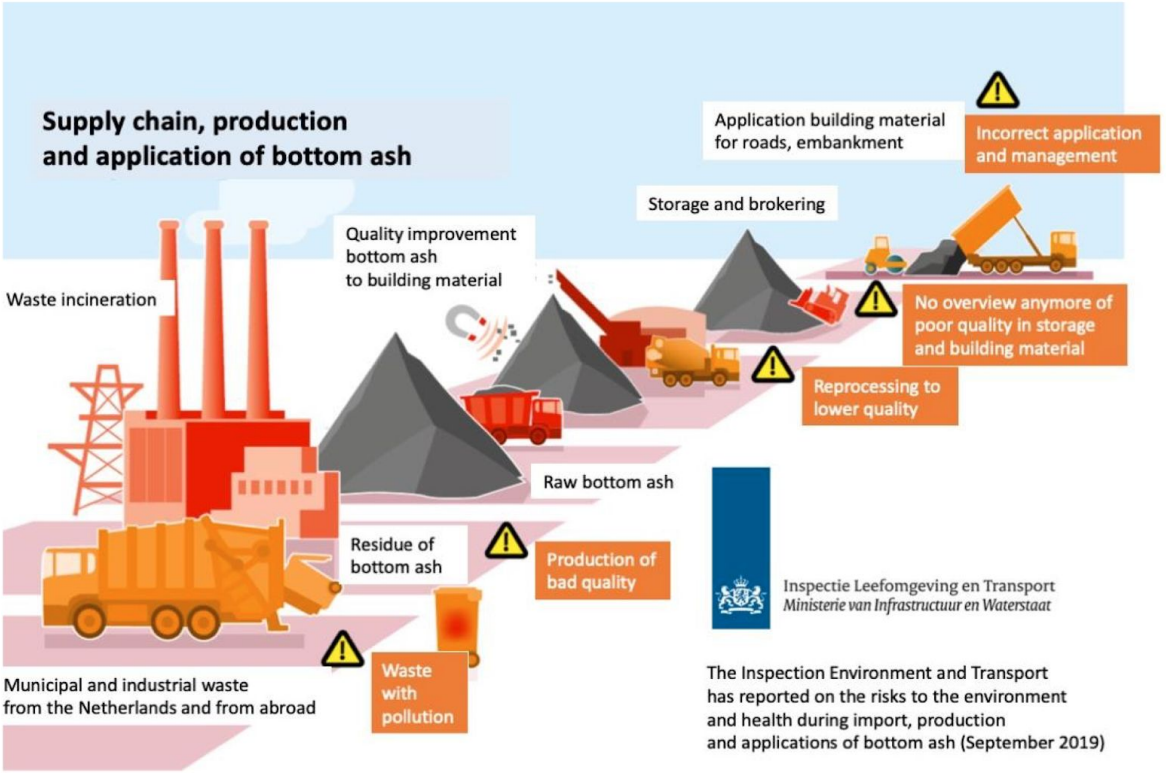
42) Storage of Toxic Incinerator Bottom Ash Onsite

Cleanaway state in their Human Health Risk Assessment (Pg 15) “The remaining portion of Incinerator Bottom Ash (IBA) is transported using a conveyor to the ash storage hall where ash will be stored in bays with a minimum of 5 days storage capacity. IBA will be collected and transported to a dedicated ash facility. The purpose of this ash facility is storage of IBA, further metal recovery and, subject to further investigation, incorporation of the ash into construction products (either at this facility or by transporting the ash to another facility).

The Inspectorate of Human Environment and Transport of the Dutch Ministry of Infrastructure and Water Management (Ministry of Health, Welfare and Sport) released a report in September 2019 highlighting the risks of the import, production, and application of bottom ashes to the environment and human health. The diagram below shows the level of perceived risk in relation to supply chain, production, and application of bottom ash. This research was supported by another government report by the Netherlands National Institute for Public Health and the Environment in September 2019 which also warned of the high damage that bottom ash has on soil, ground and surface water. ***Significantly, the earlier report by the Inspectorate concluded that there was a high risk of fraud coming from industry due to the negative market value of bottom ash - indicating a clear problem with current implementation of regulations.***
Source:
https://zerowasteeurope.eu/wp-content/uploads/2019/11/zero_waste_europe_

cs_the-hidden-impacts-of-incineration-residues_en.pdf

Figure 6. Report inspectorate 'Human Environment and Transport' (ILT 2019)



This raises serious questions about the control of toxicity in public works. There is therefore a need to ensure that hazardous substances such as endocrine disrupting compounds are not leaking out of concrete or other building materials containing bottom ash, now or in the future.

Waste incinerators generate highly toxic compounds which are released as residues (e.g. heavy metals, dioxins, and other persistent organic compounds). These residues are then often used in so called "useful" applications as "green" solutions throughout the construction sector. However, the content of hazardous compounds in those solutions exceed the safety limits recommended by scientific researches and the amended Basel Convention. Specifically, Dutch regulations are based on outdated data, posing a significant threat to human health and the environment. A truly green deal means taking all efforts to minimize the impact of hazardous compounds such as dioxins

Although current research is limited, what exists indicates strong concerns for public safety and the environment. This should prompt reconsideration over the impacts of using incineration ashes in a wide variety of applications. Until then, any "useful" application of bottom or fly ash from incineration should be

suspended. Continuing to use these residues, could put our health and the environment at risk.

Samples of water were taken from near the loading locations of ash as well as reference samples (kilometres away from the loading station). The results showed elevated oestrogenic activity (stimulated changes in female reproductive organs during the oestrous cycle), expressed as estradiol equivalent in the Era CALUX10, of water near the transhipping place. This research therefore demonstrates a significant threat to Prospect Reservoir, which forms part of the drinking water for 4.5 Million people in Greater Sydney.

Fishermen in Europe near a bottom ash loading station have testified to catching fish with abdominal growths as well as growths on the mouths of certain species of European eel (Anguila).

Source:
https://zerowasteeurope.eu/wp-content/uploads/2019/11/zero_waste_europe_cs_the-hidden-impacts-of-incineration-residues_en.pdf

43) Cleanaway Incinerator Does Not Eliminate Landfill

"Cleanaway state in their Human Health Risk Assessment (Pg 15) "Boiler fly ash recovered downstream of pass 3 is not suitable for disposal with the inert IBA due to its higher concentration of heavy metals. So, it will be diverted to the FGTr stream to be transported for pre-treatment at Cleanaway's hazardous solid waste treatment facility at St Mary's. Then it will be disposed of to a licenced restricted ***solid waste landfill facility such as at Kemps Creek***."

44) Toxic Flue Gas Incinerator Ash Will Be Stored Onsite

Cleanaway states in their Human Health Risk Assessment (Page 15) "The current design includes two silos to allow for redundancy in the system. Flue Gas Incinerator Ash is classified hazardous due to its ecotoxicity and physical characteristics. FGTr is collected within the bag house filters and will be conveyed to silos for temporary storage".

Residents do not want hazardous Ash stored on site near homes and schools. Overseas it has been found that sealed silo to truck systems still release toxic ash to the environment.

Road sign near a sealed hazardous ash storage site overseas, ash is still released.

45) Toxic Incinerator Ash, Transported By Truck, Further Risk Of Contamination

Several accidents have occurred (see below photo) from transporting bottom ash by truck, resulting in direct contamination of the ground.

Cleanaway state in their Human Health Risk Assessment (Pg 15) that "Flue gas treatment residues (FGTr) contain spent flue gas treatment reagents as well as residual boiler fly ash that has remained entrained within the flue gases through the flue gas treatment stages".

"Flue Gas Treatment Fly Ash will be transported for pre-treatment at Cleanaway's hazardous waste treatment facility located at St Mary's before being disposed of to a licenced restricted solid waste landfill facility such as at Kemps Creek."

Figure 4. Accident with bottom ash (2011), picture by Ruben Alkemaa, www.scannernet.nl

46) Incinerator Hazardous Ash Stored Onsite For 6 Days

"Hazardous Incinerator Ash will be stored onsite for about 6 days in two silos. The Ash will then be collected." (Human Health Risk Assessment Pg 16)

The Preliminary Hazard Assessment (PHA) found that there would be dangerous goods stored onsite which could be subject to fire, explosion, or toxic release. Cleanaway states "there are industry standards for storing and managing these goods", considering they have many EPA violations for not managing or storing goods appropriately.

Fly ash residues generated from the incinerator pose a significant disposal problem. Fly ash has to be managed carefully as it is enriched with heavy metals and organic micropollutants. Source

Fly ash residue contains organic micropollutants. "Organic micropollutants (OMPs) in the environment are a relatively recent challenge faced by societies. The continuous discharge of these pollutants, without any regulatory measures, may cause environmental concerns even at their low concentrations. Recent studies have reported the fate of many OMPs in the environment along with their ecotoxicological potential. While acute toxicity due to OMPs is considered unlikely at environmental concentrations, the chronic exposures may cause damages to biotic elements of the ecosystem at large. In this review, we are discussing exposure pathways with particular emphasis on the role of aquatic and terrestrial plants in bioaccumulation, associated potential risks, and remedies for the abatement of OMPs and their metabolites. Further negligence on behalf of concerned authorities and scientific community may lead to unwanted consequences if proper measures are not taken. These measures start with the further development and adoption of sensitive, robust methods to detect and analyze OMPs in the environment. To assess potential risks and hazards of OMPs and their metabolites, methods must be devised to generate data on their usage, environmental persistence, and mobility. Next, strategies must be devised for risk assessment of biologically active toxins within the class of OMPs" "Organic Micropollutants in the Environment: Ecotoxicity Potential and Methods for Remediation" , 2017

Incinerator Ash is lightweight and ultra fine, dangerous for inhalation.

47) Incinerator using same technology knocked back in 2018 on Health Grounds

The Cleanaway Incinerator will use the same moving grate technology as the Next Generation Incinerator that was knocked back in 2018 due to uncertainty" over the project's human health risks, and impact on air and water quality. These incinerators are not new technology but outdated at 18 years old. The European Union is moving away from incineration due to air emissions exceeding safety levels.

48) Cleanaway Confirm They Will Burn Plastic In Their Incinerator

From Cleanaway EIS Page 244 "Most plastic received will form part of the fuel for the EfW process." Burning plastics derived from fossil fuels does not create 'green' energy – it is simply burning fossil fuels in another form. This is in breach of "The Renewable Energy (Electricity) Act 2000", which specifically excludes fossil fuel based materials such as plastics.

49) Feed Stock Does Not Comply With The EU BREF & NSW Energy From Waste Policy

- Cleanaway' EIS states "Most plastic received will form part of the fuel for the EfW process." Plastic is not an eligible waste stream under the NSW Energy from Waste Policy Statement or the EU BREF

- MSW is household red bin waste whereas C&I waste comes from a variety of commercial and industrial sources, including offices, schools, shopping centres, warehouses and manufacturing. MSW and C&I waste streams are similar in composition. Red Bin Waste Will Not Be Sorted, Everything Burnt, this is not "Best Practice" and does not comply with

the EU BREF.

- One of the proposed objectives is: “Develop and operate a facility to international best practice standards that protects the health of people and the environment in the surrounding area” Burning unsorted red bin waste is not best practice, does not protect the health of people, but endangers their health.

- Cleanaways EIS states (Pg 245) "Residual mixed waste from source separated business collection and ***councils operating a 3-bin FOGO kerbside collection service are 100% eligible for energy recovery and will be directed to WSERRC without any initial processing***"

- Cleanaways EIS states (Pg 255) "The nature of residual MSW and C&I waste is that ***it is heterogeneous in composition and is reliant on human behaviour for its composition. Whilst every effort will be made to support the community on what waste should be deposited in what bin, not all contamination can practically be removed from a heterogenous waste stream. For example, it is possible that a consignment of residual MSW could contain a single AA battery that had been disposed of incorrectly by a resident."***

- To suggest that it is the communities responsibility to make sure there are no toxics in the red bin waste stream is ridiculous considering a lot of people have no idea what is toxic, especially when burnt.

- Burning plastics and everything in the household and industrial red bin waste stream without sorting or taking items out such as batteries, smoke detectors and paint will create toxic and radioactive emissions. Anything could be burnt and Cleanaway would not even know.

- Burning batteries emit toxic fumes, which are irritating to the lungs. https://www.analog.com/media/en/technical-documentation/application-notes/hdr202li_hd220rli_battery_msds.pdf

- Burning smoke detectors are hazardous to health due to their radioactive elements. Americium-241 is a plutonium byproduct. “It is a bad idea to dismantle or burn a smoke detector, because this could release americium into the environment”. http://large.stanford.edu/courses/2011/ph241/eason1/

- Americium-241 has a half life of 432 years. This is the time taken for it to decay to half its original activity. Even though the radiation emitted

during this process is very small, it will persist in the environment for hundreds of years.

- If consumed, americium-241 is excreted within a few days and only 0.05% is absorbed in the blood. From there, roughly 45% of it goes to the liver and 45% to the bones, and the remaining 10% is excreted. The uptake to the liver depends on the individual and increases with age. In the bones, americium is first deposited over cortical and trabecular surfaces and slowly redistributes over the bone with time. The biological half-life of ^{241}Am is 50 years in the bones and 20 years in the liver, whereas in the gonads (testicles and ovaries) it remains permanently; in all these organs, americium promotes formation of cancer cells as a result of its radioactivity.[Source]

50) Cleanaways Incinerator not compliant with EU Industrial Emissions Directive or 2019 reference document on best available techniques for Waste Incineration (BREF)

Burning plastics, batteries and radioactive smoke detectors is not best available practice and does not comply with the EU Industrial Emissions Directive or the EU BREF.

Cleanaway State in their EIS (Pg 268) "The facility will be designed, built and operated in compliance with the EU Industrial Emissions Directive (IED 2010/75/EU) and the 2019 reference document on best available techniques for Waste Incineration (BREF-WI)." This is not true as burning radioactive elements and plastics do not comply with the BREF.

51) Plastic to Reprocessed Plastic Waste from Cleanaway's Incinerator

Cleanaway has a partnership with Resource Co to reprocess plastic waste. The federal government plan to change our waste exports to "reprocessed plastic waste" giving the public the false impression that Australia is dealing with its own waste and recycling when in really our plastic waste is being pelletised (PEF,RDF) to burn here in Incinerators, cement plants and cogen plants. Plastics are a fossil fuel, they create toxic emissions and more Co2 than coal and gas.

Cleanaways EIS (Pg 238) states "The WSERRC proposal has flexibility to accommodate changes in feedstock as domestic recycling capacity and markets for recycled material are developed." They will burn recycling until we establish recycling infrastructure here in Australia?

Australia needs to establish recycling infrastructure as a priority. Incineration produces more Co2 than coal and gas. Plastics are made from fossil fuels, burning plastics create toxic emissions dangerous to our health and climate.

Australia needs to move away from fossil fuels now to meet the Paris Agreement.

52) Recovered Organic Material from Mixed Waste (MWOO) to be burnt in Cleanaways Incinerator

Cleanaway's EIS states "Organic material sourced from the extraction and recovery of organic material from mixed waste (MWOO) is no longer permitted in NSW. This is a significant fraction of mixed MSW and C&I waste, and includes food organics, garden organics and heavily soiled paper and cardboard. As there is no recovery outlet for this material in the current regulatory context, it will not be separated from the mixed waste stream during pre- processing".

Organics high in heavy metals should not be burnt in the Cleanaway incinerator. Releasing these chemicals to air will be dangerous to health.

Food waste is composed of about 70% water, and burning it requires considerable energy. Brown, M., (2015) "Is waste a renewable source of energy?" The net energy gain is low or non-existent, making incineration one of the least efficient ways to produce energy when compared to renewable sources like wind, hydro or geothermal. Planete Energies (2015) "Incineration, the heating power of refuse". Born to Engineer (2017) "What are the most efficient forms of renewable energy?"

Paper and cardboard should not be burnt in the Cleanaway incinerator, as this will produce dioxins, which can infiltrate the food chain and the human body causing cancer.

Dioxin is formed as an unintentional by-product of many industrial processes involving chlorine such as waste incineration. Dioxin is formed by burning chlorine-based chemical compounds like those in white paper with hydrocarbons. Dioxin was the primary toxic component of Agent Orange, was found at Love Canal in Niagara Falls, NY and was the basis for evacuations at Times Beach, MO and Seveso, Italy. According to the EPA report, there appears to be no "safe" level of exposure to dioxin.

53) Does Not Comply With Planning Priority C13: Protecting & improving the health & enjoyment of the district's waterways

- Cleanaway EIS confirms ***sediment may have the potential to impact Environment, Reedy Creek & Eastern Creek***

- Cleanaways EIS (Pg 29) states "The likelihood of erosion on site is high, given the presence of dispersive, highly erodible soils. The predicted impacts on soils will be limited to soil erosion and ***sediment runoff, which in turn may have the potential to impact the surrounding environment, including Reedy Creek, Eastern Creek and the aquatic communities within it.***

- Cleanaways EIS States "***SIte Excavations During Construction Will Impact Shallow Groundwater***" this does not comply with planning priority C13: Protecting the health & enjoyment of the district's waterways.

- Cleanaways EIS states (Pg 31)"Water quality can be impacted during construction works from sediment and erosion impacts and dewatering of sedimentation basins".

54) Cleanaways Incinerator Site is subject to flooding

Cleanaways EIS states (Pg 30) "***the overland flow path that runs along the eastern boundary of the site does experience some flooding***"

This site is part of the Hawkesbury Nepean Floodplain. The Eastern Creek precinct is part of the Nepean Floodplain and would suffer backwater flooding from the Hawkesbury River in a 20, 100 and 1000 year Average Recurrence Interval flood (ARI), which is a Probable Maximum Flood (PMF). The Probable Maximum Flood (PMF) level would be more than 11 meters higher than a 100 year Flood. http://www.bewsher.com.au/pdf/CNF17P_1.PDF

The Hawkesbury-Nepean Valley Flood Management Review recommended that all new proposals in the floodplain area come up with potential infrastructure strategies including works that can be built to mitigate floods, as well as the enhancement of flood evacuation capacity through improved transport infrastructure.http://www.water.nsw.gov.au/water-management/water-availability/flood- management/hawkesbury-nepean-valley-flood-management-review

The proposed incinerator should not be built on a floodplain.

55) Cleanaway Incinerator does not comply with "The State Environmental Planning Policy (Western Sydney Parklands) 2009

Cleanaways Incinerator is within Western Sydney Parklands. The "State Environmental Planning Policy (Western Sydney Parklands 2009)" (SEPP) requires that any development within the area regulated within this policy be shown to have only a neutral (i.e. no change) or beneficial impact on the quality of water in the bulk water supply infrastructure shown on the relevant maps included in the regulation.

The bulk water infrastructure that is located in this area includes the pipelines that take water to and from Prospect Reservoir and Prospect Reservoir itself.

Cleanaways EIS states "The potential for deposition onto the surface of water within Prospect Reservoir and for wash off from the small catchment for this water body has been considered in this assessment".

Cleanaways EIS states that Prospect Reservoir will have a "small change to concentrations of chemicals" Any change to water quality is a breach of the SEPP.

56) Noise Pollution Standards May Be Exceeded During Construction

The World Health Organization lists seven health hazards associated with noise pollution from Incinerators;

- Hearing impairment
- Sleep disturbances
- Disturbances in mental health
- Cardiovascular disturbances
- Interference with spoken communication
- Impaired task performance
- Negative social behavior and annoyance reactions

Families living 1km from the site should not have to put up with 3 years of continued noise disturbances, especially at night.

Cleanaways EIS (Pg 30) states "***During construction the proposal may exceed noise standards at nearby residential, commercial and industrial receivers***".

Cleanaways EIS (Pg 32) states "***In enhanced weather conditions where the noise is carried further, a minor exceedance (less than 2dB) during the night-time period is predicted at residential receivers located to the south of the site in Horsley Park***".

Cleanaway will operate continuously, 24 hours a day, 7 days a week. The main noises associated with the facility are expected to be:

- Heavy vehicles - Vehicle movements within the site boundary for the delivery of waste, removal of ash and other combustion by-products and supply of consumables.
- Breakout noise from buildings – Internal noise generating plant, equipment and activities propagated through the building envelope into the surrounding environment.
- Exhaust stacks – Stacks releasing emissions to the atmosphere.
- Cooling equipment – Air cooled condensers that cool gas supplied from boilers to turbines.
- ID fans – Fans required to supply air flow to the flue gas treatment processes.
- Substation – Substation required to supply electricity to the grid.
- Ancillary equipment – Including silo blowers and ash bunker exhaust fan.

57) Vibration Impacts To The Warragamba Pipeline Next Door

Vibration impacts to the Warragamba Pipeline may occur with “Vibration-intensive activities, such as the air-cooled condenser (ACC) and the turbine.

58) Automatic Shutdown of Incinerator Allows Dioxin Release to Atmosphere

- Cleanaways EIS states "any exceedance of the ELVs will either be immediately corrected or will result in an automatic shutdown of the operating line". This statement is contradictory as most exceedances of dioxin occur during shutdown & startup.

- Cleanaways EIS states “WSERRC is designed to operate in the region of 8,000 hours per year. It cannot operate all the time (8,760 hours per year) as it needs to be taken offline around twice per year for scheduled maintenance.” (Human Health Risk Assessment Pg 11)

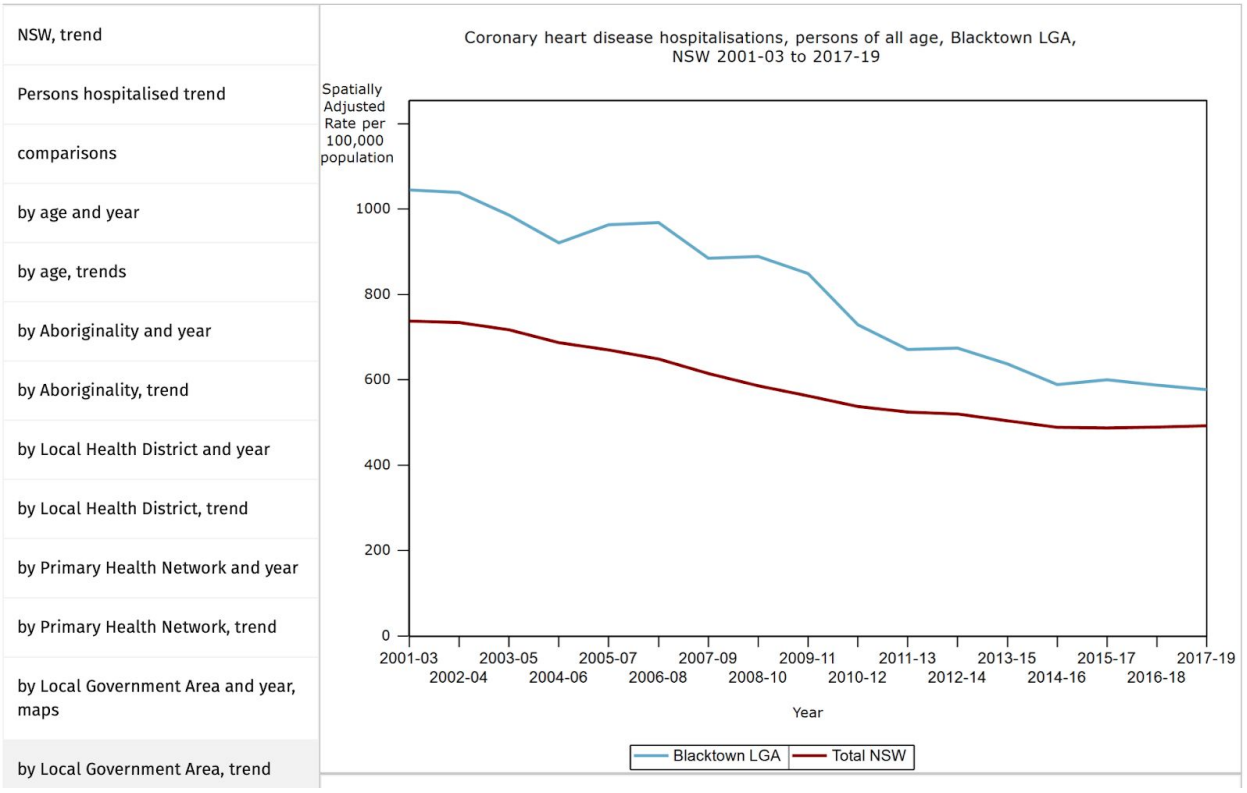
- The Study “Characteristics of dioxin emissions at startup and shutdown of MSW incinerators” (2007) shows “The total annual dioxin emission from a facility could be attributed to the startup periods”.

59) Blacktown Higher Incidence Of Heart Disease - Incinerator will Increase Heart Disease.

Cleanaways Incinerator Will Increase Heart Disease in Blacktown, an area that has a higher than average record for Coronary Heart Disease. This is putting our most vulnerable communities at risk from further health problems associated with Incineration.

There is an increased risk of out-of-hospital cardiac arrest (OHCA) even from short-term exposure to low concentrations of fine particulate matter PM2.5, such as that produced by Incinerators. This current 2020 nationwide study in Japan, chosen for its superior monitoring, population density and relative air quality, is believed to be by far the largest of its kind. It provides comprehensive evidence of the relationship between PM2.5 and cardiac arrests, using a sample three times larger than all previous research combined and demonstrating the impacts on groups such as the elderly.

Coronary heart disease hospitalisations by age



Cleanaway's EIS also confirms data suggestive of a potential higher vulnerability within the Blacktown population to health stressors. From Cleanaways EIS Table 3

Table 3: Summary of health indicators/data

Health indicator/data	Blacktown LGA	Fairfield LGA	Western Sydney Local Health District	NSW
Health behaviours				
Adults - compliance with fruit consumption guidelines (2019)[1]	Not available	Not available	36.7% (32.1% - 41.3%)	40.6% (39.0% - 42.1%)
Adults - compliance with vegetable consumption guidelines (2019)[1]	Not available	Not available	4.7% (2.3% - 7.1%)	6.3% (5.5% - 7.1%)
Adults – alcohol consumption at rates posing increased long term risk to health (2018) [1]	Not available	Not available	23.9% (20.2% - 27.6%)	31.5% (30.2% - 32.9%)
Adults - body weight (overweight or obese) (2018) [1]	Not available	Not available	55% (50.8% - 59.2%)	54.2 % (52.8% - 55.7%)
Adults – insufficient physical activity (2019) [1]	Not available	Not available	44.7% (39.7% - 49.7%)	38.5% (37.0% - 40.1%)
Current smoker (2018) [1]	Not available	Not available	8.5% (6.1% - 10.8%)	10.3% (9.4% - 11.2%)
Burden of disease				
Morbidity - cardiovascular disease hospitalisations[1] (2018/19)	1830* (1814.7-1845.7)	1395.4* (1374-1417.2)	1587.2* (1562.1-1612.6)	1672.4* (1664.1-1680.7)
Morbidity – respiratory disease hospitalisations (2018/19)[1]	Not available	Not available	1647* (1622-1672.3)	1675.2* (1666.4-1684)
Mortality – all causes (2017)[1]	570.8* (551-591.2) (2016/17)	489.8* (469.6-510.7) (2016/17)	483.7 (469.3-498.5)	508.8* (504.4-513.3)
Prevalence of asthma (adult) (2019)[1]	Not available	Not available	11.7% (8.7-14.8)	11.5% (10.5-12.5)
Prescriptions for asthma medication (adult) Rate per 100000 adults across 2013/14	22193	23171	Not available	Not available
Prevalence of asthma (child) (2017-19)[1] (current asthma data)	Not available	Not available	10.4% (6.8-14.1)	13.1% (11.8-14.4)
Prescriptions for asthma medication (child) Rate per 100000 children across 2013/14	36086	51259	Not available	Not available

* Rate per 100,000 population (age-standardised)

1 Data from NSW Health Stats (http://www.healthstats.nsw.gov.au/)

Shading relates to comparison against NSW:

statistic/data suggestive of a potential higher vulnerability within the population to health stressors

60) Run-off from hard-standing will be directed to the bioretention basin.

Run-off from hard-standing will be directed to the bioretention basin. (PG 750 EIS).

Cleanaways incinerator will have a negative impact on the quality of water - leading to soil pollution and damage to ecosystems through eutrophication (Eutrophication is a leading cause of impairment of many freshwater and coastal marine ecosystems in the world e.g From acid rain and excess nitrogen pollution).

Cleanaway is proposing to use the local bioretention basin as a water treatment system. It will act as a sediment basin during construction of the incinerator. The untreated water will be first allowed to infiltrate native soils, vegetation, before treatment. This will promote contamination to soil and vegetation by heavy metals and toxic chemicals.

The local Bioretention basin must not be used to filter waste incinerator water and sediment. This practice would put at risk The Hawkesbury-Nepean river system, an important natural asset and one of the largest coastal river catchments along the NSW coastline. **It is the main source of drinking water for over 4.5 million people, or 70 percent of the NSW population.** Its waters also support agricultural and horticultural industries that generate more than $1 billion annually, including $259 million of irrigated agriculture which supplies much of Sydney's fresh food. This catchment covers 2.2 million hectares (22,000 square kilometres).

61) Arsenic Emitted from Incinerators with Acute Health Effects

Recent studies by The HARP indicate that arsenic is the pollutant of most concern emitted from incinerators, with acute health effects being higher than anticipated. The chemical form of arsenic may be emitted from the incinerator, Inorganic arsenic inhalation exposure has been found to be strongly associated with lung cancer. Ingestion of inorganic arsenic has been found to be associated with increased risk of non-melanoma skin cancer, and also an increased risk of bladder, liver and lung cancer (USEPA, 2000). Acute inhalation exposure of workers to high levels of arsenic dust or fumes has resulted in gastrointestinal effects and whereas acute exposure of workers to inorganic arsenic has resulted in nervous system disorders (USEPA, 2000); The most sensitive chronic effect was decreased intellectual function in 10 year old children (Wasserman et al., 2004). Chronic illness, from inhalation and vegetable consumption, of the developmental system, central nervous system, cardiovascular system, respiratory system and skin due to arsenic.

62) Mercury Emitted from Incinerators with Acute Health Effects

Health risks from exposure to Mercury. Mercury exists in metallic vapour form at incinerator operating temperatures. Inhalation exposure to mercury is usually to vapours of the elemental metallic form. However, combustion processes may also emit chlorides and oxides of mercury. Exposure to the inorganic forms (valences II and III) also occurs via the oral route. In the absence of acute inhalation studies in humans, the acute REL for mercury is derived from the work of Danielsson et al (1993). Pregnant rats were exposed by inhalation to 1.8 mg/m3 of metallic mercury vapour for 1 hour/day or 3 hours/day during gestation. The offspring displayed significant dose-dependent deficits in behaviour after birth compared to controls.

63) Cleanaways Community Engagement/Citizen Panel A Farce

The Cleanaway Citizens Panel was made up of around 25 paid Market Researchers. They were paid $240.00 each per session which ran from 9.00am - 1.30pm. For a total of four days. Everyone who attended was made to sign a confidentiality agreement that stated nothing said at the Citizens Panel would be discussed with anyone outside the room. This is not a way to build trust, or engage with the community.

One of the proposed objectives is “Build trust with the community through ongoing engagement in the planning, design, construction and operation of the EfW facility” Cleanaway have failed to do this.

64) Selection Of Site - Cleanaways Land Deal With NSW Government

Cleanaways EIS states (Pg 8) “The main reasons for the selection of the site located at 339 Wallgrove Road in Eastern Creek are outlined in the subsequent section. The site is in a region that is expected to accommodate a significant proportion of the population growth forecast for Sydney.”

The Government purchased the land for the Cleanaway Incinerator in March 2019 from Bako eggs for 2500,000. The land was contaminated with salmonella. The Government sold the land five months later to Cleanaway for an inflated price of $19,250,000. The ICAC needs to investigate this transaction. This is equal to Cleanaway paying $16,750,000 to the Government in an illegal developer donation. Why did Cleanaway pay $19,250,000 for land with salmonella contamination. Did the Government pay to clean up the land ? Source

65) Independent Analysis of Cleanaway’ Incinerator Emissions Plume

Plume Plotter predicts this fallout using AERMOD, which is one of the most widely used modelling systems for air pollution. It uses the latest local weather conditions and upper air data, which are obtained in real time. Since the incinerator does not yet exist, Plume Plotter does not use real-time information about its emissions. Instead, it assumes that the incinerator is operating continuously and emitting pollutants at a constant rate. The emission rates assumed are the long-term planned emission rates that were specified by the incinerator developers in their planning application; the other parameters (e.g. emission velocity and temperature) used are also taken directly from the planning application.

If Cleanaways Blacktown Incinerator was operating today this is where the emissions would fall. https://plumeplotter.com/blacktown/?m=places

Plume Plotter's model takes account of the real terrain in the vicinity of the incinerator and the shape of the incinerator buildings.

PlumePlotter
Plotting Incinerator Plumes

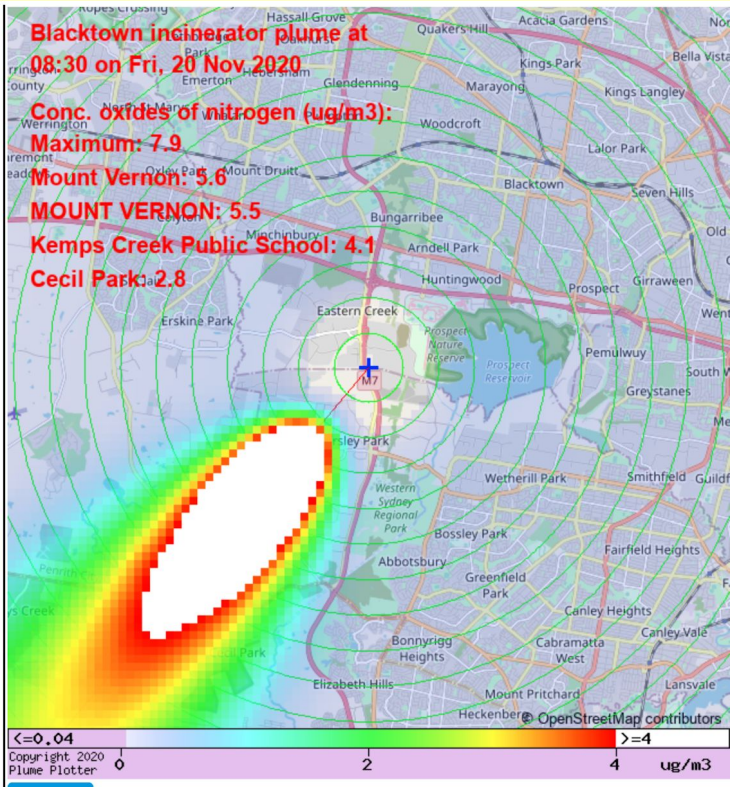
Blacktown places

Plume Plotter | Blacktown Plume Plotter | Blacktown places | About Blacktown Plume Plotter

Blacktown incinerator plume at 08:30 on Fri, 20 Nov 2020

Estimated concentration of oxides of nitrogen (µg/m^3):

Maximum	7.9
Mount Vernon	5.6
MOUNT VERNON	5.5
Kemps Creek Public School	4.1
Cecil Park	2.8
Badgerys Creek Public School	1.4
Badgerys Creek	1.4
Horsley Park	0.8
Horsley Park Public School	0.8
HORSLEY PARK	0.5
Austral	0.4
Austral Public School	0.4
Evans High School	0.3
Kemps Creek	0.3
Wetherill Park	0.2
William Stimson Public School	0.2
St Johns Park Public School	0.2
Blacktown Technical College	0.2
Wakeley	0.2
Blacktown North Public School	0.2
Blacktown	0.2
Prairiewood	0.2
St Johns Park	0.2
Blacktown High School	0.2
Bonnyrigg Public School	0.2
Tarlington Public School	0.2
Bonnyrigg	0.2
St Johns Park High School	0.2
Prairievale Public School	0.2
Huntingwood	0.2
Bossley Park	0.2
Marayong	0.2
Marayong South Public School	0.2
Blacktown Public School	0.2
Coreen Public School	0.2



PlumePlotter
Plotting Incinerator Plumes

Blacktown places

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Blacktown incinerator plume at 21:30 on Fri, 20 Nov 2020

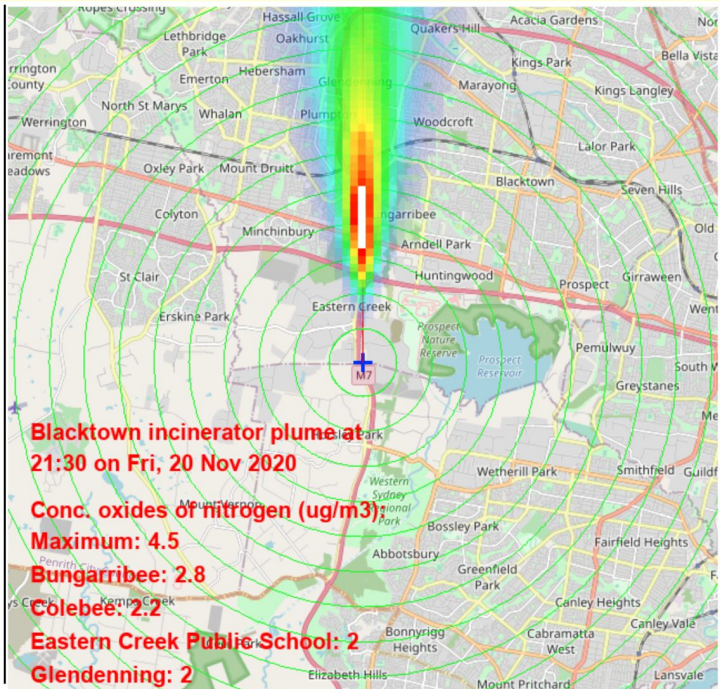
Estimated concentration of oxides of nitrogen (µg/m^3):

Maximum	4.5
Bungarribee	2.8
Colebee	2.2
Eastern Creek Public School	2
Glendenning	2
Dean Park	1.8
Crawford Public School	1.7
Doonside	1.4
Doonside High School	1.1
Doonside Public School	0.8
Plumpton	0.5
Schofields	0.4
Schofield Public School	0.4
Quakers Hill	0.4
Marsden Park Public School	0.4
Marsden Park	0.4
Hassall Grove Public School	0.3
Marayong Heights Public School	0.2
Quakers Hill Public School	0.2
Oakhurst	0.2
Hassall Grove	0.2

Click on a place name above for full details.

Plume Plotter on Facebook/Twitter

Weather data from Richmond airport



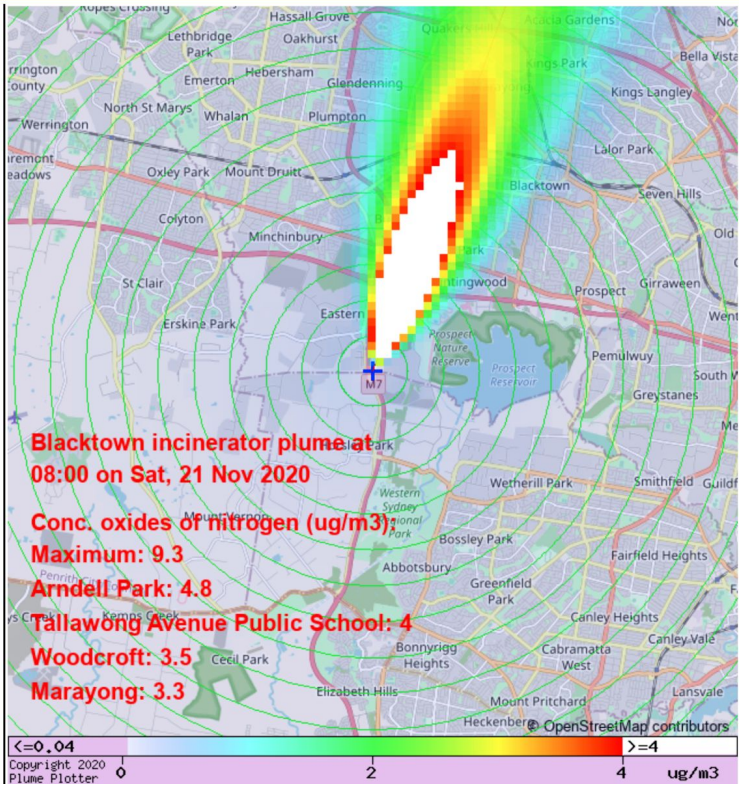
PlumePlotter
Plotting Incinerator Plumes

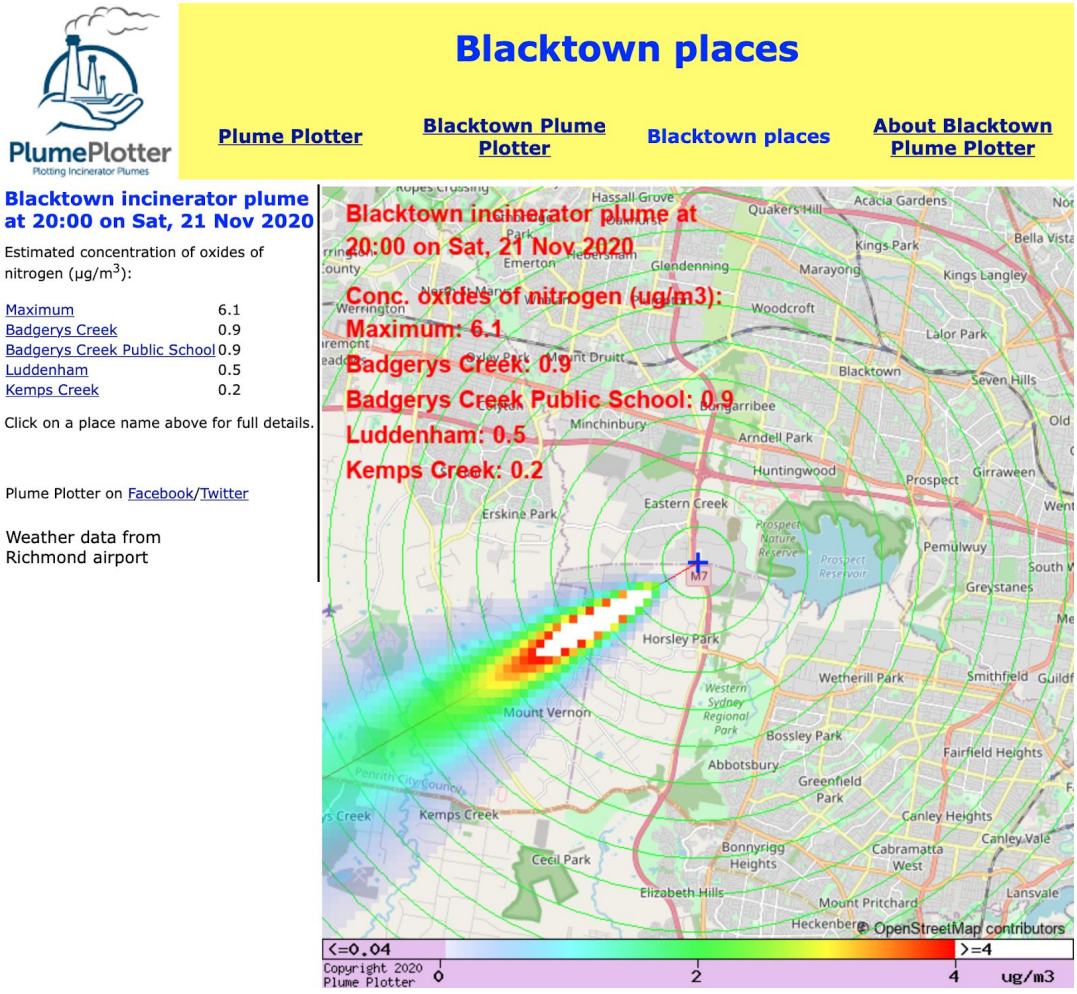
Blacktown places

Blacktown incinerator plume at 08:00 on Sat, 21 Nov 2020

Estimated concentration of oxides of nitrogen (µg/m^3):

Maximum	9.3
Arndell Park	4.8
Tallawong Avenue Public School	4
Woodcroft	3.5
Marayong	3.3
Doonside Public School	3.3
Marayong Public School	3.2
Marayong South Public School	3.2
Doonside	2.8
Blacktown West Public School	2.8
Bungarribee	2.8
Quakers Hill High School	2.7
The Ponds	2.4
John Palmer Public School	2.4
Doonside High School	2.4
Marayong Heights Public School	2.3
Kellyville Ridge	2.2
Acacia Gardens	2.2
Kings Park	2.2
Evans High School	2.1
Quakers Hill	2.1
Parklea	2.1
Rouse Hill	2
Quakers Hill Public School	2
Kellyville Ridge Public School	2
Blacktown High School	1.9
Parklea Public School	1.8
Stanhope Gardens	1.8
Rouse Hill High School	1.8
Crawford Public School	1.6
Ironbark Ridge Public School	1.5
Schofield Public School	1.4
Blacktown North Public School	1.4
Schofields	1.4





66) Independent Analysis of Technical Report A: Air Quality & Odour

Calpuff Air Modeling Delisted As An EPA Prefered Model In 2017

P33: Cleanaway used CALPUFF to model the fallout, rather than AERMOD. (Both AERMOD and CALPUFF are or were US EPA software.) CALPUFF has certain advantages (e.g., in mountainous and coastal locations). However, "CALPUFF was delisted as an EPA preferred model in the 2017 revised Guideline": https://www.epa.gov/scram/air-quality-dispersion-modeling-alternative-models

Cleanaways Modelling Scenarios Aimed At Confusing People

P39-43: Cleanaways modelling scenarios are extremely complicated and seem to be aimed at confusing people. E.g; in Table 6-4, they show nine "load points": LP1-LP9. LP1 seems to be the one representing normal long-term operation, so I have used LP1 for the plume plotter. The velocity, temperature, and flow rate in the plume plotter come from this table for LP1.

Numerous Alternatives For The Concentration Of Pollutants

P39-43: Tables 6-6 and 6-7 show numerous alternatives for the concentration of pollutants. In these tables, the 1- hour and 24-hour averages are mostly the same as the half-hour and 24-hour averages, respectively, in the EU legislation. They also have a column for the expected annual average (lower than the 24-hour averages), which is not mentioned in EU legislation. The EU limits changed at the end of 2019, from "IED" (https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32010L0075&from=EN) to "BAT- AELs" (https://eippcb.jrc.ec.europa.eu/sites/default/files/2020-01/JRC118637_WI_Bref_2019_published_0.pdf), as used in their tables. They mostly use the new limits, unlike other Australian incinerators (Lithgow, Eastern Creek, Kwinana, East Rockingham), which used the old EU limits. To add to the confusion, in Table 7-6, they propose using the new EU limits ("BAT-AELs") as their licence limits.

Tables 6-4 and 6-5 Have Incorrect Headings

p40: In Tables 6-4 and 6-5, the headings should say Nm3/h, not Nm3/s. These inconsistencies make it very hard to trust the quality of data in this report.

Stack Height Contradiction

p40: Cleanaway seems to be vague about the stack height, stack height of 75m was used in the plume plotter.

p40: "It is noted that a difference in stack height of ±5m is unlikely to have any tangible effect on the emissions." This sentence is questionable because increasing the stack height is probably the most effective way to reduce the ground-level fallout, and a 10m difference would make a noticeable difference. (But would have no effect at all on the emissions)

NOx Over The Limit At Dublin's Poolbeg Incinerator - Reference Facility

p46: In Table 6-10, Cleanaway compares the emission concentrations from the Poolbeg incinerator with the limits ("BAT-AELs"), and it turns out that only NOx (about 155 daily average) is over the limit (120). They say, "With minimal additional NOx mitigation measures (i.e. increased use of dosing consumables) the Dublin facility can comply with the NOx BAT-AELs once it is required to." This is misleading because the new limit (120) only applies to new incinerators. The limit for existing incinerators is 150, so Poolbeg will only need to reduce NOx concentrations slightly (from 155 to 150).

Low Stack Temperature Creates A More Visible Emissions Plume With Less Rise

p47: Table 6-11 shows that the stack gas temperature (of Blacktown and Poolbeg) is very low (61 and 70 degrees). All other incinerators (including planned ones) that I know have a much higher temperature (at least 120 degrees). This is why the Poolbeg plume is always visible, unlike other incinerator plumes, but this is only a guess. The drawbacks of a cold plume are that it's more visible and there is less plume rise.

Table 6-11 Has Rows In the Wrong Order

p47: In Table 6-11, the last two rows seem to be in the wrong order for the Poolbeg incinerator (rightmost 4 columns), but I cannot confirm the correct values. These inconsistencies make it very hard to trust the quality of data in this report.

SNCR System Should Average NOx At 150mg/Nm But Cleanaway Claim 90 mg/Nm3, in Table 6-7

p88: "The proposal will equip (sic) the use of a SNCR system to mitigate nitrogen oxides (NOx)." SCR is more effective than SNCR but more expensive. ***Almost all incinerators in the UK and Ireland currently use SNCR, and their NOx emission concentrations are usually around 150 mg/Nm*** *.*

It is not certain that new incinerators will be able to use SNCR because they will need to average less than 120 mg/Nm to comply with the EU BREF. Cleanaway claims they will be able to keep to 90 mg/Nm3, as per Table 6-7, by using SNCR? The evidence from working incinerators around the world suggests this is not possible with SNCR.

Cleanaway Have Not Plotted All Highly Polluted Areas

Appendix C: The plume contour maps only cover a small area, and do not include all the highly polluted areas.

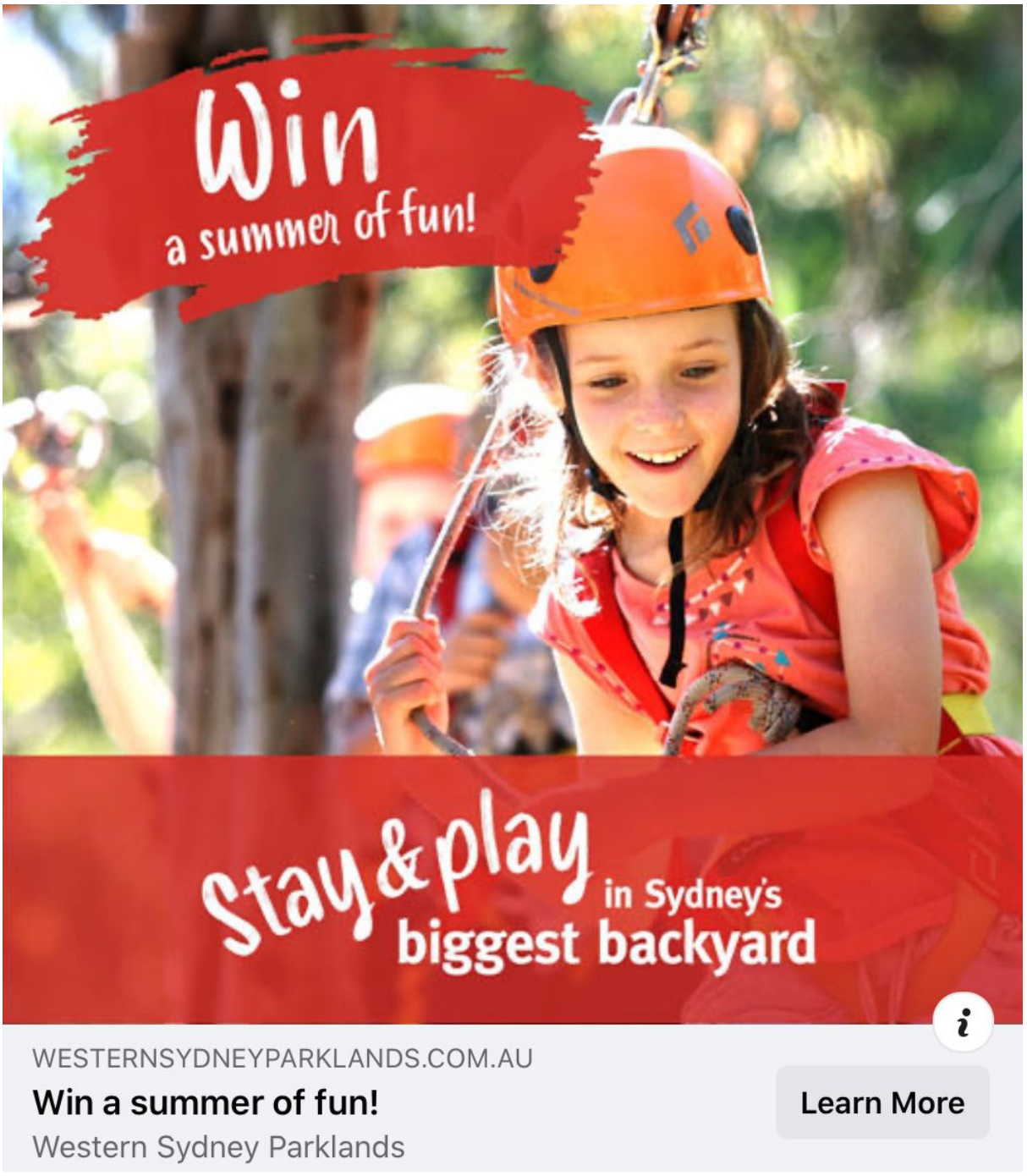
Figure C-6 & Others Don't Make Sense

Figure C-6 (and others): "Figure C-6: SC1 - Predicted incremental relative 100th percentile annual average NO2 glc concentrations (µg/m3)." This doesn't make sense: it must be either the 100th percentile (maximum) or the average. Judging by the contour values, it seems to be the average, in this case. These inconsistencies make it very hard to trust the quality of data in this report.

67) Western Sydney Parkland In The Shadow Of An Incinerator

Western Sydney Parkland is marketed as "treetops, thrills at the racetrack, animal encounters, or cooling off at the water park, Western Sydney Parklands is home to some of Sydney's best days out this summer.

Western Sydney Parklands publicly accessible areas are located about 1 km north of the Cleanaway Incinerator site, within the sacrifice zone. Families and their children don't want to play in the shadow of a toxic incinerator.



There is no way that it is a sensible idea to build an incinerator in the Western Sydney Parkland, as you can see from the map on the following page, this area is a designated leisure park. People will not enjoy outdoor activities 1km from an incinerator pumping out a visible plume.

68) Australian Academy of Technology and Engineering major report, *Towards a Waste Free Future.*

An important report 18th November 2020, the Academy of Technology and Engineering has called for a complete rethink of how products are designed to avoid creating waste in the first place. We should be designing products so they have a long and productive first life and can then be reused, repaired or made into something else once they reach the end of that first life. This circular economy would create enormous job creation benefits. Incineration is not the answer and is not part of a circular economy.

https://www.atse.org.au/research-and-policy/publications/publication/towards-a-waste-free-future/

69) Incineration - More C02 Than Coal & Gas - Not Renewable Energy

"To make the same amount of energy as a coal power plant;

- Incinerators release 28 times as much dioxin than coal
- 2.5 times as much carbon dioxide C02,
- twice as much carbon monoxide,
- 3 times as much nitrogen oxides (NOx),
- 6-14 times as much mercury,
- nearly 6 times as much lead
- 70% more sulfur dioxides". (EJN). http://www.energyjustice.net/incineration/worsethancoal

Zero Waste Europe (ZWE) has published a policy briefing on the carbon intensity of energy-from-waste (EfW) processes, revealing that it is around twice as carbon intensive (580g CO2 equivalent per kWh) as the current EU average electricity grid intensity and significantly greater than energy produced through conventional fossil fuel sources such as gas (340g CO2 equivalent per kWh).

70) Cleanaway Incinerator Is A Danger To Our Climate

Cleanaways Incinerator is likely to contribute to climate change. This is a key reason why their proposal should not go ahead. The GHG emissions from the project, both direct and indirect, would be inconsistent with Australia's commitments under the UNFCCC and the Paris Agreement to keep global temperature increases to below 1.5º to 2ºC above pre-industrial levels, and would have a cumulative impact on climate change in the long term.

Cleanaways Incinerator will release 2.5 times more C02 than a coal power plant. The Bureau of Meteorology and the CSIRO said in the latest Australian "State of the Climate Report" "Rising levels of carbon dioxide in the atmosphere, mostly from fossil fuel burning, has driven more dangerous bushfires, rising sea levels and a rapid rise in the days where temperatures reach extreme levels.

The UN Secretary-General has proposed six climate-positive actions for governments to take once they go about building back their economies and societies:

1. Green transition: Investments must accelerate the decarbonization of all aspects of our economy.
2. Green jobs and sustainable and inclusive growth

3. Green economy: making societies and people more resilient through a transition that is fair to all and leaves no one behind.
4. Invest in sustainable solutions: fossil fuel subsidies must end and polluters must pay for their pollution.
5. Confront all climate risks
6. Cooperation – no country can succeed alone.

To address the climate emergency, post-pandemic recovery plans need to trigger long-term systemic shifts that will change the trajectory of CO2 levels in the atmosphere.

https://www.un.org/sustainabledevelopment/climate-change/

71) Cleanaway Incinerator Will Create Minimal Jobs

Numerous independent studies have reported that jobs generated in waste management systems that use waste incinerators are expensive, computer controlled, largely automated technology that only require a small workforce to operate. 55 full time jobs will be created on completion of the waste incinerator. A Bunnings Warehouse would create more jobs without toxic pollution.