

## Why not burn?

Of course there will always be those who will tell you that burning rubbish is a simple, clean option and one which can create energy which in turn can produce electricity. Please be assured that those who express this view very often do not have possession of all the facts on incineration, and they **NEVER** live near an incinerator. If they did, they would hold a very different view indeed.

This site will give you the facts about incineration and blow apart some of the myths, as well as pointing you in the direction of a number of other websites which contain vast resources on the subject.

## Overview

The purpose of this area of the website is to share facts and information regarding some of the effects of municipal solid waste (MSW) incinerators. The full range of adverse effects of municipal solid waste (MSW) incinerators is well beyond the scope of this site, but for those interested you can get more information by going to the Links page which will direct you to a number of web based resources on the subject.

Whilst we have tried to separate out some of the effects of Incinerators on this page, some of the areas will of course overlap with each other. This is a testimony to the far reaching effects of toxic emissions, poisonous ashes and other polluting residues which are produced by burning our waste.

What we put into the environment comes back to us through the food chain, the air we breathe and the water we drink. Pollution Control Levels cannot protect us as they are based on currently achievable levels, not actual levels. There are **no control levels** at all for some of the most harmful substances known to man, for example **dioxin** a substance known to **cause cancer**.

After reading this it is hoped that you will understand why we have to fight incineration as a "Solution" to our current waste problem and why we have to find cleaner, greener, sustainable alternatives.

This is not about us, but about what we can do for the future generations living in this Country.

## Location

**"Why if incinerators are claimed to be safe are they always located in poorer areas?"**

A very good question and one which perhaps the residents of Cheshire should be asking of the Council right now? Take a look at the sites listed in the Draft Waste Local Plan and you will see that they are all in areas traditionally regarded as the poorer areas of Cheshire.

You won't see any plans for '*Thermal Treatment*' in Knutsford, Macclesfield, Wilmslow, Altrincham or Congleton, but you will see plans for Northwich, Crewe, Ellesmere Port, Middlewich and Sandbach. Is this a coincidence? It may be that there are really legitimate reasons for the sites that have been chosen, however

you can make your own minds up about it. It's ironic really because if the Council do go ahead and actually build an Incinerator at any of the possible sites outlined in their plan then the residents of Knutsford, Macclesfield, Wilmslow, Altrincham or Congleton will actually bear the brunt of the dioxin fallout from the chimney stack as they are all **DOWNWIND** of the proposed sites!

Residents of Altrincham will recall the closure and demolition of the Incinerator at Broadheath in the early 90's following a public outcry about the incidence of health problems in the areas immediately surrounding the plant. Its closure was hastened by the introduction of legislation, which meant that it could not meet emission levels imposed on it.

Supporters of incineration today will tell you that modern plants all meet these new stringent emission levels but omit to tell you that the **Environment Agency could not find an Incinerator in England and Wales that hasn't breached its emission level targets**. The Environment Agency has also admitted to Parliament that it **does not know how dangerous modern incinerators are to human health**. (Copyright GAIN <http://www.no-incinerator.org.uk/>)

Do not believe for one minute that it is safe to site Incinerators anywhere in this Country – they are long term killers, produce carcinogenic and toxic wastes and cost more to run than the alternatives.

It is worth remembering what John Prescott said in 2000 **"We should not lose sight of the fact that it is the poor who suffer most from pollution"**.

## ***Human Health Risks***

The following is a simple summary of some of the available information on human health risks, but if you want to get a better understanding then go to our [links page](#) and check out the other sites.

- "Air emissions from waste incinerators have been **positively identified** as a cause of cancer and other health damage in humans."
- 6.7 increase in the likelihood of mortality from lung cancer.
- 2 fold increased probability of cancer mortality in children.
- 37% excess mortality due to liver cancer.
- "Studies of the communities living in the vicinity (0.5km to 5km) of municipal solid waste incinerators have shown elevated levels of dioxins in blood samples compared to background population levels.
- "Nitrogen Oxides : A by product of the process of burning waste have respiratory effects (and is a pre-cursor of ozone, which also contributes to respiratory problems)
- Sulphur Oxides : A by product of the process of burning waste also have respiratory effects
- Particulates: Cause respiratory effects and there is no known safe threshold
- Dioxins: Class 1 Carcinogen (as TCDD). Affects development and reproduction Highly Toxic, persistent, bio accumulative. Can contaminate the food chain
- Developmental impacts: Birth-defects, foetal death, impaired neurological, development and subsequent cognitive defects, altered sexual development.

## **Environmental Effects**

The environmental effects of Incinerators are such a huge subject that several websites and papers have been produced on this topic alone. There are impacts from the transport of rubbish to the site, storing the waste before burning, emissions from burning and the subsequent fallout of dioxins and furans, long term build up of toxicity in the environment, disposal of the three types of ash produced by the Incinerator as well as the dangers of toxic build up in the food chain. Incinerators can impact on Agriculture, Industry and Fishing and can create environmental problems for years to come.

The following are some examples of the environmental issues surrounding Incinerators.

- The bulk of our exposure to Dioxins is through the food chain (around 98%) rather than through breathing". Parliamentary Office of Science and Technology report K9, Dec 2000
- "There are no air quality standards set for dioxin".
- "Stoke MWI produces 260 tonnes of nitrogen oxides, 24 tonnes of sulphur oxides, 3.5 tonnes of particulates, and 0.095 grams of dioxins for its 200,000 tonnes capacity " (as reported in the Pollution Inventory)"
- "Incineration worsens climate change".
- "Because of their contaminates, disposal of incinerator ashes presents significant environmental problems."
- "In the U.K., it was estimated that MSW incinerators were responsible for 30 -80% of dioxin emissions".
- "The environmental gains from re-cycling waste going to landfill and incineration - in energy use, in improved air, and water quality, reduced carbon monoxide emissions and in global resources conservation - may provide the greatest benefit of all.
- "...it causes pollution from air emissions and toxic ash"
- [Incinerators produce] "Acid gases"

## **Resource Losses**

One of the least talked about issues regarding Incineration is that of resource loss. Very few people stop to think that as we burn all this 'waste' material we are destroying, forever, resources which may be irreplaceable. Not only is this a criminal waste of precious natural resources, but also an incredibly short sighted approach. Remember that matter can neither be created nor destroyed – all we are doing with incineration is taking stuff we recognise such as wood, textiles and plastics, and turning it into stuff we don't such as dioxins, furans and other toxic by products.

When we think about this subject, which isn't very often, we do so in the knowledge that in our lifetime we will never run out, or run short of natural resources, but can we be so sure about the lives of our children, and grandchildren?

Natural resources are finite, yet we gladly burn these with not a care for tomorrow. Are we really that short sighted? Can we really say that we don't care what happens to our children and our children's children? Are we happy to be

described as the generation that wasted what little resources the planet has to offer?

Here are some facts about resource loss:

- Incineration wastes natural resources, it undermines re-cycling by demanding a steady stream of waste
- Around 20,000 tonnes of aluminium foil packaging (worth £8,000,000) is wasted each year.
- British Glass estimate that up to 90% of new glass could be made from reclaimed scrap glass.
- Most incinerators are not very efficient at capturing energy from the waste they burn, which means that they release a large amount of energy. Most power stations are more efficient, produce more power with less carbon dioxide released

The following table illustrates the energy saved by re-cycling rather than burning waste.

Material	Energy saved
Paper	3 times
Plastic	5 times
Textile	6 times

- Plastic packaging - Plastic accounts for 4% of oil consumption, oil is a non-renewable resource, it has been estimated that, at current projected consumption rates and allowing for future discoveries, we will run out by the middle of this Century
- Paper - half of Europe's forests have already disappeared. Logging for paper production is moving into wildlife rich forests like the Carpathian Mountains, home to 45% of Europe's wolf population, brown bears, lynx and the globally threatened imperial eagle.

## Economics

Quite simply, Incineration is not economically viable. The cost model against which Incinerators are built presupposes a constant stream of waste over a 20 year period to make the plant worthwhile. Where this waste stream is not available then the Council ends up paying fines to the Incinerator operator (see below). In this ludicrous situation it then costs each Council Tax payer **MORE** than if they had used virtually any other option.

Building a single plant in Cheshire to manage 200,000 tonnes a year would put Cheshire County Council in the same position as other Councils around the UK, and we as Council taxpayers would have to foot the bill. The reason for this is that the figure of 200,000 tonnes is taken directly from the Council's Draft Waste Local Plan (page 33, fig 3.32 euphemistically titled 'energy recovery' to save you trawling through the plan!) but the figures themselves are flawed.

They seriously underestimate the value and success of source waste separation and assume that both the volumes of unsorted household waste and industrial waste will continue to rise. This of course assumes that we as members of the public, and our Local Councils do nothing about it. And if this happens Cheshire County Council will of course be able to demonstrate the need for an incinerator.

**THIS DOES NOT NEED TO HAPPEN**

Vale Royal Council introduced their kerbside recycling scheme in May 2004 <http://www2.valeroyal.gov.uk/internet/vr.nsf/0/23D5B9C649267F70802570AF0057B457>, and whilst it has not been universally accepted by every resident the small effort required to separate the waste going into the bin has meant that the Council, by August 2004, was named as one of the top recycling Councils in the **COUNTRY**, with over 40% of all household waste going for recycling. And this is just the tip of the iceberg because as yet there are no facilities for recycling plastics through this scheme. The scheme is already a success and will actually cost **LESS** than the alternatives of sending rubbish to landfill or burning.

Recycling creates significant jobs in the local environment as the table below demonstrates

Types of waste disposal	Number of jobs
Landfill	40 - 60
Incineration	100 - 290
Composting	200 - 300
Re-cycling	400 - 590

The jobs attributed to incineration typically show a higher proportion being associated with building the incinerator, so they were not permanent jobs.

Here are some more good reasons why economically Incineration is a nonsense:

- **Cleveland County Council.** There was a shortfall of 12,000 tonnes in the first year of the contract, and the authorities incurred penalties of **£147, 000**
- **Nottingham City Council.** Long term contracts agreed in 1973 on their MSW incinerator are now causing serious losses. The Council will have to continue paying until 2016. Council taxpayers are having to meet the shortfall of **£100,000 per month.**
- "Instead of being a disposal problem, organic household waste can be useful end products that have both a market value and an environmental value."
- "Re-use and re-cycling initiatives provide more than 10 times as many jobs as incineration for a given quantity of material process.

## House Prices

In a recent paper on the effect of the impact of an EfW (Energy from Waste) Incinerator in Newhaven

(<http://www.lewes.gov.uk/coun/planning/esxwaste/econimpact%20.pdf>)

the researchers drew from two previously published papers on the subject,

- Kiel, Katherine A and McClain, Katherine T. "House Prices during siting decision stages: The case of an incinerator from rumour through operation". *Journal of Environmental Economics and Management* 28, pages 241-255, 1995
- DEFRA. "A study to estimate the disamenity costs of landfill in Great Britain". Cambridge econometrics in association with EFTEC and WRC, February 2003

and reported the following:

*"The study found evidence that **house prices** close to the incinerator **dropped** relative to prices elsewhere on rumour of the new site, **fell further** when construction began, **fell further still** when operations began and recovered slightly after four years of operation, although they were still **significantly lower** than they would otherwise have been."*

Put simply therefore, your property will lose value if you live within a **five mile radius** of any of the proposed sites. Houses that have an incinerator in the local area are typically as much as 20% lower in market value.

The impact is already happening in Northwich; prospective house buyers have started to withdraw from purchases once searches uncover the threat of the Lostock incinerator.

If the plant is built then **any** property downwind of the plant will be subjected to dioxin fallout, and once this is known you can expect this to impact on house prices in these areas.

## The Alternatives

The good news is that **THERE IS AN ALTERNATIVE!** There is so much that can be done from personal initiatives, where you take papers, plastics, bottles and cans to a recycling facility, up to Local Council level where they can provide kerbside recycling facilities rather than simply emptying bins directly into landfill, up to Government level where, with the right approach we could change the way this country deals with waste.

- The Government strategy strongly supports the composting of waste, this is a vital component of meeting Waste Strategy Targets for the re-cycling and composting and targets under the Landfill Directive to reduce the land-filling of biodegradable municipal waste. *DEFRA siting note on composting 21st June 2001*
- Most in the industry agree that at least 60% is a realistic target for diversion from landfill into biodegradation and recycling - Peter Jones Director, BIFFA Waste services January 2001
- Vertical composting units-odourless, small footprint, low cost. The system requires as little as 11kW of electrical energy to process a tonne of waste
- Mechanical Biological Treatment (MBT) systems combine a series of treatment steps to remove as much vegetable, organic and toxic material from the residual as is possible thereby producing an inert "stabilized" final product.
- Refurbish and re-use schemes not only reduce waste, but also provide good quality employment and encourage small scale businesses which generate money for the local economy.

## Examples

For examples of towns, cities, regions and countries you need look no further than Vale Royal Borough Council, currently recycling over 40% of all household waste after introducing their scheme in Spring 2004.

Other good examples around the world show us just how much further we can go with the right approach:

- Canberra, Australia - 66% in 2000. Zero waste by 2010
- Mersea Island, Kent - 57% recycled.
- Wealden, East Sussex - 53%
- Toronto, Canada, Waste Plan 60% diversion from landfill by 2006, 100% by 2010. [www.toronto.on.ca/task-force2004](http://www.toronto.on.ca/task-force2004)
- Nova Scotia, Canada - 50% reduction in waste
- Edmonton, Canada - 70% reduction in waste [www.gov.edmonton.ab](http://www.gov.edmonton.ab)
- U.K. "Over 50% of our local authorities aiming for zero waste"
- Zero waste New Zealand Trust [www.zero.waste.co.nz](http://www.zero.waste.co.nz)
- San Francisco, USA, aiming for zero waste. Already over 70%

## **References**

The following articles and publications have been quoted or referenced in the figures published on this page. For more examples see our [links](#) page.

- "Incineration and health issues", Friends of the Earth briefing, March 2001 ISBN: 90-73361-69-9 [www.foe.uk](http://www.foe.uk)
- "Up in Smoke", Friends of the Earth briefing. June 2003 [www.foe.uk](http://www.foe.uk)
- "Incineration and human health" Greenpeace 2001 [www.greenpeace.org.uk](http://www.greenpeace.org.uk)
- "How to Comply with the Landfill Directive Without Incineration": a Greenpeace blueprint. [www.greenpeace.org.uk](http://www.greenpeace.org.uk)
- Zero Waste New Zealand Trust [www.zero.waste.co.nz](http://www.zero.waste.co.nz)