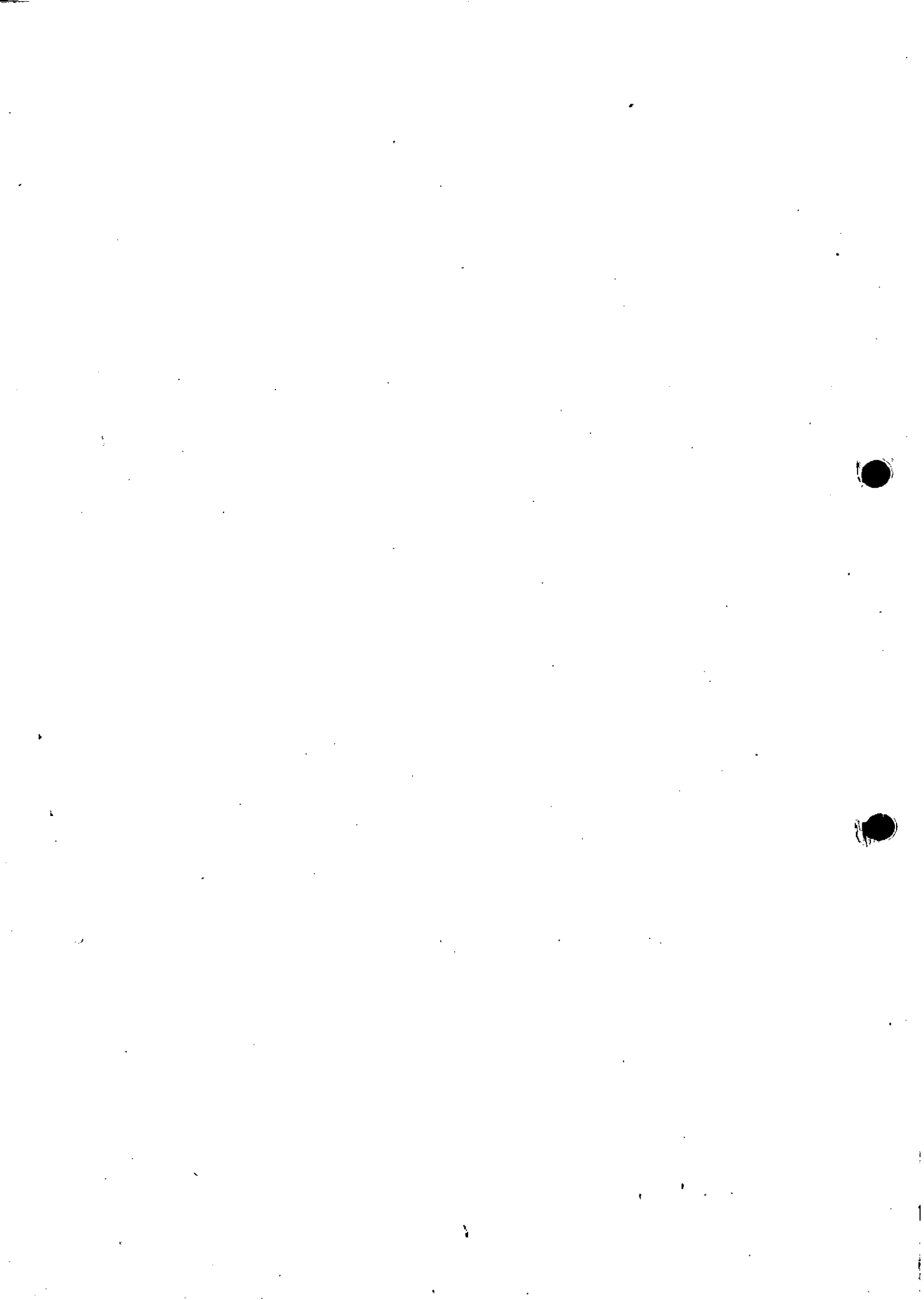


APPENDIX 2

CORRESPONDENCE FROM HALTON
ACTION GROUP AGAINST THE
INCINERATOR



**HALTON ACTION GROUP
AGAINST THE INCINERATOR**

**Ineos Chlor Limited
Energy from Waste Generating Facility**

**Proposal for Weston Point
Runcorn**

**The Action Group's
Statement of Concerns Relating to the Proposal**

June 2007

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2. Introduction

We fully support Halton Borough Council's plans to develop more sustainable waste disposal solutions and to seek to reduce levels of waste currently going to landfill. However, there are other more environmentally friendly and much less dangerous routes available for waste disposal than energy from waste incinerators.

We are opposed to the building of a large energy from waste incinerator of the type proposed at Weston Point, in order to provide a Regional Centre for waste disposal, in this densely populated, highly polluted, deprived area with one of the worst health records in the United Kingdom, to the detriment of the Borough, and to the health and quality of life enjoyed by the people who live here.

This Proposal is unrelated to the Borough's Waste Management Policy and is solely motivated by Ineos Chlor's commercial interests.

Our response identifies specific concerns that we have about the Proposal, and the reasons why we strongly believe that it should not be supported! These concerns have in common the one recurring theme, that for the people of Halton, this Proposal has no identifiable benefits, only enormous risks! We therefore recommend application of the Precautionary Principle viz:- "When an activity raises threat of harm to human health or environment, precautionary measures should be taken, even if some of the cause and effect relationships are not fully established scientifically. In this context, the proponent of the activity, rather than the public, should bear the burden of proof".

In our judgement, there is sufficient evidence to support our view that the exercise of reasonable doubt should lead to rejection of the Proposal.

3. Location of the Proposed Incinerator

1. Dangers of the Location

The Proposal fails to recognize or understand the dangers of locating an incinerator of the type envisaged in the centre of one of the most polluted areas in the U.K., with large areas of contaminated land, "especially heavier air pollution levels" due to traffic flows, emissions, and increasing pollution fall out caused by air traffic as the Liverpool John Lennon Airport expands. The Halton Health Report identified the presence of toxic substances but also stressed the threat in the form of the possible 'cocktail' effects of the combination of those substances. In this respect, the location of this incinerator in one of the largest Chemical Industry complexes in Europe must be a cause of great concern.

2. Population Density

Halton Borough has the highest population density in Cheshire, and 10,190 people live within 2km of the site of the proposed incinerator. The Proposal therefore conflicts with Government advice that such installations should not be sited near densely populated areas. **It also conflicts with Halton Borough's Unitary Development Plan's criteria that waste incineration plants should not be located "within close proximity to residential areas or other sensitive land uses", (Ref 1), or "cause pollution or emissions that would have an unacceptable detrimental impact on surrounding land uses", (Ref 2).** Has due consideration therefore been given to the fact that residential housing is located only 50m from the proposed site? Further, given that children are believed to be at greater risk from substances emitted from incinerators (Ref 3), what account has been taken of the presence of three primary schools, three pre-schools and a College in close proximity to the site?

3. The Case for Incineration

Waste incineration produces CO₂ as its major pollutant. Now that the threat of global warming has been exposed, any activity, which increases CO₂, is, in general not a good thing. In this case the first priority for waste reduction and the simplest and cheapest is to significantly reduce the amount of waste by more thoughtful use of materials and recycling, before considering incineration. Halton and other surrounding NW areas have some way to go to achieve this. This proposal to incinerate waste removes this incentive and even could be said to encourage profligacy, as municipal waste will now have a positive value (more is good!?)

4. The Incomplete Nature of the Proposal

This proposal cannot and should not be judged on its own. In fact it is deficient in a large amount of important and critical information concerning its essential partner as producer of the "processed waste" fuel, possibly because it has not yet been determined. Some key questions are:

- Where will processing take place?
- What will be the true logistics of waste movement into the processing plant and out to the incinerator?
- What will be the nature, and consistency of the processed fuel (chlorine, bromine, heavy metal content, etc.) and its burning characteristics?

The answers to these questions will have a direct bearing on the suitability of the proposed site, in terms of the combustion process, the stack height, the at risk population and adverse health airborne pollutants, and the significantly increased road traffic across the Mersey and through Halton.

5. The Location and Stack Height

The supporting modelling studies for the proposal essentially assume a flat terrain. The proposed location, however, is next to an escarpment with residential housing downwind. The prevailing winds are south and west, with Runcorn/Daresbury and even Widnes directly downwind. The effects on the prevailing wind and air currents of the escarpment are not known. There may be eddies causing down drafts and fallout downwind.

In Cheshire there is and have been power station stacks close to an escarpment (the Brunner Mond station at Winnington by the Barnton escarpment). The history of this relationship has been one of continuing particulate fallout and residential unhappiness. This piece of concrete evidence shows what the outcome of the current proposed siting is likely to be.

The height of the proposed stack (105 metres) seems to have been chosen to suit airport approval requirements, not to reduce the potential pollution risks downwind. A conservative estimate might be that the stack needs to be a further 40 metres high, which is unacceptable to the Airport, to avoid the adverse effects of the escarpment.

How can a 100m chimney height be deemed appropriate for the Ince Incinerator burning 200,000 tonnes of fuel less than the much larger Ineos Incinerator, and located on flat level ground with no concentrated housing nearby, and yet the Ineos Incinerator needs only another 5 metres chimney height despite being located at the bottom of an 80m hill with three residential areas and three schools adjacent? It defies belief!

We recommend that this most important issue is resolved through an independent specialist report commissioned by the Council, since it would be unwise to rely solely on information supplied by Ineos Chlor. The Proposal could fail on this major issue of safety alone!

The proposal suggests that the location is in an industrial area with very little residential property nearby. However, the reality is that the dense residential wards on the higher ground of Runcorn stretching all the way to Daresbury and even parts of Widnes will be at risk from the plume fallout caused by the prevailing south and west winds. There is no modelling or other quality information to refute this. Nor is consideration given to the 'calm' period of the year (approx 12% of the year) when there is minimum dilution of emissions, thereby causing fall out in greater concentrations onto houses and residents close to the site. (*Appendix 2 and 5*)

6. Potential Pollutants

The proposal gives no details of the composition of the "processed waste" fuel, nor of any specification requirements. This is worrying! However, it is not difficult to imagine, from our own individual experience, what municipal waste contains (almost anything?) It will certainly have halogen elements (from PVC, etc), heavy metals and other toxic chemicals. It is difficult to see without any information, how 'processing' will not simply concentrate all of these 'nasties' in the fuel. Also there is no information given, based on experimental fact, on the resulting nature of the gaseous discharge whatever cleaning processes are applied and it is, therefore, not unreasonable to suppose that the known health adverse contaminants of incineration will be present.

Furthermore the lack of fuel quality specification would allow the operator to perhaps add other waste of indeterminate quality or provenance to improve their economics, thus increasing the already high risk.

7. Summary

From the foregoing, it is clear that the proposal presents little or no information on the most critical and important issues. There is no information on the necessary 'waste fuel' processing plant; there is no information on the specification of the fuel or the nature of its combustion, and entirely unrepresentative information on the modelling of the effects of the downwind plume and fallout of health adverse substances. For these reasons alone it would be unwise to support this proposal.

Effectively this proposal is a large experiment to see what happens if municipal waste is compacted/processed into fuel, and is burnt in an incinerator. Unfortunately the citizens of Runcorn and Widnes will be the unwitting guinea pigs in this experiment.

Because of the density of the threatened residential areas, it is likely that, if the proposal went ahead, complaints, real or imagined, will be regular and vociferous. This will adversely affect Halton in the long term with property prices being depressed and new businesses relocating away from Halton. At particular risk will be the new and emerging image of Runcorn as a "Science and Technology/New Business" hotspot with the growing Runcorn Heath and Daresbury Science Parks. This new image is a 21st century construct, whilst a waste incinerator is a throwback to a 19th century age.

8. Conclusion

In conclusion we can identify no benefits to Halton from the proposal but only serious risks of an experiment in building an incinerator upwind of dense residential areas. This site must be one of the worst possible locations in the U.K. for an energy from waste incinerator!

4. The Incinerator and the Environment

1. Size of the Incinerator

The Incinerator would be the largest of its kind built in the U.K. to date, and, therefore, the largest source of emissions. It would dramatically INCREASE, not reduce, the amount of waste going to landfill in Halton, and, in particular, the amount of hazardous toxic waste dumped at Randle Island. It cannot, therefore, be viewed as a solution to Halton's own waste disposal problems, but rather as a Regional Centre seeking to attract the Region's rubbish to be dumped in Halton, after burning, to satisfy Ineos Chlor's commercial interests.

2. Fuel and Residue

The Incinerator would burn some 850,000 tonnes of treated waste per year, of which only 30,000 tonnes (4%) would be Halton's waste. After burning, 375,000 tonnes of fuel would become residue, and of that, 155,000 tonnes (approximately 50%) would be hazardous material to be dumped at Randle Island. Therefore, of the 155,000 tonnes of hazardous material, the amount from Halton's waste would total only 6,200 tonnes, and so, every year, the equivalent of 25 years of Halton's own hazardous material would be dumped there!

It is important to note that the Government's proposed targets for reducing waste through increases in re-use, recycling etc, would necessarily reduce the amount of waste coming from the Region. Thus, a recycling target of 50% would reduce the 850,000 tonnes of fuel identified above to some 567,000 tonnes (and Halton's 30,000 tons to 20,000 tonnes) whilst a target of 60% would reduce it to 453,000 tonnes (and 16,000 tonnes) and a target of 70%, (as achieved in Germany) to 340,000 tonnes (and 12,000 tonnes) respectively. It is therefore, clear that the current recycling target of 50% would leave the Incinerator some 300,000 tonnes short of its fuel capacity.

However, this Incinerator would require its 'feed' of 850,000 tonnes if it were to run efficiently. It would be reasonable to assume therefore, that Ineos Chlor would seek to import the required waste either from other areas of the Country or abroad over the operating period of 25 years.

It is also important to note that despite the filtering processes employed, the quality of the 'feed' fuel cannot be strictly controlled, and is bound to be variable in its content. Given the variability that will occur in the waste from which the 'fuel' is derived, there can be no steady state conditions. Controls over that imported from abroad would be even more difficult to maintain thus rendering the process and its output in emissions and residues even more unpredictable and potentially hazardous.

Ineos do not say where the Refuse Derived Fuel (RDF) will be produced, yet there are no existing recycling and processing facilities in the North West capable of producing the required 850,000 tonnes per annum. They do state that "the present application does not include any area for producing the raw waste into fuel".

So, where will Halton's waste be processed? Is it to be transported out of Halton for processing, and returned for burning? Or, if this Proposal is approved, will there be a further proposal for the building of a treatment centre on the same site, and possibly other facilities? With these in place how can we guarantee that Ineos would not in the future seek to take in raw waste direct, including that imported from abroad? Consider the consequences this would have for local residents!

In addition, vehicle movements in and out of Halton, relating to the transporting of Halton's raw waste have not yet been identified, but these must further add to traffic congestion and pollution from emissions!

3. Inadequate Monitoring and Control

Abatement equipment will not prevent the incinerator emitting the potentially dangerous fine and ultra fine particles, which have been linked to increases in birth defects, respiratory diseases and cancers. The standard response from those companies operating incinerators is that they operate to statutory standards and are, therefore, safe! However, independent monitoring of dioxins only takes place twice a year. All other monitoring is on a self-reporting basis.

Regulations do not guarantee safety! As measurements and monitoring techniques improve, limits are being continually lowered for exposure to other threats, such as those from asbestos and radiation, where it is acknowledged that long-term low-level exposure has a cumulative effect not previously recognized. Recent concerns about the effects on the health of those people living near mobile phone masts have led to their removal from densely populated areas. In our every day lives we are accustomed to changes in accepted safety standards, which continually occur.

It is important to recognize that current U.K. regulations only require monitoring of particulates of 10 microns or above. This means that the most dangerous ultra fine particulates are not monitored. The World Health Organization's fact sheet (*Page 3*) showed that unmonitored particulates (PM2.5) seriously affect health, increasing deaths from cardiovascular and respiratory diseases and lung cancers. "Studies on large populations show a strong effect of PM2.5 on mortality, and have been unable to identify a threshold concentration below which ambient PM has no effect on health: a no effect level".

The Halton Health Report (2003) forewarned us of the dangers, viz. "There is good evidence that pollution from particulate matter at levels previously thought to be 'safe' is associated with increased risk of mortality and morbidity (death and disease) from cardiopulmonary disease, especially in people with other risk factors".

4. Transportation of Fuel and Residue

The importation of waste from outside of the Borough is contrary to the 'Proximity Principle', which requires local communities to deal with their waste as close to its source as possible.

In our view, the Ineos Proposal understates the effects of road traffic to and from the site via the Jubilee Bridge and increased levels of congestion, noise and pollution from traffic emissions inflicted on an area which already suffers from these problems. 400 road vehicle movements per day (7.00am to 7.00pm) can only add to congestion and pollution, with particularly adverse effects on residents living closest to the site, reinforced by train deliveries throughout the night, causing other problems, particularly noise.

The routes for heavy goods vehicles carrying the hazardous waste to Randle Island will pass residential properties and access the dump at a point immediately adjacent to the Wigg Island Country Park. This is likely to adversely affect the image of the Park and its appeal to visitors.

A major concern must be the massive increase in the amount of toxic waste dumped at the Randle Island. Apart from the problems generated by wind borne pollution associated with the dumping of fly ash, the site is next to the Manchester Ship Canal and the River Mersey, and in close proximity to residential areas in Runcorn and Widnes, and the Astmoor and Daresbury Business Parks. The adverse effects impacting on these businesses will vary, but concerns have been expressed with regard to the location of toxic residue disposal close to medical, food and scientific establishments.

It must also be asked how 'safe' is the dump itself? Has it the capacity to take such a large increase in toxic waste each year? What is its total 'life'. What are the guarantees against leakages? Dioxins and heavy metals do not 'break down'. Will the ground water or aquifers be irreversibly contaminated?

5. Pollution and the Environment

Energy from Waste Incineration is not environmentally friendly or 'green'. Incinerators INCREASE not reduce global warming, and are widely believed to discourage the full use of more preferable methods of waste disposal.

5. Health Risks

1. Background

It has been recognised for many hundreds of years that exposure to high levels of dust can lead to ill health and particularly lung disease. As the Industrial Revolution progressed, it became clear that workers involved in mining, foundry work and stone grinding were particularly at risk of developing silicosis. It is now well established that there are a number of diffuse fibrotic conditions of the lung associated with industrial exposure to smaller particles including; pneumoconiosis in miners, bissinosis in cotton workers and, more recently, asbestosis amongst ladders and associated trades. The first indication that serious pathology could arise from low-dose exposure to particles came with the recognition that asbestos fibres could cause the previously rare tumour pleural mesothelioma.

It took many years to recognise the specific causes of these debilitating and usually fatal diseases. It was too late to help those who suffered and died from these dreadful conditions. We must not put the health of present and future generations at risk by ignoring these lessons from the past.

2. Concerns

- A comprehensive evaluation of the research findings now provides persuasive evidence that exposure to fine particulate air pollution also has adverse effects on cardiopulmonary health. (Ref 4)
- Incinerators are a major source of fine (PM_{2.5}s) and ultrafine (PM_{0.1}s) particulates, of toxic metals, and of persistent organic pollutants (POPs) including known carcinogens, mutagens and hormone disrupters. (Ref 5)
- Particulates are tiny particles in the air that are classified by size. The smaller the size of the particles, the more dangerous the health effects become. Their miniscule size allows them to be breathed deeply into the lungs and absorbed into the bloodstream. The human body has no natural defences against these manufactured organo-chlorine and carbon-chloro compounds. (Ref 6)
- The World Health Organization has concluded that fine particulate air pollution has a strong effect on mortality and that there is no safe threshold concentration below which ambient fine and ultrafine PMs have no effect on health. In any case, current regulations do not require the monitoring of fine and ultrafine particulate emissions. (Ref 7)

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- A large number of studies have shown higher rates of adult and childhood cancers and of birth defects around incinerators. (*Ref 5, Ref 8 and Appendix 1*)
 - Of greatest concern is the bioaccumulation of particulate air pollution and its long-term effects on the health of the community especially the risk to the developing embryo and infant. (*Ref 5*)
 - Two recent papers have highlighted the excess risk of kidney mortality and morbidity in Runcorn that already exists in the population living closest to several sources of pollution. We do not want to put the health of the local community at even greater risk by building a massive waste incinerator in such close proximity to an urban community. (*Ref 9 and Ref 10*)
 - There is also the cocktail effect, whereby combinations of pollutants create an enhanced negative effect.
 - Past experiences show the costly consequences of disregarding early warnings about environmental hazards. Today the need for applying the Precautionary Principle is even greater than before. (*Ref 5 page 27 and Ref 11*)
 - Michael Meacher, Minister of Environment stated to a House of Lords Select Committee in 1999 that, "I repeat that the emissions from incinerator processors are extremely toxic. Some of the emissions are carcinogenic. **We know scientifically that there is no safe threshold below which one can allow such emissions**".

In addition, increased traffic pollution, and noise levels from a plant operating 24 hours a day every day of the year leading to sleep deprivation and mental stress will be additional health hazards for the local communities.

3. Is it worth the risk?

The standardised mortality rate (SMR) for Halton residents is already 23% above the national average. Only recently we had the scandal of HCBd emissions from the industrial waste dumped in the Weston quarry by ICI. To site the proposed Energy from Waste Combined Heat and Power Generating station at Weston Point is, at best, a gamble with the future health of the residents of Halton, which has already been compromised in the past by industrial pollution. **It is not a risk worth taking.**

6. Economic and Social Factors

1. The Image of the Borough

The Proposal directly conflicts with the Borough Council's regeneration policies, which have sought successfully to attract to the Borough 'clean' industries housed in low-rise buildings situated in 'green' environments. In our view it would adversely affect the image of the Borough and reverse the improvements achieved over the last 30 years.

- Over that period, much has been done, at great expense, to improve both the image and environment of Halton by reducing the pollution of old industries and bringing in new cleaner industry. Improvements to the infrastructure in Widnes and developments such as those at Norton and Sandymoor, have created a place which is a much more pleasant place in which to live and work. Weston Point itself is a deprived but improving area, as can be seen by the amount of house building, improvement and home ownership taking place there. The Proposal to build an incinerator will in itself adversely affect that image!
- The Ineos proposal would be totally contrary to 'Halton Vision', and the 5 specific objectives of the Council as quoted in Chapter 1, Page 6 of the Council's Constitution as detailed below:-

Our Vision for Halton Borough Council

Halton will be a thriving and vibrant Borough where people can learn and develop their skills; enjoy a good quality of life with good health; a high quality, modern urban environment; the opportunity for all to fulfil their potential; greater wealth and equality; sustained by a thriving business community; and a safer, stronger and more attractive neighbourhood.

"The Council has identified the following key priority areas for action".

A Safer Halton – Our overall aim

To ensure pleasant, safe and secure neighbourhood environments with attractive, safe surroundings, good quality local amenities and the ability of people to enjoy life where they live.

A Healthy Halton – Our overall aim

To create a healthier community and work to promote well-being, a positive experience of life with good health (not simply an absence of disease), and offer opportunities for people to take responsibility for their health with the necessary support available.

Halton's Urban Renewal – Our overall aim

To transform the urban fabric and infrastructure, to develop exciting places and spaces and to create a vibrant and accessible Borough that makes Halton a place where people are proud to live and see a promising future for themselves and their families.

Children and Young People in Halton – Our overall aim

To ensure that in Halton, children and young people are safeguarded, healthy and happy, and receive their entitlement of high quality services that are sensitive to need, inclusive and accessible to all.

Employment Learning and Skills in Halton – Our overall aim

To create an economically prosperous Borough that encourages investment, entrepreneurship, enterprise and business growth, and improves the education, skill.

- Many new, clean businesses have been attracted to Halton and it is hoped many more will be. Businesses decide location on commercial grounds that include whether the location matches the image they wish to project and whether their existing or prospective employees will be attracted to the location. An important development has been the attraction of 'high tech' industries to the Daresbury and Heath Science Parks. The perception of Halton as the dumping ground of the North West's waste and incinerator emissions, will not only reduce Halton's attraction to new businesses, but will harm retention of existing businesses.

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- Many residents have informed us that they would seriously consider moving away from Halton if the incinerator became operational. This is particularly strongly felt by residents with prospects of having children, or grandchildren, and residents of Mersey and Heath Wards particularly feel that their neighbourhoods would be seriously affected as residential areas. The potential loss to Halton of existing and new residents, many with the skills required in the area, would far outweigh any employment opportunities arising from the Proposal.

- In the Proposal, Ineos Chlor fails to recognise the concerns encountered amongst residents relating to the perceived threat of the risks associated with the Incinerator, on their lives. We believe that residents are generally opposed to the Proposal.

- The Proposal to build an incinerator will in itself have a detrimental effect on property values in Halton. This will not be of concern to Ineos, but will be a major concern to existing residents and businesses and would have some detrimental effect on Council Rates income.

2. The Effects on Jobs

It has been claimed that failure to implement this proposal would put at risk the Ineos operation in Runcorn and the jobs involved. However, there is no guarantee given that the proposed plant would secure the operation for the 25 year life of the incinerator.

- Ineos is a major international supplier of products vital to our modern society and it seems unlikely that they would not be able to continue providing such products. It may be suggested that they may move their operation to another Country, but this may happen anyway (then leaving Halton with the Incinerator). Such a decision would be taken for many commercial reasons and not just for the sake of providing themselves with cheaper energy for 20% of their requirements.
- If the current and future U.K. cost of energy for Ineos (shared by all U.K. industry) makes their operation so fragile, it is difficult to see why their Proposal covers only 20% of their Runcorn energy requirements. Logically, 100% would be beneficial (and Halton would become the waste and pollution centre of not just the region, but of the U.K. and beyond). Perhaps subsequent proposals are likely and these would be impossible to refuse if this initial Application is approved.

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- Similar threats to employment have been made in the past. For example, in the discussion about the future of the Luvella incinerator, and again when the Rocksavage Power Station was approved. Subsequently, I.C.I. sold the site to Ineos!
 - Ineos do not claim that the Proposal would create even one new job. Operation of the Incinerator would be undertaken by re-deployment of existing personnel.

7. Local Concerns Relating to the Immediate Area

1. The Effects on Residents

For residents living closest to the incinerator, in addition to those concerns affecting all the Borough's residents, there are particular problems relating to noise, disturbance and the visual effects of such a massive building and associated plant.

It is very disturbing to read in the planning application how Ineos minimises those problems and ignores other contributory factors. The Assessment states, "The noise assessment provided indicates that the noise and vibration effects from the site are likely to have no significant effects".

- How the additional 400 heavy goods vehicle movements per day will not add to the present high ambient noise levels close to the incinerator is not explained. Of course this will not only be by their deliveries, but also in manoeuvring to dump or pick up their loads, and the use of reversing alarms that, particularly at night, will be a constant source of irritation!
- The Plant itself will contain machinery whose noise should be possible to minimise, but as this is secondary to performance we are well aware from experience that, even when noise limits are broken, it is often not possible to obtain more than a minimal improvement before the operators of the plant state that they are at 'Best Possible Practice and it would be financially unacceptable to reduce the disturbance further'. Effectively then residents are left to bear the noise nuisance.
- We are all too well aware that disturbance to our lives and environment will occur. It will be a nightmare for those closest to the incinerator with the noise from road and rail traffic, the inevitable dust, and even the threat of having our houses under the permanent cloud of water vapour from the six cooling towers required for the operation.

2. The Transportation

In addition to our concern about road transport of the fuel into the site, and residue out of the site, there are other concerns relating to the fuel transportation by rail.

According to the Ineos Application, 'information presented in the Technical Assessment, demonstrates that trains using this rail track do not pass residential properties and would therefore have no detrimental environmental impacts in terms of noise or disturbance'.

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- This is untrue because it omits reference to the existence of over thirty houses that back directly onto the rail track and to substantial new residential development which is taking place immediately adjacent. It also fails to take into account the houses in Picow Farm Road, Crofton Road and Westfield Road which are also within close proximity. (*Appendix 3*)
 - Five trains per day will arrive at the site, therefore five trains per day must consequently leave. Add to this that the majority of train movements are limited to the night times, because of the restrictions on the main line through Runcorn, and this equates to ten trains per night passing within fifty metres of these houses at rooftop height! They will have "significant effects" for the people living there!

3. The Construction Phase

It needs to be recognised that the concerns mentioned would take effect following the three and a half years of disturbance for twelve hours a day during the construction and commissioning of the plant. Again we would question whether it would seem possible to build such a large installation as a power station without, for example, pile driving for the foundations. To say that the noise and vibrations from this and similar activities would have no detrimental effect on homes less than 100 metres from the site is inconceivable!

4. The Visual Aspect

It is however, in the 'visual aspects' section of the application that Ineos denigrates the area in giving the impression that the neighbourhood closest to the site is of low value and impoverished. Lack of local knowledge may have been responsible for the miss-naming of the six Avenues containing semi-detached houses, close to the site as 'Terraces', but how could it be conceived that the detached four-bedroom double garaged properties at Minster Court could be so described!

As we have already indicated above, we believe that Ineos has understated the effects on the immediate visual environment of the presence of such a massive building and associated plant and of the height of the chimney itself. The cosmetic landscaping planned will not, in our view, disguise the serious deterioration in outlook currently available to residents.

5. The Decimation of the Village of Weston

The Village of Weston, which overlooks the proposed site, provides a vivid testimony to the impact of pollution on land, buildings and people, caused by the past dumping of toxic waste from the industrial site. As a result, houses were sealed or demolished, the Village was decimated, polluted areas were landscaped and identified as unfit for development and people were forced to re-locate, as the life of the Village was destroyed. Fortunately, the Village is beginning to rediscover itself, as people have moved in and new residential development is taking place. Now the Village feels that it is, once again, under threat.

6. The Vision for Halton

All this runs counter to Halton's Constitution, which promises that "Halton will be where people can enjoy a good quality of life with good health, in a high quality, modern urban environment", and also promises "To ensure pleasant, safe and secure neighbourhood environments with attractive safe surroundings". How can these promises be kept for the people who live here, if this Incinerator is built?

Nearly twenty years ago, this area was placed in a similar position when the Luvella Incinerator was built very near to the same location because of the limited and inaccurate case that was presented to Councillors.

- Local residents spent the vast majority of the next three years fighting to have that decision reversed. That they were successful in the end owed a great deal to Councillors who appreciated the dangers of locating an incinerator in such a dangerous position!
- We hope that, on this occasion, Councillors will recognize the seriously detrimental effects that this incinerator would have, day in and day out, on the health and quality of life of the people of this area, and take appropriate action to ensure that this Proposal is rejected!

8. Conclusion

The fundamental question which remains, is why would Halton wish to permit the building of this Incinerator in the Borough?

We can identify no advantages or benefits, only costs and great risks, detrimental to its image, the health and quality of life enjoyed by its residents, and to its future social economic development.

We strongly recommend that the Borough Council rejects the Proposal and support the Action Group in opposing the Ineos Application.

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Fact sheet EURO/04/05
Berlin, Copenhagen, Rome, 14 April 2005

Particulate matter air pollution: how it harms health

Definition

Particulate matter (PM) is an air pollutant consisting of a mixture of particles that can be solid, liquid or both, are suspended in the air and represent a complex mixture of organic and inorganic substances. These particles vary in size, composition and origin. Their properties are summarized according to their aerodynamic diameter, called particle size.

- The coarse fraction is called PM₁₀ (particles with an aerodynamic diameter smaller than 10 µm), which may reach the upper part of the airways and lung.
- Smaller or fine particles are called PM_{2.5} (with an aerodynamic diameter smaller than 2.5 µm); these are more dangerous because they penetrate more deeply into the lung and may reach the alveolar region.

The size of the particles also determines the time they spend in the atmosphere. While sedimentation and precipitation removes PM₁₀ from the atmosphere within few hours of emission, PM_{2.5} may remain there for days or even a few weeks. Consequently, these particles can be transported over long distances.

Principal sources

The major PM components are sulfate, nitrates, ammonia, sodium chloride, carbon, mineral dust and water. Particles may be classified as primary or secondary depending on their formation mechanism.

Primary particles are directly emitted into the atmosphere through man-made (anthropogenic) and natural processes. Anthropogenic processes include combustion from car engines (both diesel and petrol); solid-fuel (coal, lignite and biomass) combustion in households; industrial activities (building, mining, manufacturing of cement, ceramic and bricks, and smelting); erosion of the pavement by road traffic and abrasion of brakes and tyres; and work in caves and mines. Secondary particles are formed in the air, usually by chemical reactions of gaseous pollutants, and are products of atmospheric transformation of nitrogen oxides mainly emitted by traffic and some industrial processes, and sulfur dioxide resulting from the combustion of sulfur-containing fuels. Secondary particles are mostly found in the fine PM fraction.

Health hazards

The systematic data assessment completed in 2004 by the WHO European Centre for Environment and Health, Bonn, indicates that:

- PM increases the risk of respiratory death in infants under 1 year, affects the rate of lung function development, aggravates asthma and causes other respiratory symptoms such as cough and bronchitis in children;
- PM_{2.5} seriously affects health, increasing deaths from cardiovascular and respiratory diseases and lung cancer. Increased PM_{2.5} concentrations increase the risk of emergency hospital admissions for cardiovascular and respiratory causes; and
- PM₁₀ affects respiratory morbidity, as indicated by hospital admissions for respiratory illness.

Relation of health effects to PM concentration

In the last decade, studies of the short-term effects of PM, based on association between daily changes in PM₁₀ concentrations and various health outcomes, were conducted in many cities in the WHO European Region, including Erfurt and Cologne in Germany. In general, results indicate that short-term changes in PM₁₀ at all levels lead to short-term changes in acute health effects (Table 1). Effects related to short-term exposure include: inflammatory reactions in the lung, respiratory symptoms, adverse effects on the cardiovascular system and increases in medication use, hospital admissions and mortality.

Table 1. Short-term effects on health from 10- $\mu\text{g}/\text{m}^3$ increases in PM₁₀ concentration

Health outcome	Estimated percentage increase in risk per 10 $\mu\text{g}/\text{m}^3$ PM ₁₀ (95% confidence interval)	Estimates available for meta-analysis
All-cause mortality	0.6 (0.4-0.8)	33
Mortality from respiratory diseases	1.3 (0.5-2.0)	18
Mortality from cardiovascular diseases	0.9 (0.5-1.3)	17
Hospital admissions for respiratory disease, people age 65 years and over	0.7 (0.2-1.3)	8
Cough, children aged 5-15 years with chronic symptoms	0.0 (-1.3-1.1)	34
Medication use, children aged 5-15 years with chronic symptoms	0.5 (-1.9-2.9)	31

Source: Anderson HR et al. *Meta-analysis of time series studies and panel studies of particulate matter (PM) and ozone (O₃). Report of a WHO task group.* Copenhagen, WHO Regional Office for Europe, 2004 (<http://www.euro.who.int/document/e82792.pdf>, accessed 8 April 2005).

Because long-term exposure to PM results in a substantial reduction in life expectancy, the long-term effects clearly have greater significance to public health than the short-term effects. PM_{2.5} shows the strongest association with mortality, indicating a 6% increase in the risk of deaths from all causes per 10-µg/m³ increase in long-term PM_{2.5} concentration.¹ The estimated relative risk amounts to 12% for deaths from cardiovascular diseases and 14% for deaths from lung cancer per 10-µg/m³ increase in PM_{2.5}.²

The effects related to long-term exposure include: increases in lower respiratory symptoms and chronic obstructive pulmonary disease, reductions in lung function in children and adults, and reduction in life expectancy, due mainly to cardiopulmonary mortality and probably to lung cancer

Studies on large populations show a strong effect of PM_{2.5} on mortality, and have been unable to identify a threshold concentration below which ambient PM has no effect on health: a no-effect level. After a thorough review of recent scientific evidence, a WHO working group therefore concluded that, if there is a threshold for PM, it lies in the lower band of currently observed PM concentrations in the European Region.

Estimated change in health damage due to PM in the EU through implementation of current legislation, 2000–2020

Health end-point	Units (1000s)	2000	2020	Difference
EU				
Mortality – long-term exposure	Life years lost	3001	1900	1101
Mortality – long-term exposure	No. premature deaths	288	208	80
Infant mortality	Cases	0.6	0.3	0.3
Chronic bronchitis	Cases	136	98	37
Respiratory hospital admissions	Cases	51	33	19
Cardiac hospital admissions	Cases	32	20	12
Restricted activity	Days	288 292	170 956	117 336
Respiratory medication use, children ²	Days	3510	1549	1961
Respiratory medication use, adults	Days	22 990	16 055	6935
Lower respiratory symptoms, children	Days	160 349	68 819	91 529
Lower respiratory symptoms, adults with chronic disease	Days	236 498	159 723	76 773
Germany				
Mortality – long-term exposure	Life years lost	657	413	244
Mortality – long-term exposure	No. premature deaths	65	48	17

¹ Pope AC et al. Lung cancer, cardiopulmonary mortality, and long-term exposure to fine particulate air pollution. *Journal of the American Medical Association*, 287:1132–1141 (2002).

² Pope AC et al. Lung cancer, cardiopulmonary mortality, and long-term exposure to fine particulate air pollution. *Journal of the American Medical Association*, 287:1132–1141 (2002); and Pope AC et al. Cardiovascular mortality and long-term exposure to particulate matter air pollution. *Circulation*, 109:71–77 (2004).

Infant mortality	Cases	0.09	0.05	0.04
Chronic bronchitis	Cases	31	21	10
Respiratory hospital admissions	Cases	11	7	4
Cardiac hospital admissions	Cases	7	4	3
Restricted activity days	Days	63 832	36 216	27 616
Respiratory medication use, children	Days	781	324	457
Respiratory medication use, adults	Days	5166	3522	1645
Lower respiratory symptoms, children	Days	32 291	13 406	18 884
Lower respiratory symptoms, adults with chronic disease	Days	52 636	34 993	17 644

Source: Pye S, Watkiss P. *CAFE CBA: baseline analysis 2000 to 2020*. Vienna, International Institute for Applied Systems Analysis, 2005 (AEAT/ED51014/Baseline Scenarios; <http://www.iiasa.ac.at/docs/HOTP/Mar05/cafecba-baseline-results.pdf>, accessed 8 April 2005).

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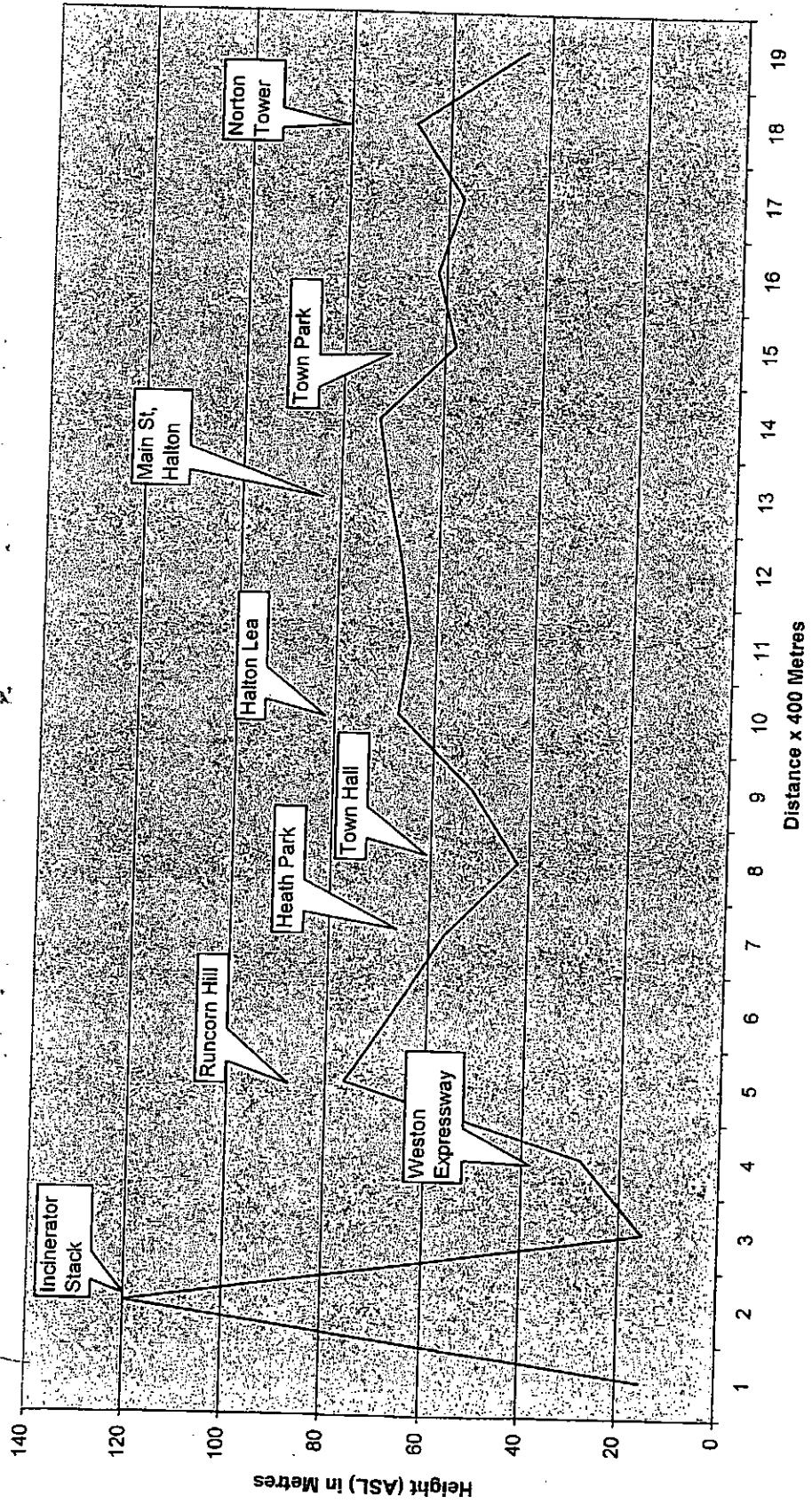
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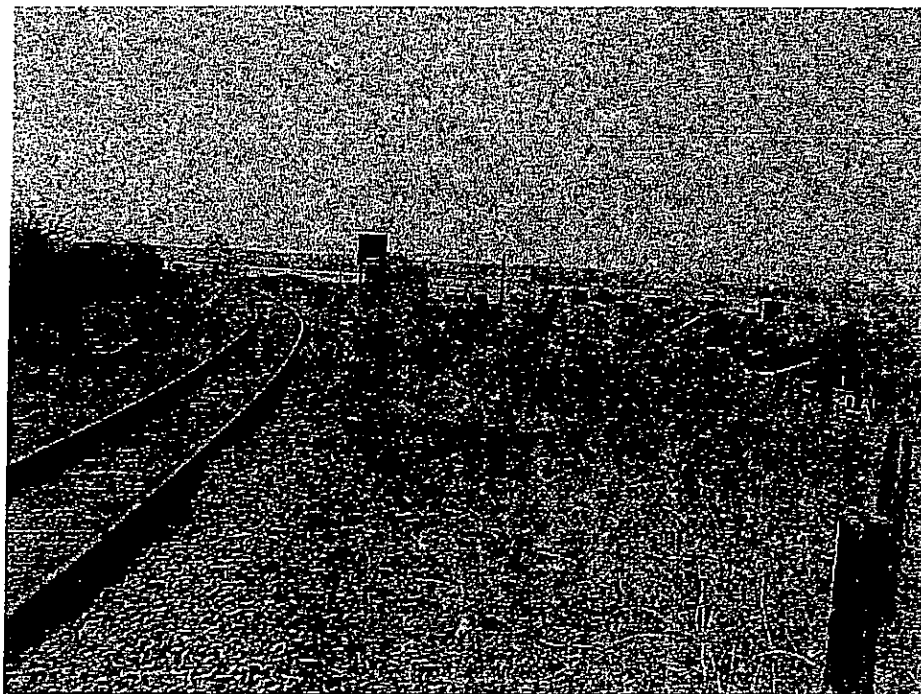
APPENDIX 2

Runcorn Topographical Profile West to East from Incinerator to Norton

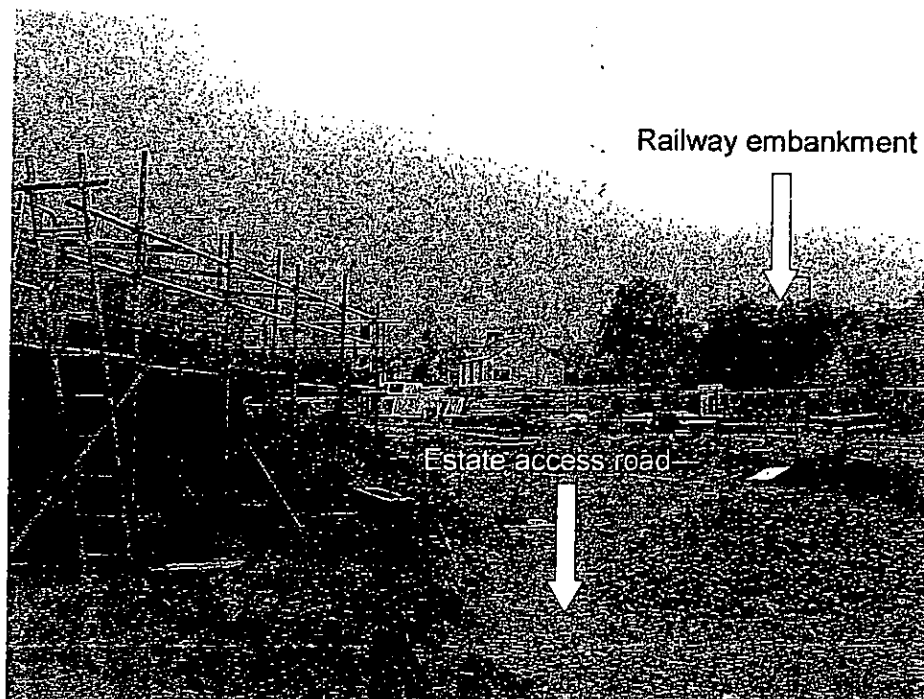


Stack height 105m (+15m above sea-level = 120m overall height)
 Height differential is only approximately 40m above Runcorn Hill

APPENDIX 3



Waste Rail Track Route
Immediately adjacent to houses in Percival Lane



New houses being built in Percival Lane adjacent to Rail Track

APPENDIX 3 (Continued)



Minster Court houses (on side of Runcorn Hill) overlooking Proposed Site

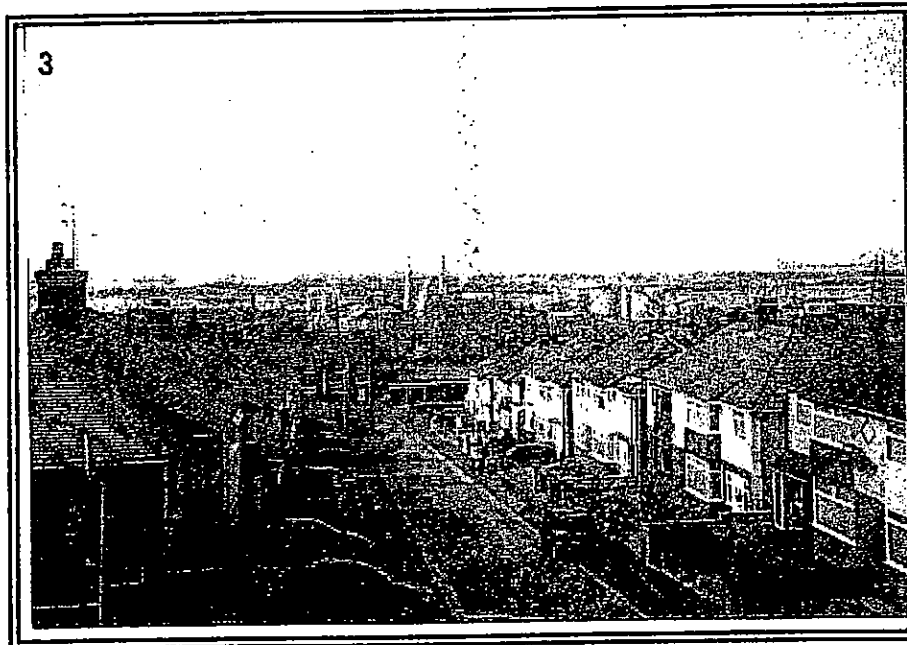


**View from Minster Court
(Stack will be approximately 50m above this point)**

APPENDIX 3 (Continued)



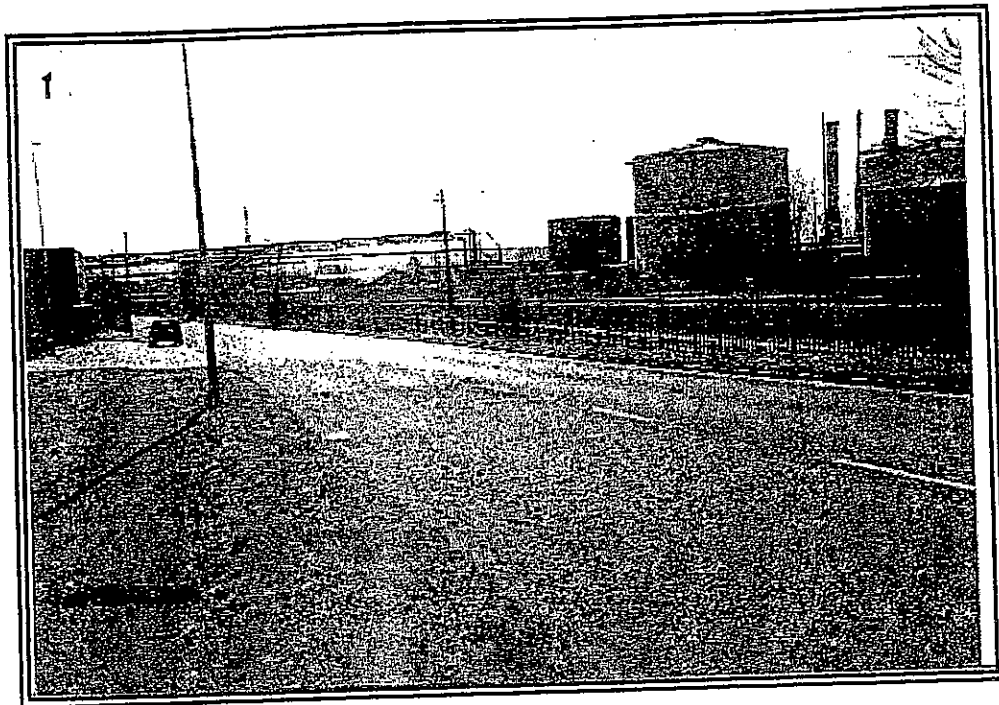
Cameron Avenue from Russell Road



Looking down on the Proposed Site

**Ineos describe these houses using the word 'terrace'
all these properties are on the incline provided by the elevation
of Runcorn Hill**

APPENDIX 3 (Continued)



Picow Farm Road looking towards the Proposed Site
The 'tree lined road' as described by Ineos (Ref 5.35)
Trees in relation to views is irrelevant as they will have minimal effect on reducing the visual appearance of a massive forty-seven metre high main building



View from Weston Road
Showing the proximity to the Proposed Site
(The current highest stack in background is smaller and much further away than the Proposed new stack)

APPENDIX 3 (Continued)



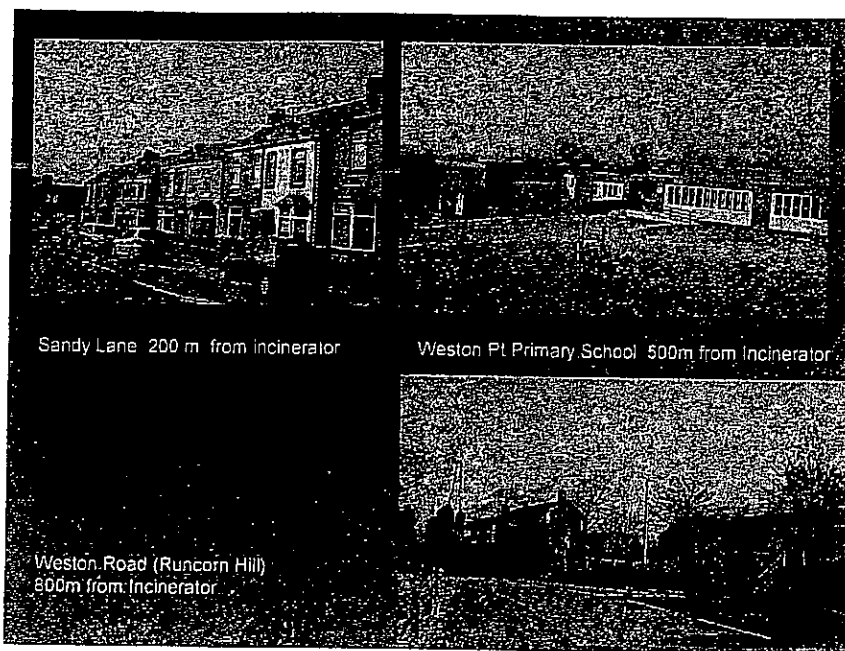
Photograph of Heathside Nursery



Houses in Banks Lane, Weston Village

Both Views show the proximity to the Proposed Site
(The current highest stack in background is smaller and much further away
than the Proposed new stack)

Appendix 3 (Continued)



Photographs of houses in Weston Point and Weston Road



Beaconsfield Wood
Part of the environmental improvements of Weston Point

Chapter 5 – Minerals & Waste Management

MW14 – Incineration

http://www.cartoplus.co.uk/halton/text/05_mw_minerals.htm#mw14

**WASTE
INCINERATION**

- 1 Waste incineration can constitute a sustainable form of waste management, when associated with the reclamation of recyclable materials and the utilisation of energy from waste, or as part of a combined heat and power process. Proposals for incinerators can lead to large-scale public concern, principally related to safety and health risks from emissions. Whilst public concern over pollution risks may be a material planning consideration, pollution risks from emissions are principally a matter for the Environment Agency who are the competent authority. Government guidance is that planning authorities should not seek to duplicate the controls of other agencies under other legislation.

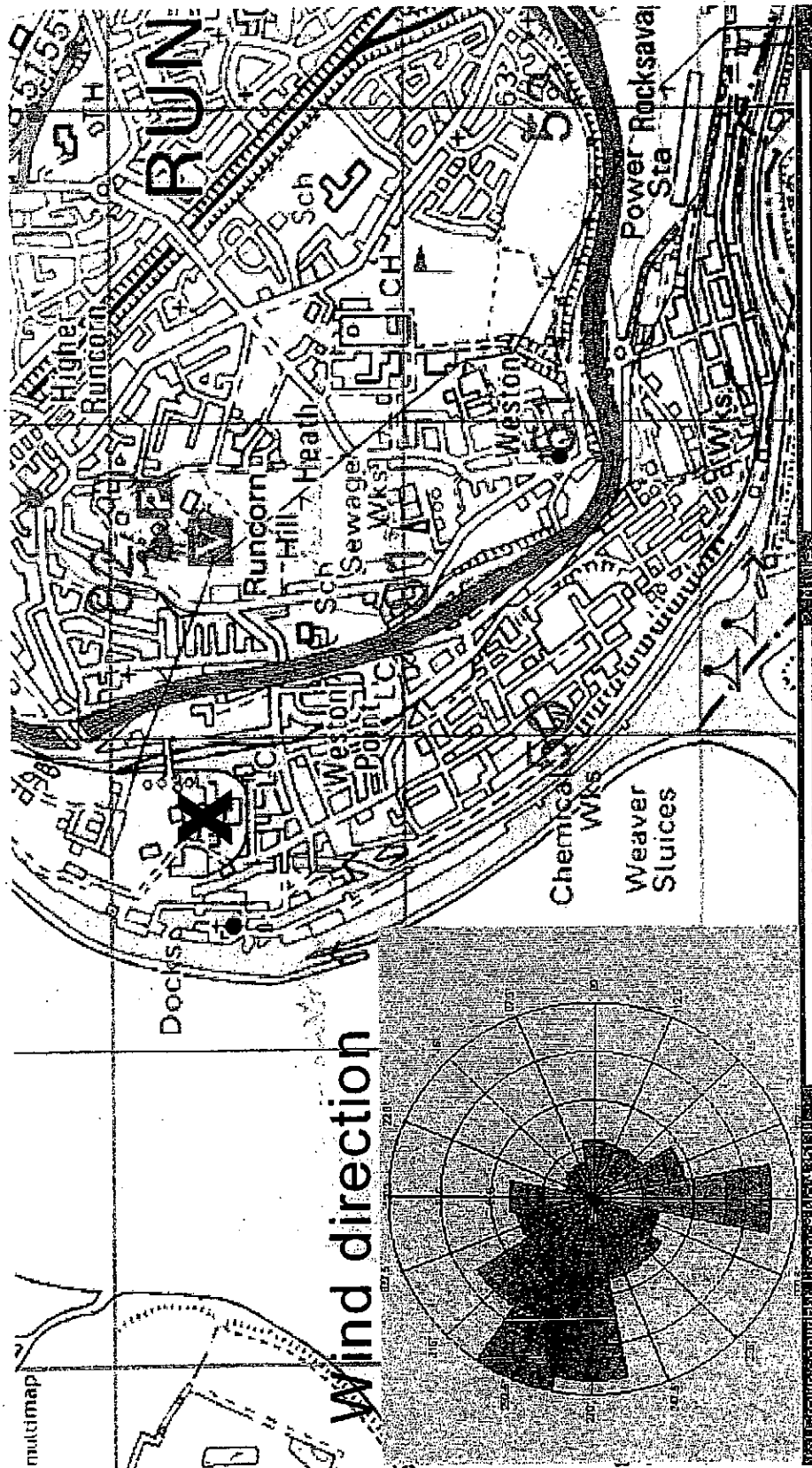
MW14 INCINERATION

- 1 Proposals for waste incineration plants must meet all the following criteria:
 - a be located within a Primarily Employment Area and not within close proximity to residential areas or other sensitive land-uses;
 - b illustrate that there are no existing suitable disposal facilities, or potential sites for the development of suitable disposal facilities closer to the source of waste arisings;
 - c not have an unacceptable detrimental visual impact;
 - d not have an unacceptable detrimental impact on economic regeneration or investment confidence;
 - e not have an unacceptable detrimental impact on existing industries, particularly food manufacturing and high technology activities;
 - f incorporate proposals for energy recovery or combined heat and power utilisation;
 - g incorporate a Materials Recycling Facility (MRF) where dealing with wastes with a recyclable component;
 - h where practicable be located so as to make use of rail or water transport methods;
 - i not cause pollution or emissions that would have an unacceptable detrimental impact on surrounding land uses;
 - j with specific reference to clinical and chemical wastes, the proposal must demonstrate the need for the facility in a regional and sub-regional context.

JUSTIFICATION

- 2 The Local Planning Authority considers that the criteria set out in the above policy will enable development proposals to be assessed and to ensure that any such developments are appropriately located where they will not have an unacceptable impact.

APPENDIX 5



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Comments for meeting with Halton Borough Council on 21.7.07

Prof. John Dearden

Stack height

The two software programs used to model stack emission dispersion (ADMS and AERMOD) give different results, but they both predict that the presence of hilly terrain adjacent to the stack has no effect whatsoever on pollution levels, for a 105 metre stack height. This appears to me to be a strange prediction. It presumably appeared strange to Vale Royal Borough Council also, since they have called for an independent assessment of pollution from the EfW facility. A technical adviser from Cambridge Environmental Research Consultants (the developers of the ADMS software) also agreed with me on the telephone on 21.6.07 that it was unexpected.

Moreover recent analysis of Government infant mortality statistics has shown that, around virtually every large waste incinerator in the country, infant deaths are much higher downwind than upwind. Three examples, from Ryan and van Steenis, using 2003-2005 statistics, are:

Incinerator	Upwind deaths per 1000 live births	Downwind deaths per 1000 live births
Edmonton (London)	2.5	10.5
Cheylesmore (Coventry)	3.2	8.2
Kirklees (Yorkshire)	3.5	9.4

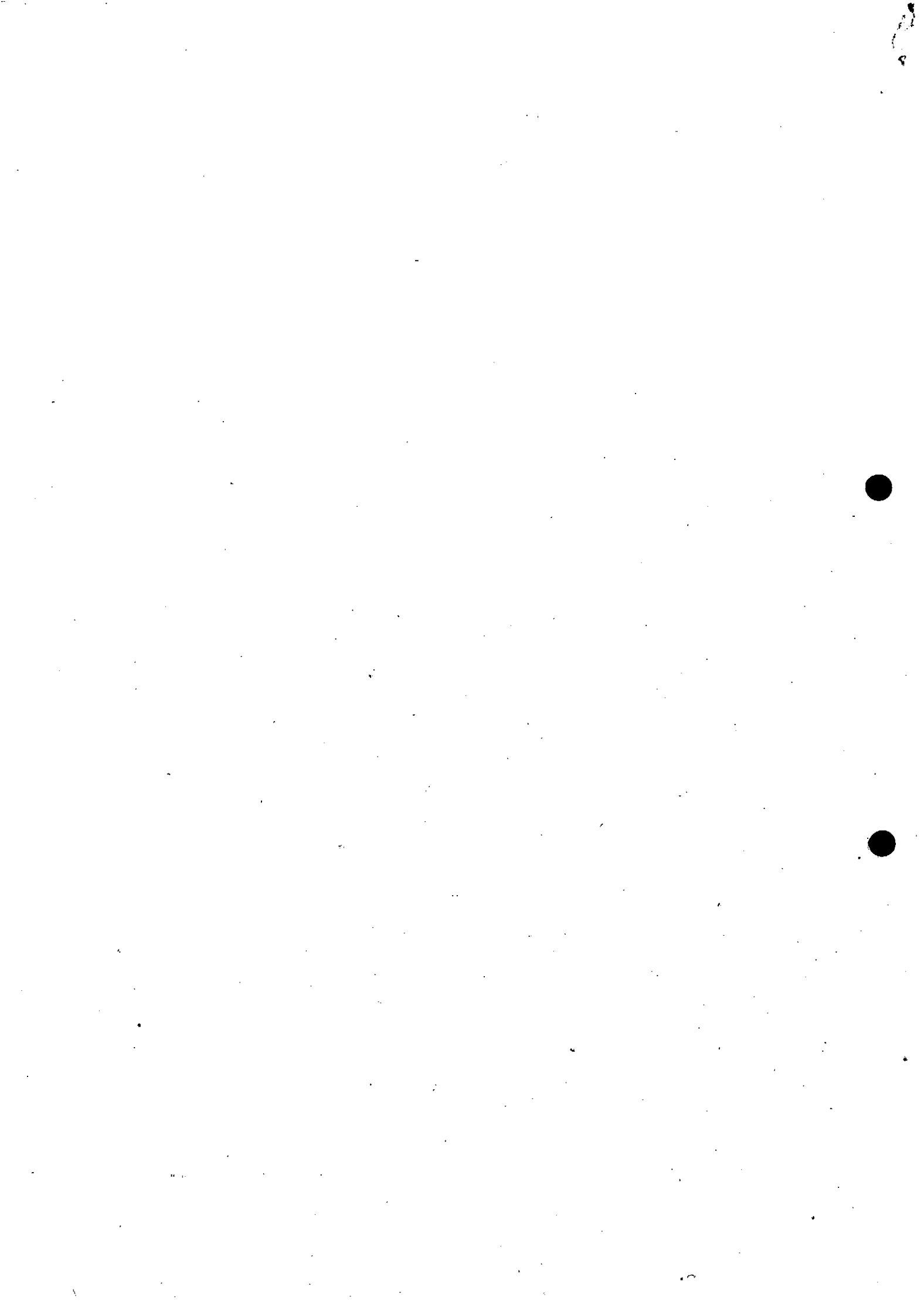
Also, in "leafy middle-class areas" the same pattern emerges. Downwind of the Colnbrook incinerator near Slough, infant mortality rates are about three times the national average.

Particulate emissions

The Ineos Human Health Risk Assessment (HHRA) ignores the contribution to toxicity of particulate emissions from the EfW facility. It is now increasingly being recognised that fine particulates (PM2.5 and below) are very dangerous (because they are drawn deep into the lung and can enter cells and disrupt cell signalling), and can cause a range of both short-term and long-term health problems. Fine and (especially) very fine (PM0.1 and below) particulates cannot be filtered out, even in modern incinerators, and thus pose the greatest risk. Of course, particulates arise from other sources as well, but the EfW facility would add considerably to particulate emissions in the area. It should be noted that in this country there is no requirement to measure particulates smaller than PM10 (10 microns in diameter), so the risks are not quantifiable.

HHRA errors concerning predicted health risks from the EfW facility

1. *Risks to breast-fed babies.* The HHRA claims (p. 33) that the USEPA (United States Environmental Protection Agency) target level for infant intake of dioxin (as 2,3,7,8-TCDD TEQ) is 50 pg.kg⁻¹.day⁻¹. This figure is incorrect; I



have consulted with Dr. Dwain Winter of the USEPA, and two Dutch experts in dioxin toxicity, Prof. Janna Koppe and Prof. Gavin ten Tusscher, and all of them have told me that there is no such figure. The actual intake can be as high as $50 \text{ pg.kg}^{-1}.\text{day}^{-1}$, because there can be high concentrations of dioxins in breast-milk. The USEPA uses a target level for adults (who are much less susceptible than are infants) of about $0.001 \text{ pg.kg}^{-1}.\text{day}^{-1}$, although the WHO uses a figure of $1-4 \text{ pg.kg}^{-1}.\text{day}^{-1}$.

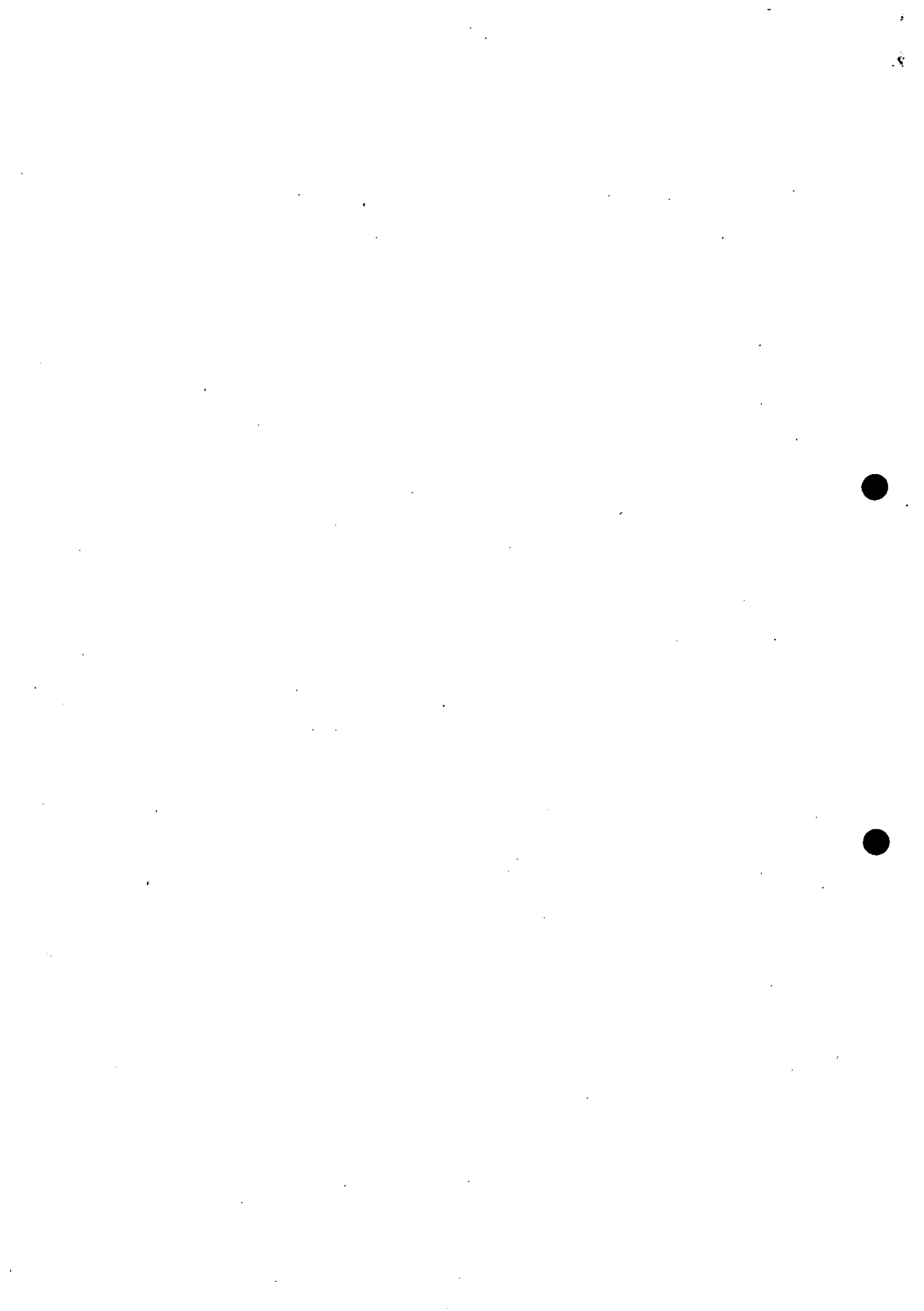
(Note: a picogram (pg) is one million millionth of a gram, that is, 0.000000000001 g . This gives some indication of the extremely high toxicity of dioxins. The units $\text{pg.kg}^{-1}.\text{day}^{-1}$ mean picograms of dioxin per kilogram of body weight per day).

Furthermore, the HHRA ignores the uptake of dioxins by unborn babies, which is considered by some experts to be greater than that from mother's milk. The concern is that dioxins, which are among the most toxic of all chemicals, have much greater effects on foetuses and infants than on adults. This fact probably accounts for at least some of the high mortality rates found around incinerators.

2. *Acceptable cancer risk from the EfW facility*

The HHRA appears to indicate (p. 25) that an acceptable risk of cancer from the EfW facility is 1 in 100,000. In fact, the USEPA recommended acceptable cancer risk is 1 in 1,000,000 (1 in a million). On that basis, the data given in Table 3.2 of the HHRA show that, for 23 of the 37 resident receptors at various locations around the area, the predicted risk of cancer is greater than 1 in a million.

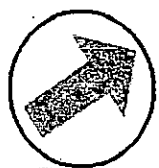
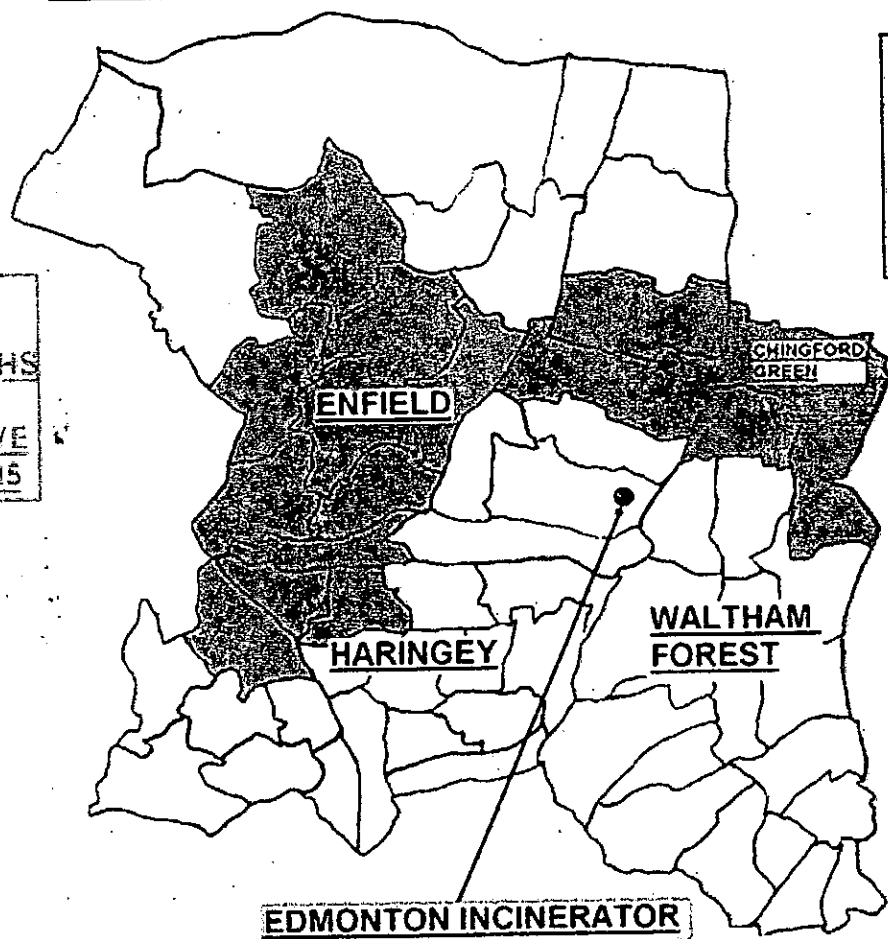
This figure is only for the risk from the EfW facility, and does not include existing risks from other pollutants. It follows that the proposed EfW facility will raise the risk of cancer in the area to an unacceptably high level.



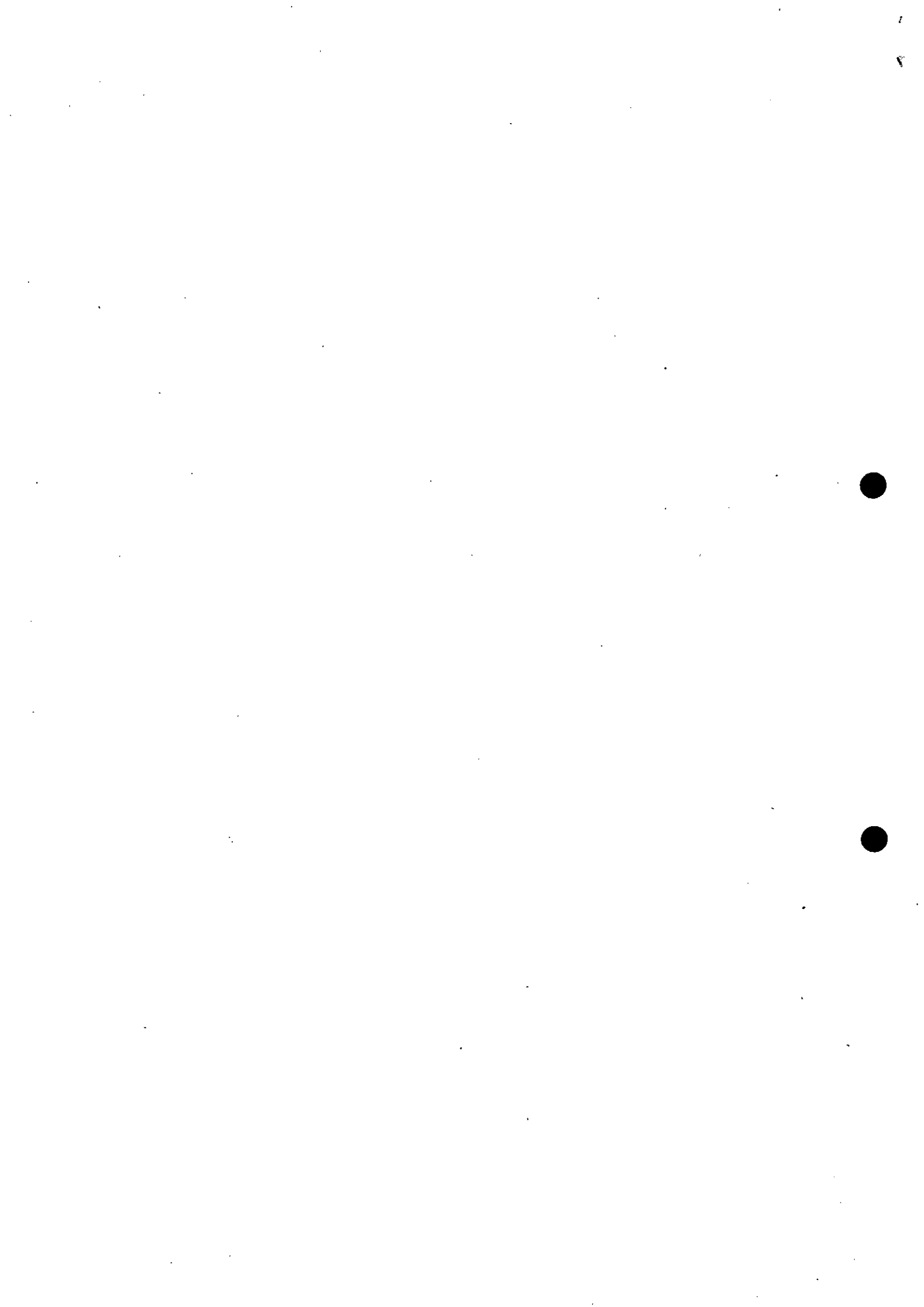
BOROUGHS OF ENFIELD, HARINGEY & WALTHAM FOREST WARD MAP
EDMONTON INCINERATOR AND INFANT DEATHS , 2003 - 2005

UPWIND ZONE:
7 INFANT DEATHS
2.5 per 1,000 LIVE BIRTHS, 2003-05

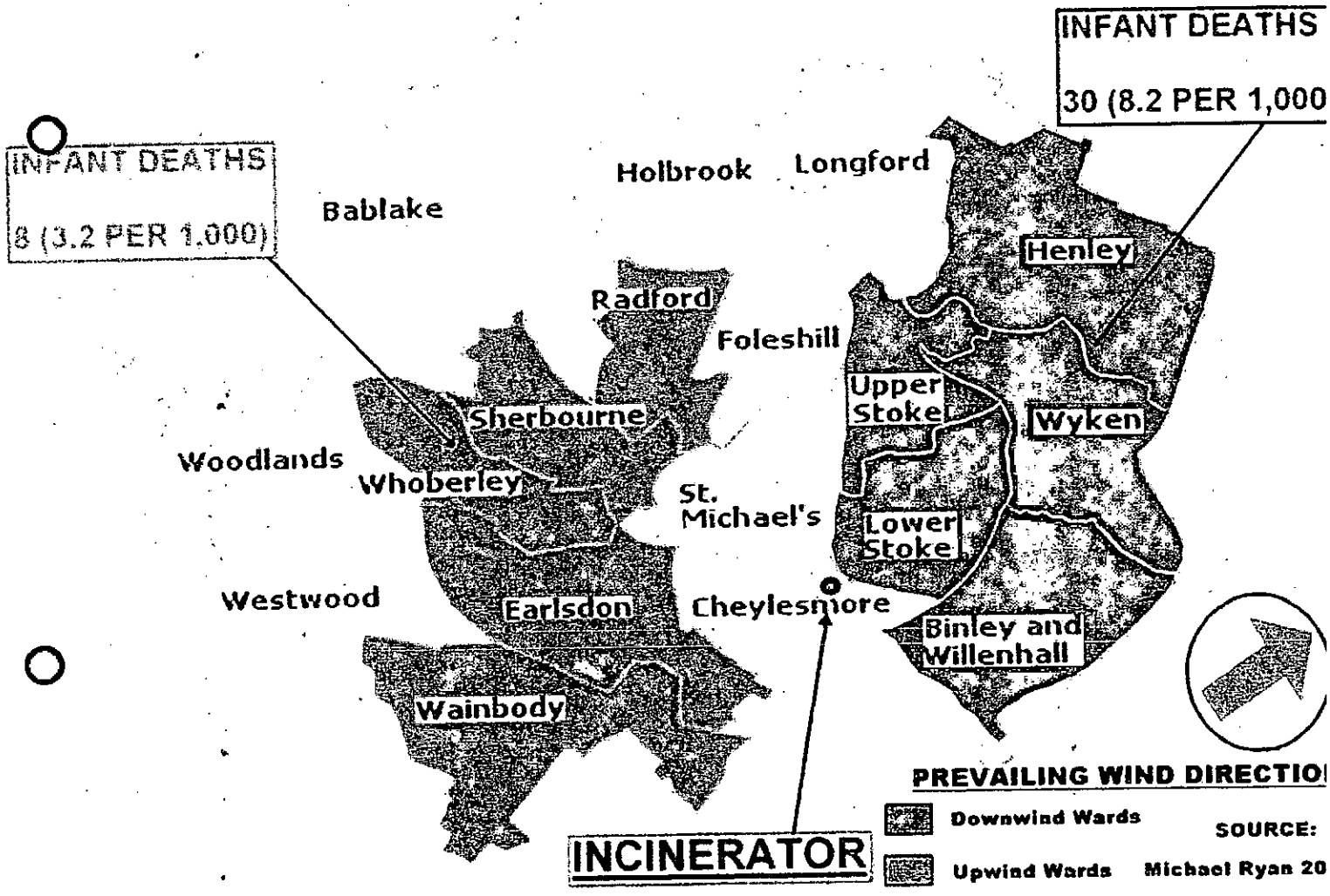
DOWNWIND ZONE:
27 INFANT DEATHS
10.5 per 1,000 LIVE BIRTHS, 2003 - 2005

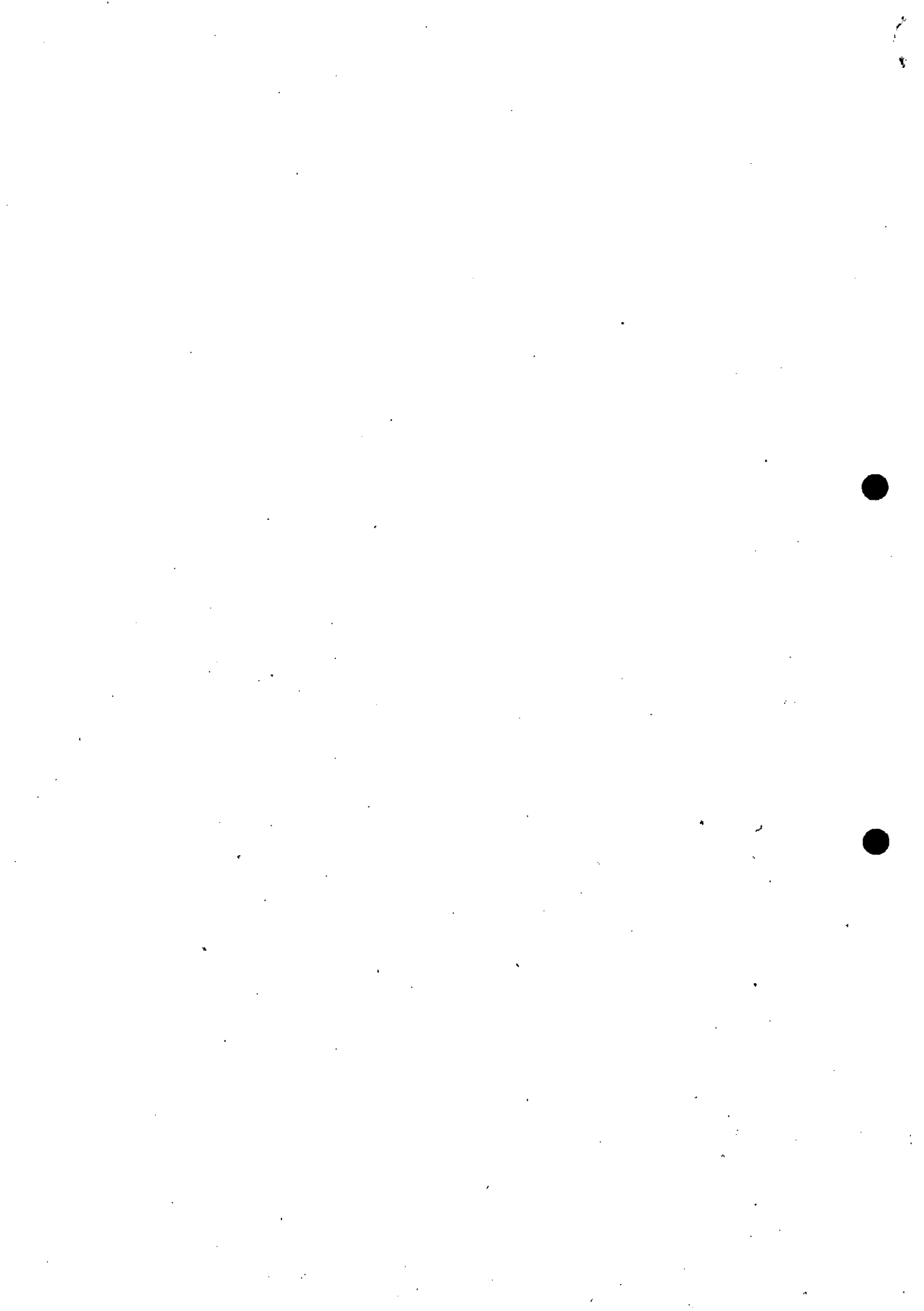


PREVAILING WIND DIRECTION
Downwind Wards
Upwind Wards



COVENTRY WARD MAP INFANT DEATHS 2003 -2005

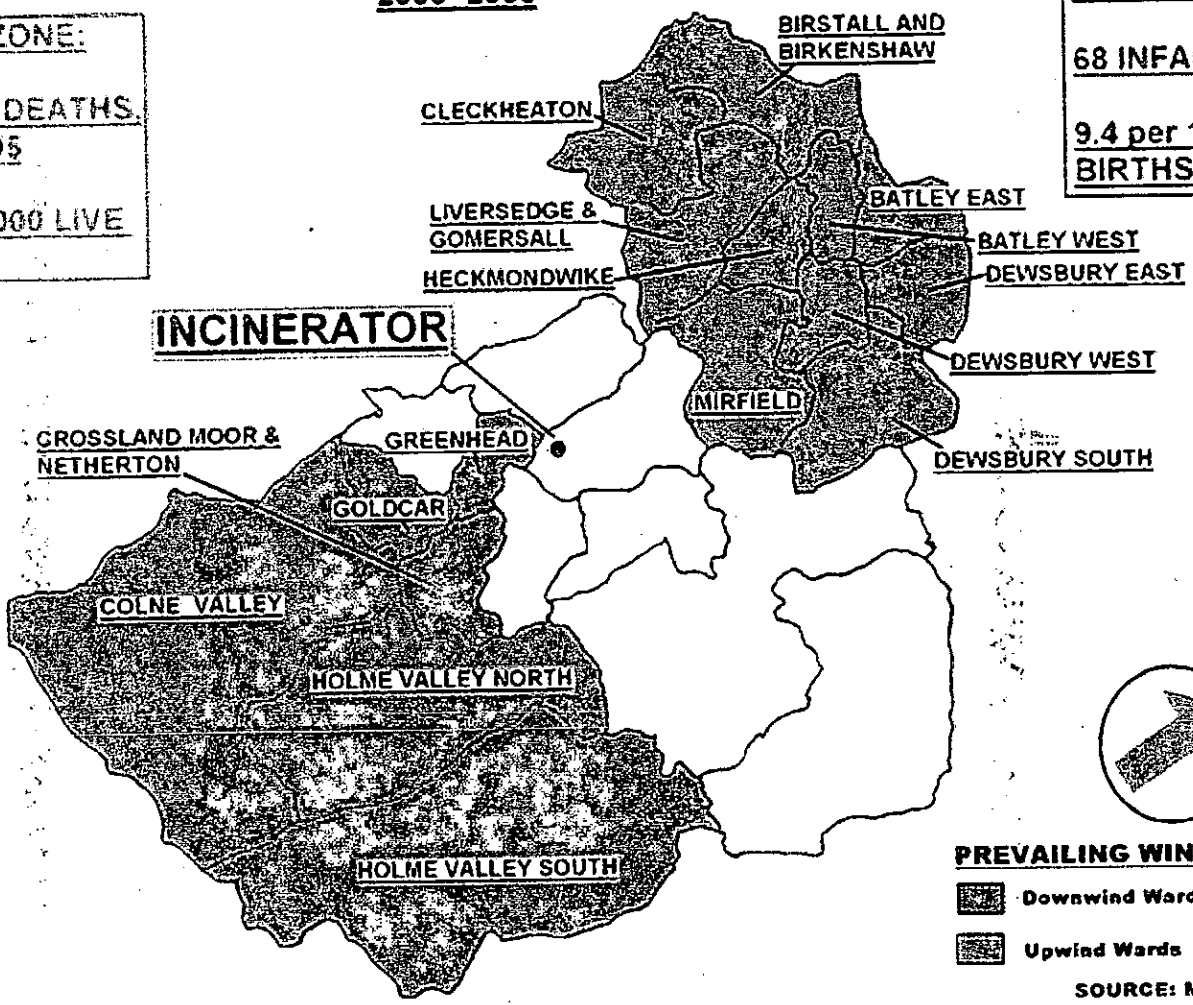




KIRKLEES METROPOLITAN DISTRICT INFANT DEATHS BY WARDS 2003 -2005

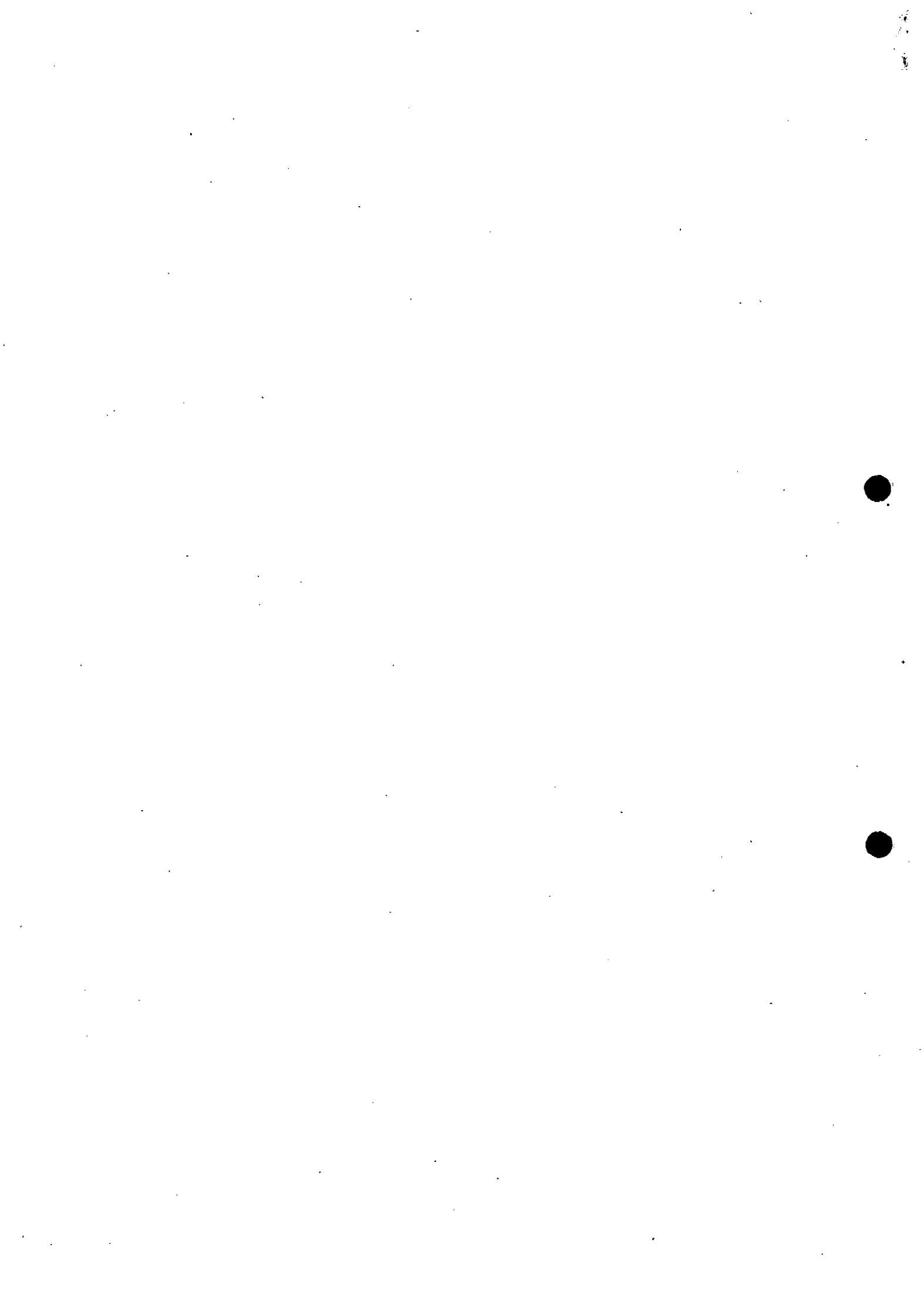
UPWIND ZONE:
5 INFANT DEATHS
2003 - 2005
3.5 per 1,000 LIVE
BIRTHS

DOWNDOWN ZONE:
68 INFANT DEATHS
9.4 per 1,000 LIVE
BIRTHS, 2003- 2005



PREVAILING WIND DIRECTION
Downwind Wards
Upwind Wards

SOURCE: Michael Ryan 2005



Rec 10/07/07

Halton Action Group Against The Incinerator

Mr P Watts
Operational Director
Environmental and Regulatory Services
Rutland House, Halton Lea
Runcorn, WA7 2GW

40 Royden Avenue
Runcorn
Cheshire
WA7 4SP
09/07/07

RPS/Ineos responses of April 2007

Dear Mr Watts

I am writing to you with regard to the above documents, kindly forwarded by Andrew Plant, following our meeting with you. After due consideration we have concluded that they do not, in any way, address satisfactorily the issues we have identified in our Statement of Concerns and in our recent meetings with Councillors and yourselves.

I enclose a copy of Professor Dearden's 'Comments on RPS Response to Report by Qstar Consulting' which identifies eleven specific continuing concerns, including, inter alia, the failure to acknowledge the emissions of the unregulated fine and ultra fine particles and their effects on health and the unresolved saga of the chimney stack height. The Action Group continues to believe that independent expert opinion should be sought and shares Professor Dearden's concern that the problems he has identified have still to be satisfactorily addressed.

I also enclose a copy of Dr John Beacham's comments on the 'Energy from Waste, Runcorn (response to HBC from RPS/Ineos, April 2007) which again, confirms that the issues we have raised in relation to the location of the incinerator, the stack height, the nature, specification, variability, quality control and sources of the proposed fuel, the logistics of the incineration process, start up and shutdown or malfunction, the nature of the emissions and the specification of the incinerator itself, still require clarification. In relation to the adequacy of any abatement equipment, we would again emphasise that bag filters will not prevent the emission of the most dangerous fine and ultra fine particulates. I also note that the Water Cooled Moving Grate (WCMG) technology with bag filters is the preferred technology. This is exactly the same technology used in the Luvella incinerator 20 years ago, so one is bound to ask, how can this be classed as a 'modern' incinerator?

Reference is made to a 'similar' incinerator in Cologne but no details have been provided as to its specification and history, or to other important relevant factors such as density of population, terrain, wind direction, the nature and specification of the 'fuel' etc. in a country with a different recycling history as compared with that of the U.K.

We continue to share Dr Beacham's concerns regarding the transportation of the toxic waste and its dumping at Randle Island and RPS/Ineos estimates of traffic movements by train and road, congestion and increased pollution in what is already a heavily polluted area. In particular we deplore RPS/Ineos's failure to acknowledge the detrimental effect the incinerator will have on the lives of a large number of people and their visual environment.

In addition we share Professor Dearden's concerns (Para 5) that at no time have RPS/Ineos acknowledged the effects of the perceived threat, shared by residents, to their health and quality of life posed by the proposed incinerator.

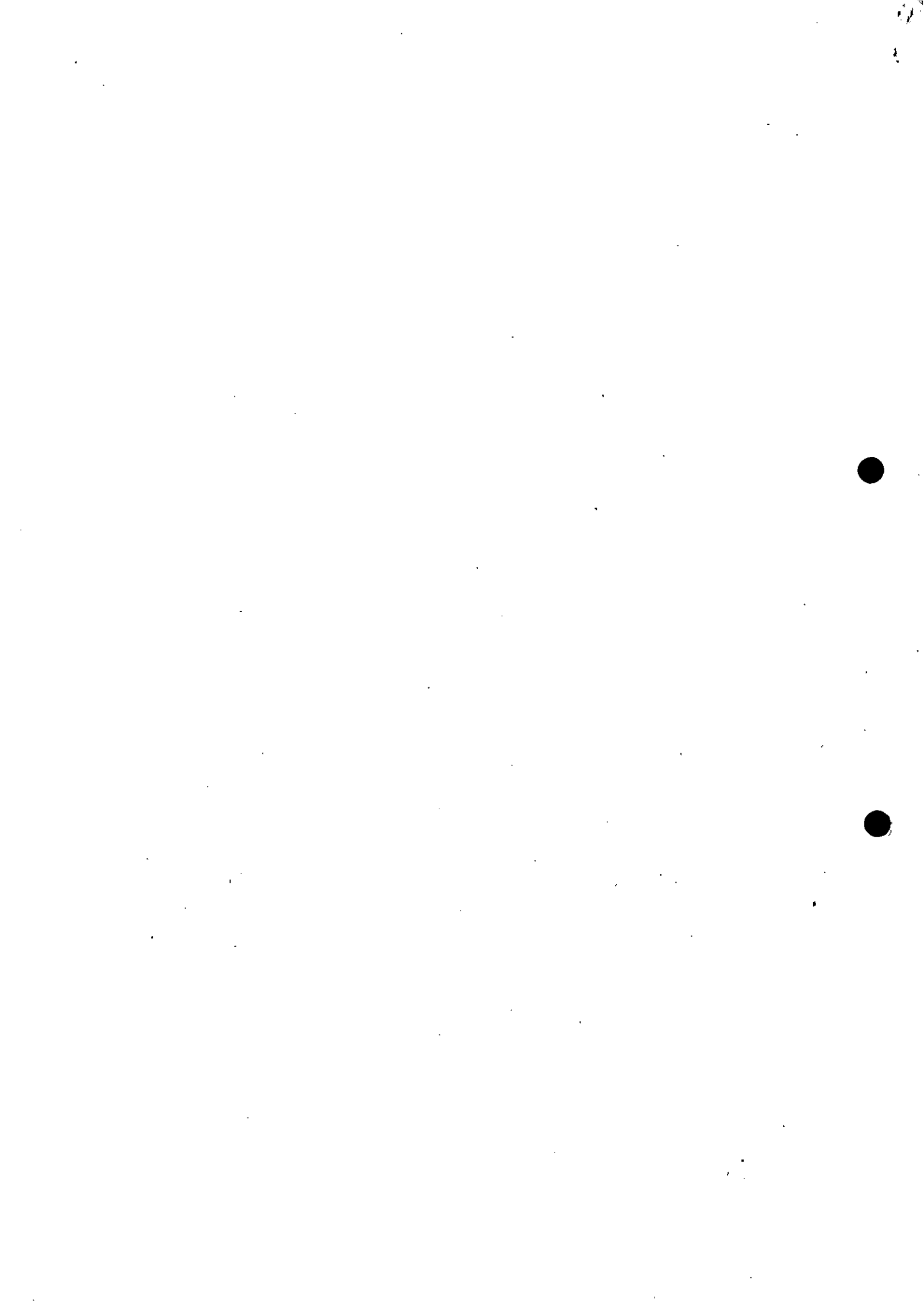
Copy ; Andrew Plant
Environmental and Regulatory Services
Rutland House
Halton Lea
Runcorn
WA7 2GW

Yours sincerely


Sir Kenneth Green

Chairman

p.s. Please also find enclosed a press release which must be a major cause for concern in suggesting that agreements have been reached prior to decisions related to the Ineos proposal and thereby pre-empting HBC's consideration of this incinerator. I welcome your comments.



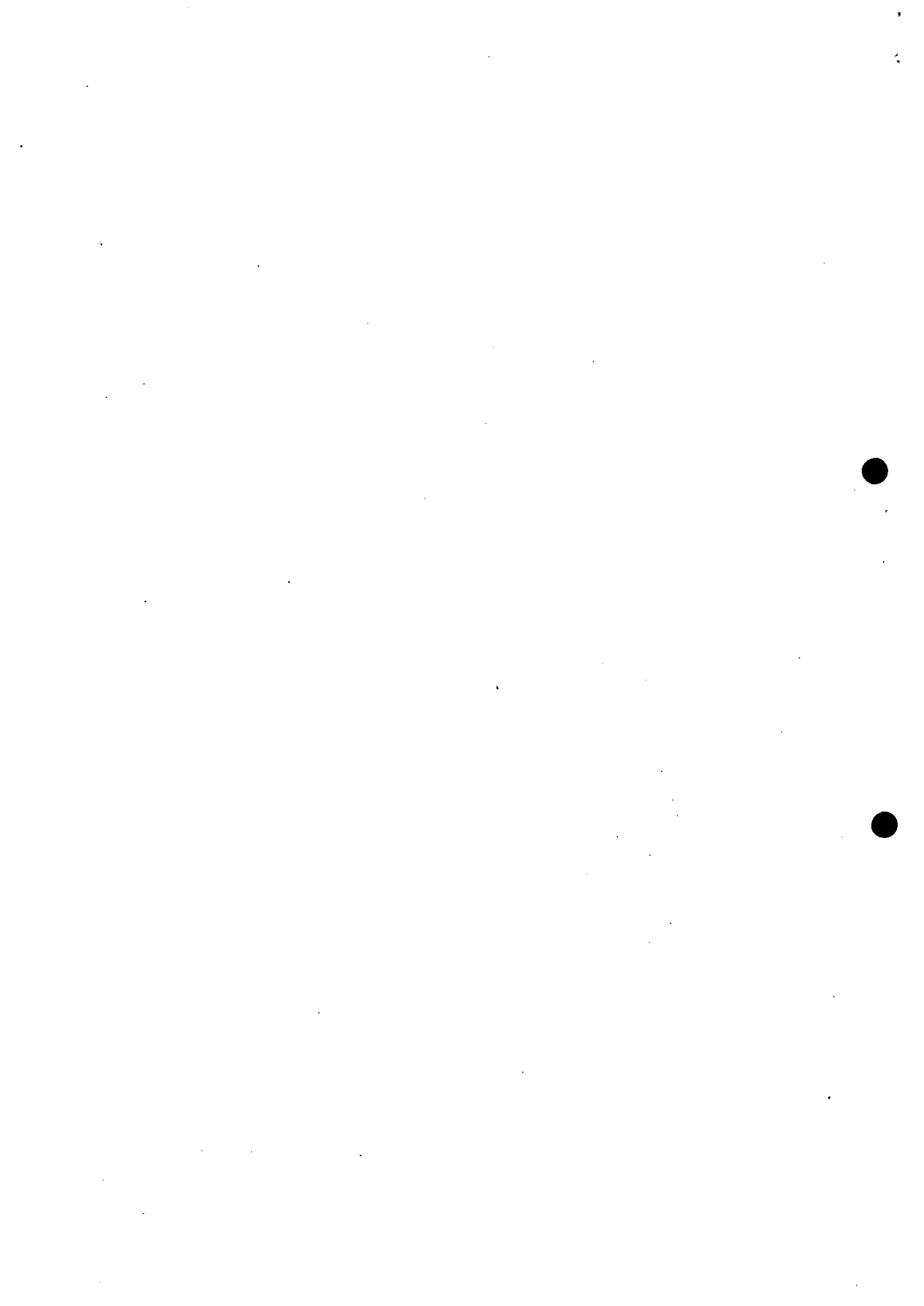
Comments on RPS 'Response to Report by QSTAR Consulting'

Prof. J.C. Dearden

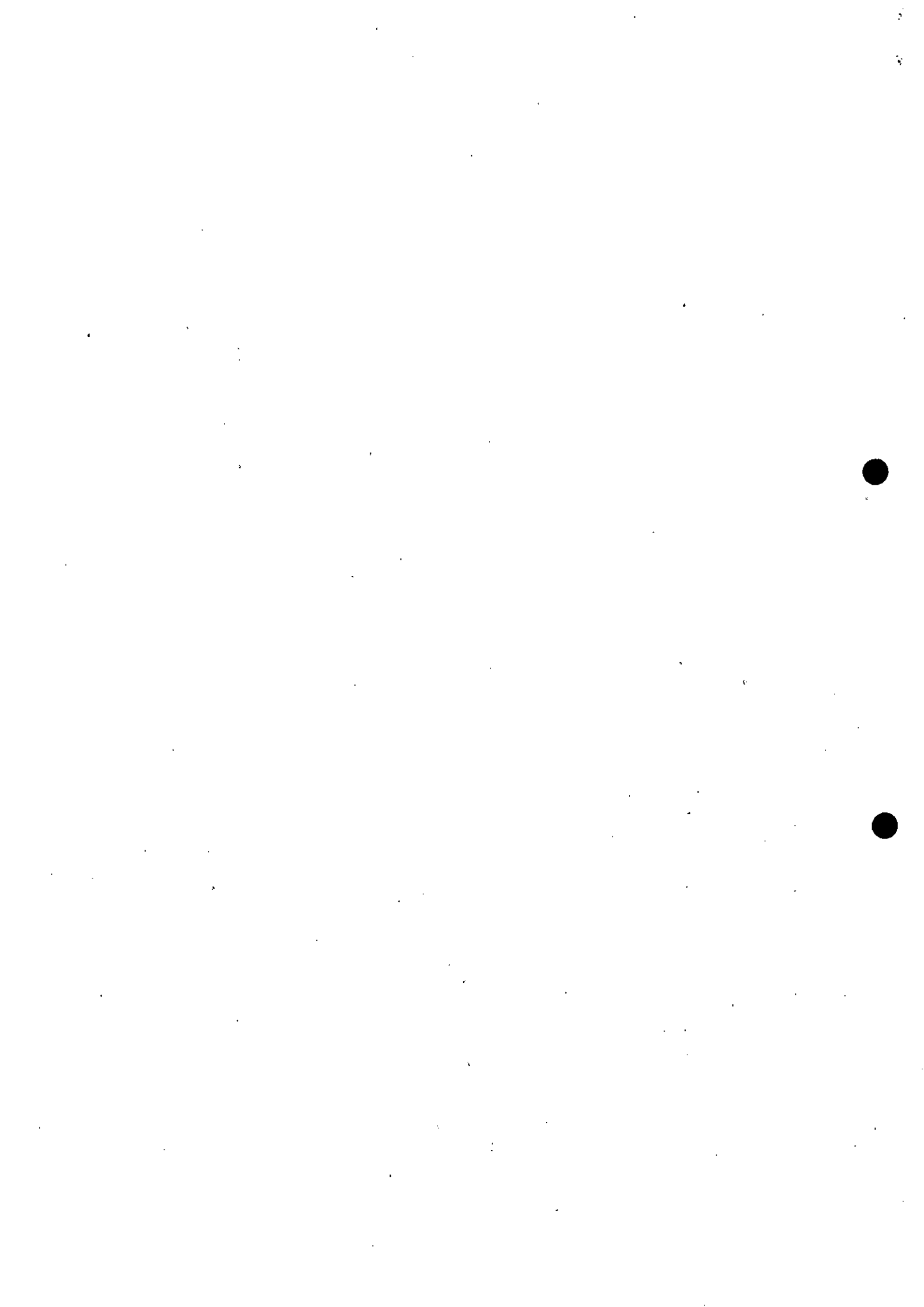
QSTAR Consulting

Following my February 2007 "Report on 'Human Health Risk Assessment', part of a planning application by INEOS Chlor for an Energy from Waste project on the INEOS Chlor chemical site at Runcorn, Cheshire", RPS have submitted a response. I give below my comments on that response.

1. I commented that the Human Health Risk Assessment (HHRA) failed to recognise that fine particles *per se* are dangerous. The RPS response does not deny this, and refers to a number of scientific studies that confirm the health risks of fine particulates. However, the RPS response restricts itself to commenting on PM2.5, whereas I specifically drew attention to ultrafine particles such as PM0.1, which are much more dangerous than PM2.5, both because they are drawn very deeply into the lungs and can penetrate systemically, and because for a given weight concentration they have a much greater surface area on which toxic chemicals can be adsorbed, compared with PM2.5 and PM10. It is virtually impossible to filter out PM0.1, because filters would have to be so fine that they would seriously impede the flow of emissions from the stack. Hence RPS have not answered my criticism of the HHRA's neglect of the dangers of ultrafine particulates.
2. I commented that the HHRA assumed that the only source of emissions would be the stack. Page 15 of the HHRA states that: "For the purposes of assessing the effect of the EfW facility, the stack is assumed to be the only source of emission". In fact, as pointed out in the RPS response, the Environmental Statement gives details of how potential vehicular emissions were assessed. Hence the HHRA was incorrect, and thus misleading.
3. I commented that the HHRA ignored the toxic effects of thallium and vanadium, and did not even mention the risks from polybrominated diphenyl ethers (PBDEs), which are widely used fire retardant agents. The RPS response has taken my criticisms on board, and gives estimates for thallium and vanadium toxicity. These appear to be relatively quite low, which is reassuring, but that information should have been in the HHRA. I would also comment that when Ince B power station was burning Orimulsion, which contains vanadium, much concern was expressed locally about possible vanadium toxicity. In connection with PBDE toxicity, the RPS response has again taken my criticisms on board, and seeks to give reassurance about possible toxicity. I have to say that I am not entirely convinced by what they say, partly because PBDEs are relatively very new toxicants and their toxicities have not been fully evaluated. Much concern has been expressed about PBDE toxicity in the scientific literature. Whilst the RPS response to my report has sought to correct the original omissions of the HHRA, the fact remains that these matters should have been dealt with in the HHRA.

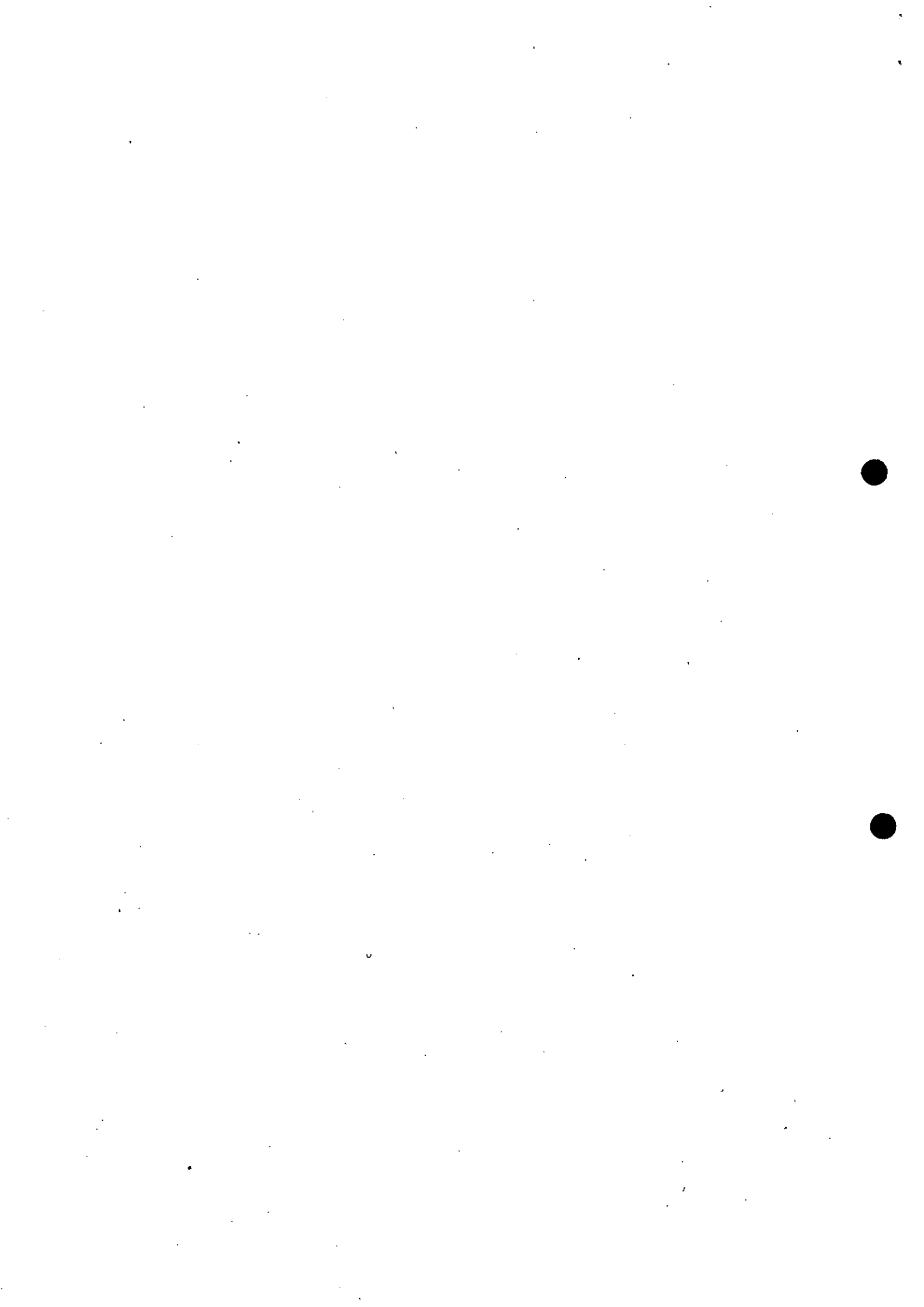


4. I criticised the fact that no sites within Frodsham town or Helsby village were considered in the HHRA. The RPS response claims that HHRA receptors were chosen on the basis of representing key vulnerable population centres (for example, local schools and health clinics). There is a very large comprehensive school (some 1400 pupils), two primary schools and a health centre in Helsby, and there are two nursing homes for frail elderly people in Helsby. Frodsham has a population about twice that of Helsby, and also has a number of schools and nursing homes. There is therefore no excuse for not considering receptors within Helsby and Frodsham. I challenge the statement in the RPS response that their modelling "incorporated receptors representing the areas of Frodsham town and Helsby village". Where are those receptors?
5. I commented that the HHRA failed to acknowledge the existence of perceived threat from a plant of this nature. The RPS response fails totally to respond adequately to my comments. There is much published work on the stresses and health effects brought about by perceived threat, and this was highlighted in the Primary Care Trust report on the possible health effects of the proposed Peel incinerator on Ince Marshes. The HHRA was seriously at fault in not drawing attention to this.
6. I commented that it was not clear from the HHRA whether, in the dispersion modelling studies, the nature of the Runcorn terrain was adequately taken into account. That statement is still valid, and the HHRA was at fault in not explaining how the nature of the terrain was taken into account. The Air Quality Assessment Appendix 10.1 addressed the nature of the terrain; Two modelling packages, ADMS and AERMOD, were used for the dispersion modelling. Remarkably, although Runcorn rises quite steeply immediately behind the proposed EfW plant site, both models predicted that the presence of the hill would have no effect whatsoever on the dispersion of pollutants from a 105 metre stack (although the numerical values for pollutant concentrations were quite different, by a factor of two, for the two modelling packages). This result appeared to me to be so strange that I contacted Cambridge Environmental Research Consultants, the developers of the ADMS model, to ask for their view; their comment was that the result appeared very strange to them also. At the very least, therefore, there needs to be an independent reassessment of the dispersion modelling, including whether the arbitrary limit of 105 metres placed on the stack height by the proximity of Liverpool John Lennon Airport is unduly restrictive.
7. I commented that the HHRA assumes that above-ground produce is protected within an outer covering, so that root uptake is the primary mechanism through which above-ground protected produce becomes contaminated. I accept that RPS did consider non-protected above-ground produce, but my comment above is still valid. The HHRA ignored the fact that some above-ground protected produce is eaten with its protective sheath, and thus any toxicants sorbed on the sheath are also ingested. Examples of such produce are some peas and beans that are eaten with their pods, and maize grown for cattle-feed.
8. I commented that the HHRA used an erroneous intake target level (which they claimed was a USEPA target level) for dioxins of 50 pg/kg bw-day for infant exposure through breast milk, thereby incorrectly claiming that the estimated



daily intakes are all well below the target level. This is correct. The USEPA (United States Environmental Protection Agency) has no target level for intake of dioxins by infants. The RPS response gives many facts and figures to try to justify what was stated in the HHRA. However, they are confusing target level (by which is meant an acceptable level with minimal risk) and actual intake. I fully accept that intake of dioxins by breast-fed babies can be of the order of 50 pg/kg bw-day, but this is much too high. The argument that is often used to claim that such a level is acceptable is that breast-feeding is for only a short time (e.g. 9 months), and that infants grow very quickly, thereby "diluting" the body burden of dioxins. This argument is invalid, because recent research (some of which I cited in my February 2007 report) has shown that infant exposure to dioxins can have serious and long-lasting effects on development. Furthermore, I pointed out that exposure of the foetus in the womb (by uptake of dioxins present in the mother's body) has been shown to be as risky as (if not more risky than) exposure through breast-milk. Both the HHRA and the RPS response totally ignored the risk to foetuses from dioxins.

9. I commented that the HHRA incorrectly claimed that all estimated carcinogenic risks were significantly below the target level of 1 in 100,000, and also used an incorrect target level. The RPS response claims that the target level of 1 in 100,000 is for individual toxicants, and is not for total risk. However, on page 28 of the HHRA it is stated that total cancer risks given in Table 3.2 "are significantly below the target level... of $1E-5$ (1 in 100,000) for... cancer risk". It is quite clear from that statement that RPS used the 1 in 100,000 target level to refer to total cancer risks, and not those from individual toxicants. The RPS response also states that the USEPA target level of 1 in 1 million is a lifetime target level, whereas the figure of 1 in 100,000 that they used is an annual figure. However, on page 25 of the HHRA it is stated that "a risk of 1×10^{-5} is interpreted to mean that an individual has up to a one in 100,000 chance of developing cancer *during their lifetime* (my italics) from the evaluated exposure". Clearly, therefore, the HHRA was using the figure of 1 in 100,000 as a lifetime target level, and not as an annual target level, as the RPS response claims. It should also be pointed out that the figures given in the HHRA relate only to predicted emissions from the proposed EfW plant, and take no account of existing cancer risks in the area. It has very recently been reported that Halton has the highest mortality from early cancer in the whole country. It therefore seems to me unwise, to say the least, deliberately to impose yet more cancer risk on the population of Halton.
10. I commented that the presentation of some numerical and other information in the HHRA is unclear. The RPS response accepts this, and states that a glossary of acronyms and units will be provided. I disagree with the RPS statement that "none of the units are (*sic*) expressed incorrectly in the (HHRA)". For example, on page 12 of the HHRA it is stated that the units of normalised flow rate are $Nm^{-3}S^{-1}$. This should be Nm^3S^{-1} , i.e. normalised cubic metres per second.
11. The RPS response has failed to respond to point 12 in my report, dealing with estimation of Nox levels.



Energy from Waste, Runcorn
Response to HBC from RPS/Ineos (April 2007)

1. Introduction

The responses are to questions from HBC (dated 22 February 2007) before the residents/action group had any knowledge and, therefore, do not particularly address the current concerns. These notes are my interpretation of the information supplied.

2. Project

The technology has been fixed as Water-Cooled Moving Grate (WCMG) boilers. However, there is no real new information on the fuel production and its quality, except for the following:

- Phase 1 375,000t.pa (275,000t.pa from Manchester sponsored plant delivered by 5 trains per day, and the rest from somewhere else by road).
- Plant commissioned in 2011, one year after the Manchester waste plant.
- The traffic increase on the bridge appears small in numbers, but there is no information on its effect on congestion (i.e. normal expected traffic levels in 2011, and frequency and length of delays).
- There is no new information on the quality of the fuel other than "it will be reasonably homogeneous and it will be the responsibility of the supplier".
- The fuel is described only by its calorific content, which is stated to be variable and not completely known.
- They plan to check fuel by its calorific content and by analysing the flue gas for Cl content (after the event). There is no information on heavy metals.
- There is no new information on startup/shutdown or maloperation.
- They still say that they may use other unspecified fuel albeit with approval from the Environmental Agency.

3. Visual Impact

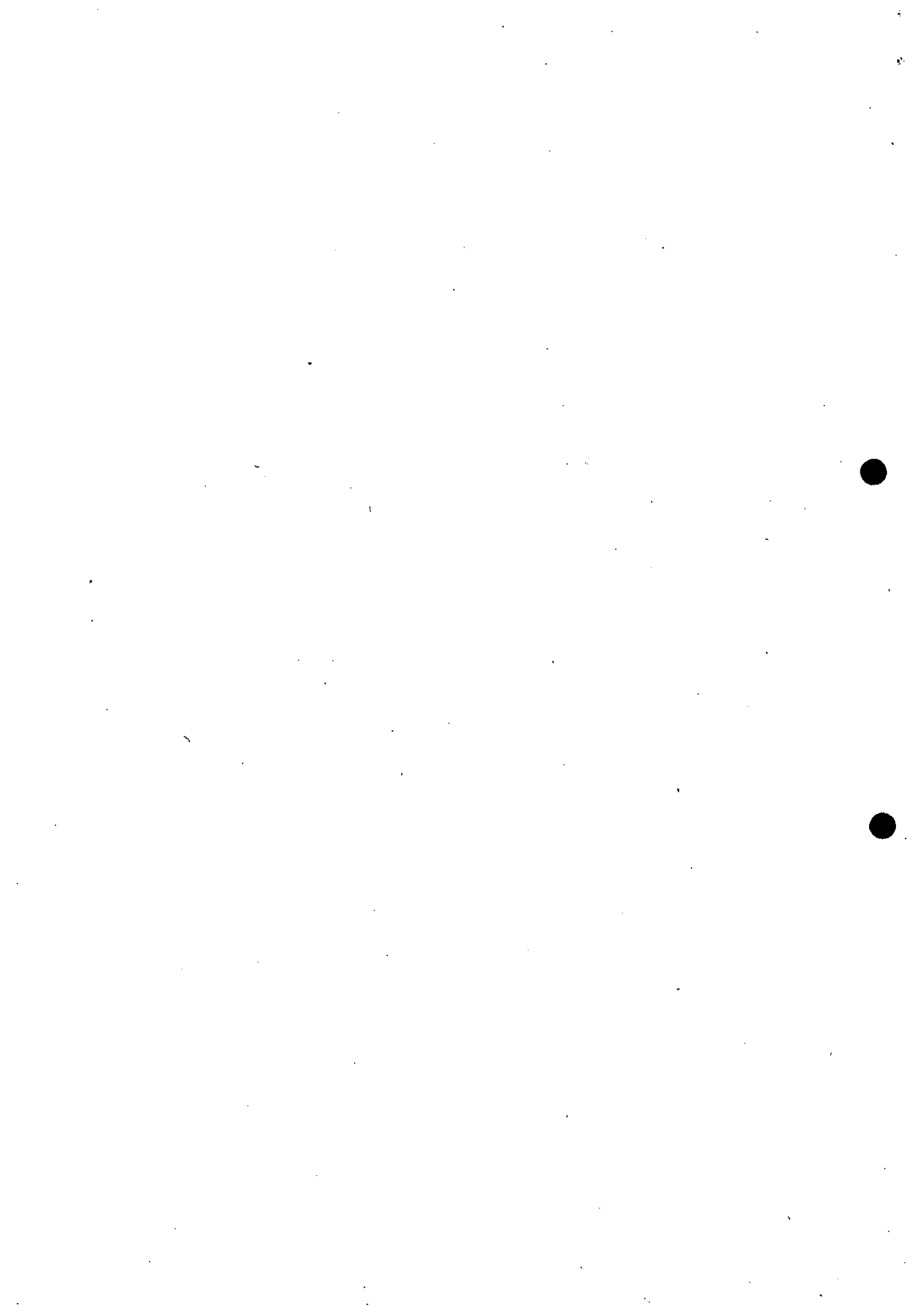
All concerns on visual impact are effectively dismissed (cavalierly in my opinion).

4. New Pollution

- There are some details of possible ash results.

Bottom	191,000t.pa
Fly ash	21,000t.pa
Flue Gas treated residues	<u>54,000t.pa</u>
	266,000 t.pa to Randle Tip

A lifetime of 28 years for Randle is stated.



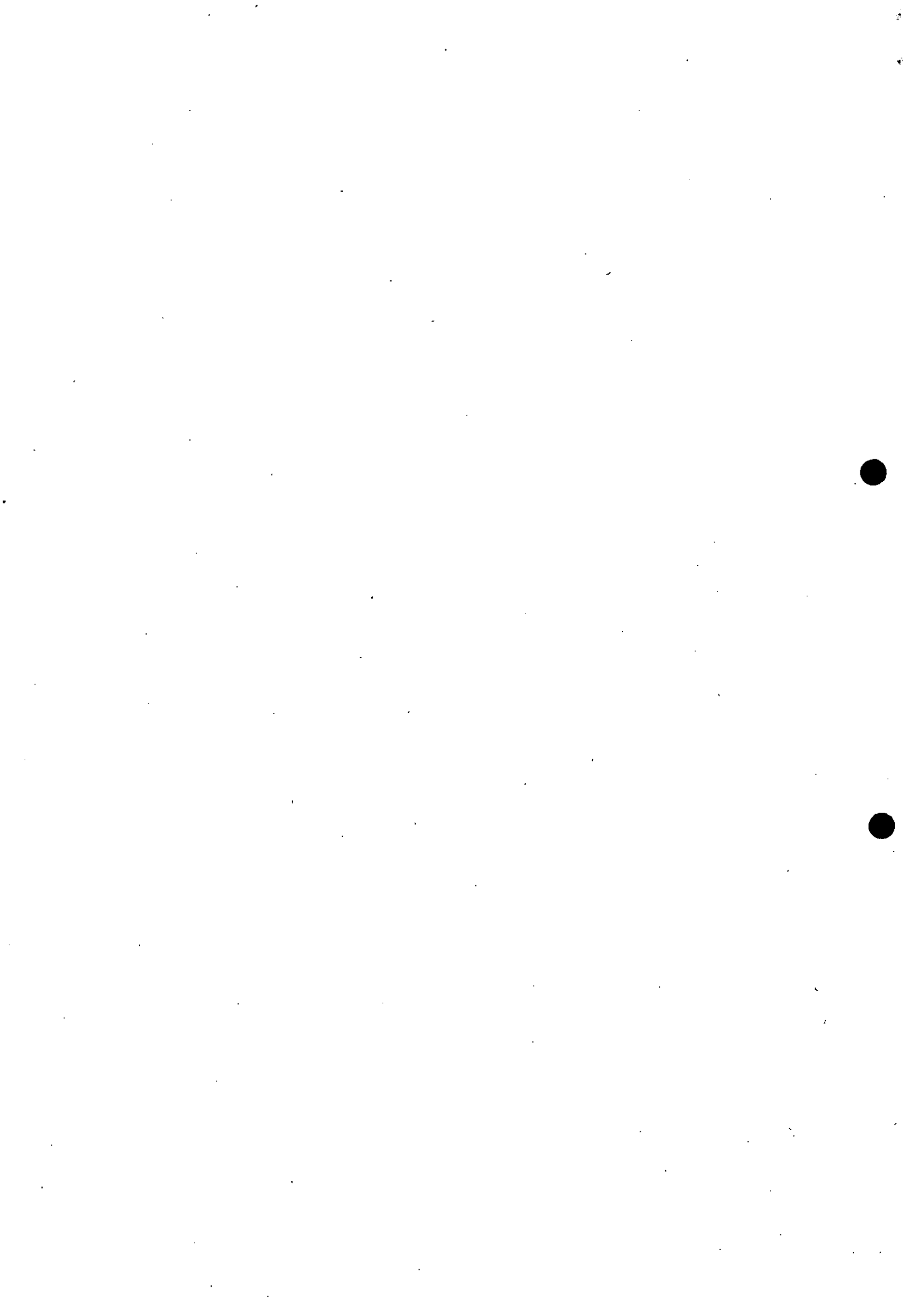
- There is no new information on groundwater contamination which remains unknown.
- There is a lot of information by modelling on possible downstream effects and they say that "terrain data has been taken into account". However this cannot be and the effects of the escarpment remains unknown.
- There is no new information about the stack height, other than that based on the discredited modelling (my view!). 105m was chosen, (in my opinion) to be as high as the airport approach approval would allow.
- They dismiss low frequency noise concerns, but there is no practical data to base this on.
- There is no new information on potential pollutants and their possible effects. They are relying on claiming that they will meet standards set by the Environment Agency (and occasionally tested).

5. In Summary

Our claim that this is an experimental process and that downstream pollution and health risks will increase, has not changed by this information.

Similarly our concerns over road/rail movements remain.

It remains surprising that no practical information on the operation of the fuel processing or WCMG technology is provided (from existing plants), to enable an assessment of the actual outcomes of this proposal.





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Manchester agrees plan to burn residual waste

03-07-2007

Residual waste from the Manchester region is likely to be burnt at Runcorn in Cheshire under an agreement reached with operators of the Ineos Chlor petro-chemical plant.

Announcing the plan to burn the waste at a new combined heat and power plant for which planning permission is now being sought, it was also revealed by the Greater Manchester Waste Disposal Authority that its signing of a contract with its preferred PFI bidder has been delayed until September.

The disposal authority announced on Friday that it intends to supply solid recovered fuel produced from mechanical biological treatment and anaerobic digestion plants to Ineos Chlor. Annually about 600,000 tonnes of material that cannot be recycled will be taken to five MBT and AD plants in the area.

The plants are to be built in Salford, north and south Manchester, Oldham and Stockport under the £320 million PFI contract for which Viridor Waste Management and construction partner Laing are the preferred bidder.



A planning application has been submitted for a plant to burn Manchester's residual waste at this site in Runcorn

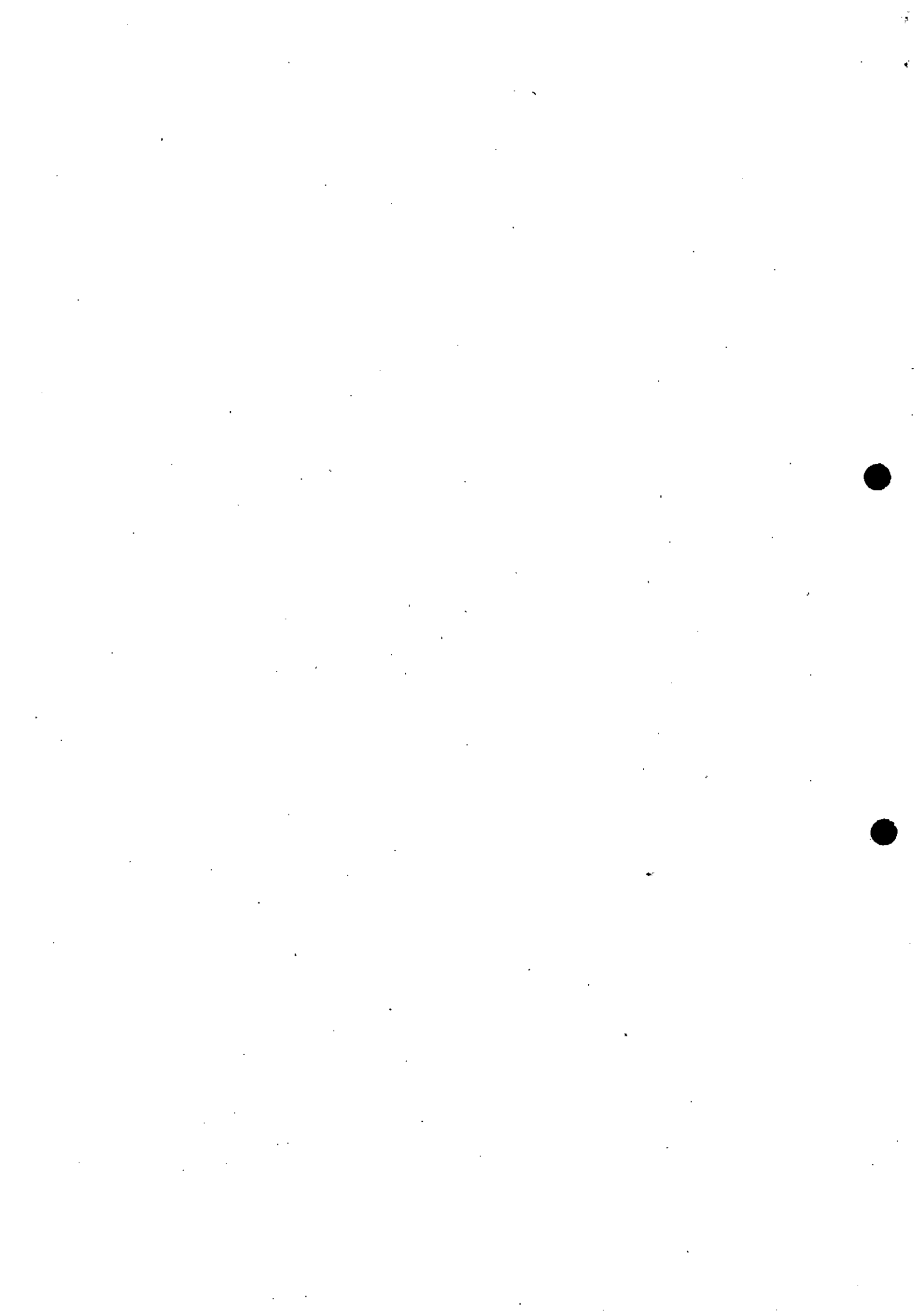
Approval

The decision to try and build a CHP plant at Ineos Chlor is thought to have won support from Defra because the department is concerned that traditional energy from waste plants are not recovering the heat generated even though they create electricity. A planning application has been submitted and will be considered by the Department for Business, Enterprise and Regulatory Reform (formerly the DTI) because it is for a power generation facility.

The speed of approval will depend on whether or not a public inquiry is held - the plant is due to be up and running in 2010. Local consultation is currently underway and concludes next month. Mr Judson noted that the local authorities in the area have the opportunity to have a plant in place much quicker than might have been the case if it was on other sites.

Working out the impact of the CHP plant on the contract with Viridor/Laing is one of the reasons for the delay in the contract, according to Tim Judson, head of procurement for the authority.

Mr Judson, who is on secondment from Defra, explained that the usage of the waste as fuel is very important. "We are working out the role of ROCs - renewable



obligation certificates - and enhanced capital allowances on the financial side of the facility. The exact rules for ROCs and other factors are still a matter of discussion and we need to know precisely what the rules of the game are."

Mr Judson added that part of the delay was also because the consultations now involve Ineos Chlor as well as Viridor/Laing.

Some observers have commented that the delay of the contract award until September could be linked to speculation about the future of Viridor, in case its owner the water utility Pennon Group ever became involved in a sale of some sort. One suggestion was that Manchester wished to make sure the contract was as "watertight as possible". However, Mr Judson said that he could "categorically state" that this was not the reason for the delay.

Government is introducing new financial incentives on renewable energy and we are keen to see some of those benefits flowing to Greater Manchester taxpayers

**Cllr Neil Swannick,
GMWDA**

Cost

With Viridor's highly competitive bid for the contract and also the potential for the sale of renewables certificates from a CHP plant, the waste disposal contract could cost the authority as much as £1 billion less than expected.

Viridor and Laing's price is now understood to have been even below the waste disposal authority's outline business case. Mr Judson confirmed that this was the case although "they were not unique in the bidding process in terms of affordability."

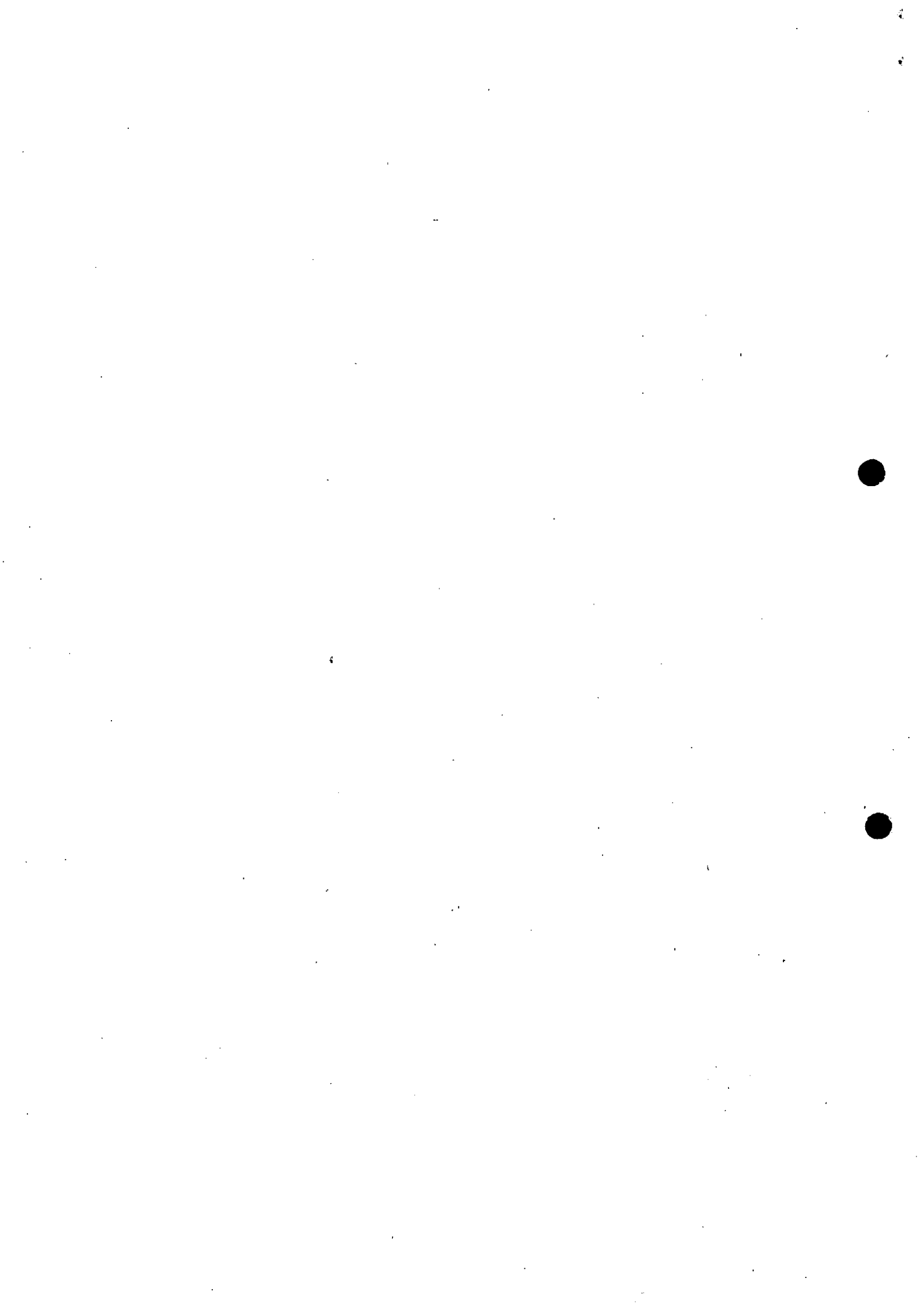
Councillor Neil Swannick, chair of GMWDA, said of the Ineos Chlor proposal: "There is a clear link to jobs in the regional economy, we can continue to use rail transport, and as a technical solution it fits very well with the Authority's ambitions for an efficient energy solution that makes local use of steam as well as electricity. We have seen a succession of government announcements about action on climate change, security of energy supply and more sustainable waste solutions. I am pleased that locally we are able to quickly give those good intentions a practical edge."

Cllr Swannick added: "We are very keen to see the new facilities in place as quickly as possible. We recognise that government is introducing new financial incentives on renewable energy and we are keen to see some of those benefits flowing to Greater Manchester taxpayers. We expect this total contract cost to be £1 billion less than what we expected to have to pay over 25 years. In that context we can wait a few weeks to dot the 'i's and cross the 't's on the contract".

Related links

Ineos Chlor
Greater Manchester WDA

With the £1 billion reduction, the councillor was referring to cost projections a few years ago of £4 billion for the contract.



Halton Action Group Against The Incinerator

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Runcorn
Cheshire
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09/07/07

RPS/Ineos responses of April 2007

Dear Mr Watts

I am writing to you with regard to the above documents, kindly forwarded by Andrew Plant, following our meeting with you. After due consideration we have concluded that they do not, in any way, address satisfactorily the issues we have identified in our Statement of Concerns and in our recent meetings with Councillors and yourselves.

I enclose a copy of Professor Dearden's 'Comments on RPS Response to Report by Qstar Consulting' which identifies eleven specific continuing concerns, including, inter alia, the failure to acknowledge the emissions of the unregulated fine and ultra fine particles and their effects on health and the unresolved saga of the chimney stack height. The Action Group continues to believe that independent expert opinion should be sought and shares Professor Dearden's concern that the problems he has identified have still to be satisfactorily addressed.

I also enclose a copy of Dr John Beacham's comments on the 'Energy from Waste, Runcorn (response to HBC from RPS/Ineos, April 2007) which again, confirms that the issues we have raised in relation to the location of the incinerator, the stack height, the nature, specification, variability, quality control and sources of the proposed fuel, the logistics of the incineration process, start up and shutdown or malfunction, the nature of the emissions and the specification of the incinerator itself, still require clarification. In relation to the adequacy of any abatement equipment, we would again emphasise that bag filters will not prevent the emission of the most dangerous fine and ultra fine particulates. I also note that the Water Cooled Moving Grate (WCMG) technology with bag filters is the preferred technology. This is exactly the same technology used in the Luvella incinerator 20 years ago, so one is bound to ask, how can this be classed as a 'modern' incinerator?

Reference is made to a 'similar' incinerator in Cologne but no details have been provided as to its specification and history, or to other important relevant factors such as density of population, terrain, wind direction, the nature and specification of the 'fuel' etc. in a country with a different recycling history as compared with that of the U.K.

We continue to share Dr Beacham's concerns regarding the transportation of the toxic waste and its dumping at Randle Island and RPS/Ineos estimates of traffic movements by train and road, congestion and increased pollution in what is already a heavily polluted area. In particular we deplore RPS/Ineos's failure to acknowledge the detrimental effect the incinerator will have on the lives of a large number of people and their visual environment.

In addition we share Professor Dearden's concerns (Para 5) that at no time have RPS/Ineos acknowledged the effects of the perceived threat, shared by residents, to their health and quality of life posed by the proposed incinerator.

Copy ; Andrew Plant
Environmental and Regulatory Services
Rutland House
Halton Lea
Runcorn
WA7 2GW

Yours sincerely


Sir Kenneth Green

Chairman

p.s. Please also find enclosed a press release which must be a major cause for concern in suggesting that agreements have been reached prior to decisions related to the Ineos proposal and thereby pre-empting HBC's consideration of this incinerator. I welcome your comments.

