No Incineration Alliance
PO Box 2001
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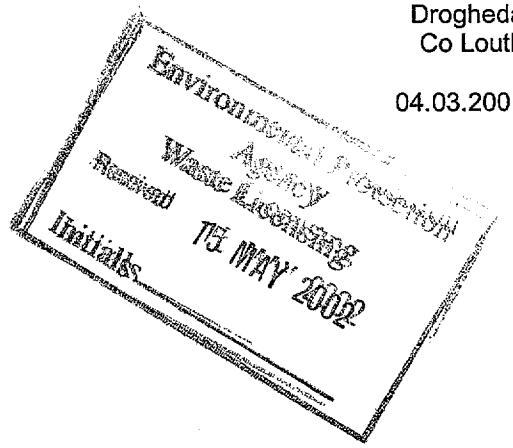
04.03.2001



The County Secretary,
Meath County Council
Navan
Co Meath

Dear Sir,

RE: INDAVER INCINERATOR PLANNING PROPOSAL
PLANNING APPLICATION FILE NO. 01/4014
LOCATION OF DEVELOPMENT – CARRANSTOWN, DULEEK, CO MEATH

Our Alliance wish to object to the above planning application and set out below our comments and concerns. Please acknowledge receipt of our submission to the above address.

(A) GENERAL PLANNING ISSUES

1. There has been no attempt by the EIS to make any analysis of the possible waste being disposed of. The EIS vaguely outlines where the calorific value is low in the feed then gas will be used to add fuel. However, analysis is required and without such a fundamental procedure being carried out then the EIS is useless. Therefore any conclusions drawn by the authors of the EIS are invalid. The EIS is therefore invalid.

2. As the EIS does not preclude toxic/hazardous/nuclear/clinical/biological or chemical wastes from the waste stream to be handled by the incinerator it implies by omission that these waste streams may be treated in contravention to the specification of the purpose of the incinerator in the details of the Planning Application.

3. The site location map on Page 6 ,Figure:1, E.I.S. document incorrectly shows location of the site .

4. Photomontages of the proposal are totally inadequate and ,we maintain, are inaccurate and misleading .

5. We note that the main building is approximately 100 ft. high. Views of this building from the west looking towards Drogheda have been selective and give a misleading perspective.

6. The EIS primarily states the current status of the Environment under various headings. No valid attempt has been made to include future IMPACTS of the proposed development of these environmental issues, in contravention of the Statutory requirements of an EIS. In particular:-

   - in the event of operational failure, the EIS fails to address the levels of dioxins and furans that may be generated by the plant.

- the EIS fails to address the process of monitoring for dioxins and furans that may be generated by the plant outside the boundaries of the site but within the areas that are admitted to be within the zone of effect of the plant.

- the EIS fails to address the problem of heavy metals that may be generated by the plant, in a similar manner to the above point.

- the EIS fails to indemnify the local population against any and all effects or damage that may be caused to them, their families or their livelihood by an increase in the levels of dioxins, furans, cadmium, mercury, other heavy metals, persistent organic pollutants, prions or any other toxic or poisonous substances which may be released into the immediate surroundings by their direct operation of this plant.

- the EIS does not include a Health and Safety Plan nor a Duty of Care provision for the members of the public, resident, working or partaking of recreation activities in the area.

7. The EIS does not indicate whether a Fire Safety Plan has been lodged with the County Fire Officer.

8. The full operational cycle of all parts of the plant has not been detailed.

9. No detailed attempt has been made in the EIS to explain where, when or how those admitted highly contaminated elements of the waste stream will be stored, transported or disposed of. The outline proposals presented appear to fail to take into account recent developments in the understanding of the interaction of such contaminants with the Environment over protracted periods of time.

10. No maintenance proposals for the cleaning of the boilers, the bottom ash pits, the flue, the filters nor any other contaminant-prone area of the plant have been included in the EIS.

11. No water balance projections have been provided in the EIS.

12. No contaminated spillage control details have been provide din the EIS.

13. No wash-down flow details have been provided in the EIS.

14. No energy balance projections have been provided In the EIS.

15. No material balance projections have been provided in the EIS.

16. No vermin control procedures have been included in the EIS.

(b) TRAFFIC

1. The Traffic Impact analysis is inadequate in that it fails to relate the projected actual traffic which will be generated including that traffic necessary to collect and remove from site recycled materials, deliver necessary process materials, provide necessary maintenance, provide necessary collection and removal of specific contaminated materials, or to provide necessary precautionary measures for the safe removal and transport of toxic, highly contaminated or volatile materials.

2. The Traffic Impact analysis is inadequate in that it fails to relate the destructive effect of multi-axle heavy goods vehicles pro-rata to private cars on the existing road. The County Council would fail in its Duty to provide a carriageway capable of taking the axle load which will be generated by the vehicle movements associated with the development if the current roadway is considered adequate.

3. The traffic analysis is totally inaccurate . It fails to show:-
Projected traffic flows on the R152 when the M1 is complete . They maintain that it will be reduced. This is totally incorrect .

- The traffic generated on the R152 by the developing and proposed zoning of the Drogheda
  environs/East Meath area .

- The traffic generated by the developing and proposed zoning of the Duleek area .

- The impact and potential hazard of large quantities of waste being transported through the villages of Duleek , Slane ,Collon , Ardee etc.

- The projected increase of traffic in the Duleek area by the expansion of local quarries.

4. Garda records will confirm the significant incidence of traffic accidents in the immediate area of the proposed development. Further volumes of traffic, especially heavy commercial vehicles, will only add to this.

(C) SITING

1. The view presented to tourists travelling to Newgrange from Drogheda, along the Boyne Valley (UNESCO World Heritage Site), either through Donore or by the Slane route ,will be degraded ,and in our opinion be detrimental to the visual environment of the area .

2. A noted Peregrine Falcon nest exists on the south face of the adjacent quarry . This has been totally ignored by the E.I.S. and in our opinion is a most serious omission, as the Peregrine Falcon is specially protected under the Wildlife Act .

3. It has been stated by Indaver that the protected view from Bellewstown Hill has been degraded by Platin Cement works . It should be noted that the Platin works were already in existence when the local authority ,in their wisdom ,established this protected view and therefore Platin is an integral part of this view .

4. Indaver have stated that their site is adjacent to an existing industrial complex. Note that when Platin was originally built, local residents were assured that it's construction was a one off development and specifically sited at this location because of the local limestone reserves .

5. Indaver's proposal to construct the incinerator on this agricultural site is contrary to the development plan as the site is classified as containing valuable limestone reserves .

6. Indaver have publicly acknowledged their inability and lack of preparedness to monitor all waste arriving on site for disposal. As a result, hazardous waste – by accident or design on the part of households or businesses using the facility – will enter the waste stream, and in turn the incinerator. It is therefore prudent to assess this project using the 'precautionary principle', as constituting a hazardous waste incinerator.

- The WHO publication "SITE SELECTION FOR NEW HAZARDOUS WASTE MANAGEMENT FACILITIES" (WHO regional publications European series NO.46) stipulates inter alia the following exclusionary factors in site selection: (EIS ref: Table 2 Page 34.) para

- para 9 Natural resources, such as the habitats of endangered species, existing or designated parks, forests and natural or wilderness areas. (proximity to nesting peregrine falcons, UNESCO World Heritage Site, old Coddington Estate)

- para 10 Agricultural or forest land of economic or cultural importance

- para 11 Historic locations or structures, locations of archaeological significance and locations or land revered in various traditions. (Battle of the Boyne Site, Dowth, Knowth, Newgrange)

- para 14 – Inequity resulting from an imbalance of unwanted facilities of unrelated function or from damage to a distinctive and irreplaceable culture or to peoples unique tie to a place.

- It would appear that areas with limestone deposits are deemed unsuitable for siting an incinerator see Annex 2 page 79 para 2 (e) of the same publication.

7. Indaver's contention that Duleek is the ideal location for their incinerator in relation to the regional waste management plan ,is highly selective and does not include a number of other areas that would be more suitable. It is also contradicted by the proposal to "source waste in neighbouring counties " This suggests that they see Dublin, Kildare and Westmeath within their catchment.

8. Population Growth - It was recently reported that with the pressure for housing and the economic boom, it is likely that Drogheda will grow from approx 26,000 people to 70,000 people by the year 2030. It is logical to assume that the development will follow the current encircling of Drogheda in all directions. This will result in population growth in the Carranstown, Duleek and East Meath areas, as well as the Southern suburbs of Drogheda, which are approximately one mile away. The proximity of the East Meath and Drogheda area to the M1; N1 and N2, as well as the Dublin Belfast railway suggests that this area is a natural 'outer' suburb within the greater Dublin area, and the rapid growth in residential development in the area already confirms this. Any further industrialisation of the area will significantly inhibit this logical trend towards residential development.

9. The EIS fails to consider the impact of the proposed plant on Mount Hanover National School. This school is situated less than 1 km from the proposed incinerator and at the moment caters for up to 100 children. The siting of this school is either omitted from maps or shown in such a way that it is difficult to identify. It is felt that if this proposal goes ahead, then the viability of this school which is vital to the local community, will be threatened.

Furthermore, it must also be noted that there are 24 primary schools within approximately 5 miles from this proposed plant. It is estimated that 4,700 children attend these schools (calculated on the basis of 20 pupils per teacher), in addition, there are 7 secondary schools in the same area, with a student population of approximately 4,000 pupils.

It is felt that the emissions from this proposed incineration, increased traffic and problems associated with the handling and disposal of ash (including the possibility of spillages and accidents) will put the lives of these children and the local community at risk.

Thus, the siting of this proposed incinerator at Carranstown, Duleek, is neither wise, nor appropriate.

10. In section 2.5.3 of the EIS - SOURCES OF WASTE paragraph 2 stipulates that the target market for the proposed plant is the four North Eastern counties of Meath, Louth, Cavan, and Monaghan. Drawing waste from such a large geographic area conflicts with EU policy which inter alia includes the **proximity principle** ie waste should be disposed of close or near to its source.

(D) ENVIRONMENTAL ISSUES

1. The ambient measurements on the local air quality at Carranstown are quite good considering the extent of industrialisation and traffic in the area. The ground level concentrations predicted as a result of the proposed incinerator increase all parameters significantly. When the average measured ambient air quality is compared with the predicted air quality there are significant increases. The table below outlines some of these excessive elevations.

Comparison table of predicted Ground Level Concentration and Measured ambient levels

	Measured ambient			Predicted GLC			% increase
Parameter	Min	Avg.	Max	98th	Daily	99.8	Avg. v 98th %
Smoke	0.5	4.3	11	1.69			39
SO2	<0	1	7	8.5	14.1	22.47	850
NO2	0.3	1.3	2.6	73.65		90.65	5665
				Hourly			
HF	<0.0001	<0.0001	<0.0001	7.12			7120000
HCl	<0.0001	0.0002	0.0018	7.12			3560000
NO2 1 hr	<2.1	8.1	36.4	73.65		90.7	909
Copper Cu	<0.005		0.03	0.37			1233
Chromium Cr	<0.003		0.12	0.37			308
Arsenic As	<0.02		<0.02	0.37			1850
Antimony Sb	<0.0003		0.012	0.37			3083
Cobalt Co	<0.001		<0.001	0.37			37000
Thallium Tl	<0.021		<0.021	0.03			143
Mercury Hg	<0.005		<0.005		0.001		
Cadmium Cd	<0.002		<0.002		0.001		
Vanadium V	<0.001		<0.001	0.37			37000
PCDF pg/m3	0.028	0.038	0.046	0.007	0.00025		18.4

All results in $\mu g/m^3$ 24 hr average

As the table shows there are very significant increases in all ground level concentrations.

2. Note the operating temperature is stated as being 850°C. Cadmium (Cd) has a melting point of 321°C and a boiling point of 765°C. Mercury (Hg) has a melting point of –38.9 and a boiling point of 357°C. Therefore both of these highly poisonous heavy metals will condense in the flue/fly ash.

3. At the moment there is no HF, HCl, TOC or heavy metals such as Chromium, Arsenic, Vanadium etc. detectable at Carranstown. The proposed incinerator is going to introduce 27,388 kg/year collectively of HF, TOC and HCl, and 657 kg/year of heavy metals. These pollutants are not present at the moment and their addition represents a serious decline in the air quality.

The table below outlines the yearly contribution of pollutants:

Parameter	Kg/hr	Kg/year (360 days)
NOx (as NO2)	30.2	260,928
SO2	7.55	65,232
TOC	1.51	13,046
Dust	1.51	13,046
HCl	1.51	13,046
HF	0.15	1,296
Dioxins	1.512 µg/hr	0.01mg/y
Heavy Metals	0.076	656.6

4. The incinerator, by it's operation and emissions, will add to the production of unnecessary greenhouse gases. The unnecessary production of such pollutants contravenes Ireland's recent commitments to reduce greenhouse gases.

5. There was no PM10 & 2.5 ambient particulate measurements completed. This is a serious oversight as these particle sizes contribute significantly to the transfer of air pollution to the respiratory system. There is also no modelling of PM 10 & 2.5 and while the overall dust emission predicted for the incinerator is low the combined effects of Irish Cement Limited, Marathon Power, Roadstone & Premier Periclase Quarries and road traffic all contribute and may cause problems and this requires extensive further investigation.

6. Particulate Matter – the ambient particulate matter in the air is likely to vary greatly depending on the activities in the adjacent cement quarries and production plant. The particulate matter and size is of great importance with regard to the potential binding sites for dioxins – therefore a much greater range of tests for particulate matter should have been undertaken over time.

7. The stack emission will be water saturated and may be visible in certain weather conditions. This moisture will affect the dispersion ability of the plume. Furthermore the moisture may contribute to the distribution of pollutants and allow them easier access to the respiratory system. This issue needs to be addressed in the EIS.

8. The air quality at Carranstown is not compared with any other reports or results and this is required to discover whether the values are typical or not.

9. The pollutant values outlined to calculate the predicted Ground Level Concentration omit to give the moisture content of the discharge gas. The concentrations of pollutants are not referenced to oxygen or moisture. This omission does not allow any check on the results and needs to be rectified.

10. The ambient dioxin measured at Carranstown is significantly higher than Kilcock* and is on the high end of the range of values found in Ireland.

The Ambient air measurements are showed in the Table below:

Location	I-TEQ Max pg/m^3
D1	0.028
D2	0.046
D3	0.033
D4	0.046
Average	0.038

These values are compared to the Kilcock values in the table below:

Site/Location	Kilcock	Carranstown	Difference
Minimum	0.003	0.028	9 fold higher
Maximum	0.007	0.046	7 fold higher

The Carranstown dioxin values are 9 times higher than measurements taken in Kilcock. As a result expected emissions from the proposed incinerator will show less of an impact on such high ambient levels compared to the lower values measured in Kilcock.

The table below demonstrates the percentage difference of predicted ground level concentration using Carranstown ambient measurements and Kilcock ambient results.

Location	Max	Min	Average	% increase
Carranstown	0.046	0.028	0.038	18
Kilcock	0.007	0.003	0.005	100
Predicted Ground level concentration	0.007	N/A	N/A	N/A

All results in pg/m3

The table clearly shows that the max. Predicted ground level concentration will have the greatest impact on the Kilcock (100% increase) results however there is only an 18 % increase in the higher Carranstown results. Any increase in the dioxin level is a serious issue.

It is evident that there is further work required to determine the correct dioxin values at Carranstown.
The dioxin values in the soil are shown in the Table below:

Comparison to other reports is as follows:

ng/m^3	Carranstown	Cork 1991	Cork 1993/4	Askeaton	Rathdrum	Kilcock
Minimum	0.06	0.2	1.5	1.1	0.8	0.6
Maximum	1.00	23.7	8.6	2.0	13.3	1.2

Soil contamination from dioxins at Carranstown is very similar to Kilcock. This does not correspond to the high level of ambient dioxin found in the air.

* Kilcock = the issues surrounding the 1999 toxic waste incinerator proposal in Kilcock where similar data was gathered

The issues above need to be clarified before any further comment can be made. It is imperative that the correct data is given as dioxins present one of the most potentially dangerous health risks.

11 The noise measurements taken at Carranstown outline an elevated noise level for a rural area - an LAeq of 61 dB(A) day-time and 56 dB(A) night-time - exceeding the EPA guideline values of 55 dB(A) and 45 dB(A) respectively. It is not clear from the report provided whether Irish Cement was operating normally. Considering that the council has issued limits of 50 dB(A) LAeq on some planning permissions in this area the results are already significantly in excess of this. Reinforcing this, the EPA have received several complaints about noise in this area. The EIS has made no attempt to predict the possible noise from the two new proposed developments. There will be a serious increase in noise within this rural area and this needs to be further addressed. The new motorway will also add to the overall noise.

12 The disposal of waste bagfilter cloth and other contaminated equipment is not addressed in any way in the EIS. These materials present a serious risk to the environment if not disposed of correctly. Again this shows a further omission on the part of the EIS.

(E) GENERAL COMMENTS-DIOXIN SAMPLER

1. The dioxin sampler proposed for the Carranstown site has been inspected by an experienced Environmental Chemist on behalf of the Alliance, during a recent visit to the Indaver site at Beveren in Belgium. Problems noted included:-

2. On the admission of an Indaver employee this sampler will underestimate the true dioxin concentration by 15%.

3. The position of the probe does not conform to accepted US EPA methods.

4. The condensate sampled by the probe is allowed to drain away, this condensate contains dioxins.

5. Because dioxins cannot be measured in real time a sample has to be taken. Indaver propose sampling over a 3-week period. The analysis of the sample can take another 2-3 weeks. This means that Indaver could have been emitting high levels of dioxins from their process and it could be weeks before they are aware of the fact. This does not offer adequate protection to the people of Carranstown, Duleek, Drogheda, and the wider catchment area.

6. Also, by sampling over an extended period for dioxins (3 weeks) you produce a long term average that masks any major emissions due to the diluting of these excursions by low levels for the majority of the sample period.

7. In December 2000, an international Conference, attended by 122 countries, determined that persistent organic pollutants (POPS) – including Dioxins – should be phased out. The POPS Treaty – to be signed in May this year, will place future obligations on Ireland in relation reducing dioxin emissions. It is therefore entirely inappropriate for Ireland to commission incinerators at this time which will increase dioxin levels in our environment, throughout their 25-30 year lifespan.

8. In 2000, the US EPA's draft report on Dioxin was leaked, this suggested Dioxins were even more dangerous than previously believed. Their final report is expected later this year.

9. Even if emissions of Dioxins are reduced as far as possible, there is always a potential for operational malfunction or accidents at the incinerator, which could cause spikes. Whilst modern state-of-the-art incinerators may have improved capture systems, they create as much dioxin as old incinerators. This means that the concentrated dioxins are in the fly and bottom ash. Dioxins, in the substantial volumes of bottom ash will leach out over time from landfill, potentially into our water courses. The dioxins in fly ash will be cased in cement and stored indefinitely (at what cost?) in hazardous waste dumps, initially in Europe as Ireland doesn't have such a dump. As cement weathers over time, the concentrated dioxins and other contaminants could potentially leach into water courses.

(F) ASH

1. Section 26 of the Waste Management Act, 1996 requires the EPA to prepare a National Hazardous Waste Management Plan. As this is not in situ, can a licence be granted without it for a facility which produces Hazardous Waste?

2. Furthermore, it should be noted that the ash and hazardous flue residues need to be further disposed of and this calls into question the Precautionary principle enshrined in EU policy and in the Waste Managment Strategy for the North East.

3. In the absence of a National Hazardous Waste Management Plan, Ireland is currently operating under a 'Proposed Hazardous Waste Plan'. The Carranstown development is not compatible with the contents of the Executive Summary of this Plan. Moreover, in the same plan (page 31) it stipulates under Security of disposal that the export of Hazardous waste is in principle prohibited under EU law.

4. Paragraph 1 on page 37 of the EIS is totally inadequate in describing how bottom ash will be disposed of. As there is no Irish or EU legislation regarding standards and quality of ash for use in roads, this cannot be left undecided. Furthermore, all disposal facilities for the disposal of ashes must be precisely identified before any license could be considered. It is also worth noting that there are no details or specs. on the trucks to be used for transporting ash except that they are covered trucks. This is unacceptable!

5. In particular proposals have not been presented for the safe disposal of fly ash, which is liable to be highly contaminated with heavy metals, dioxins, furans and other contaminants.

6. At a recent visit by members of the Alliance to Indaver's Beveren incinerator, large piles of ash were observed sitting uncovered on site. This ash was blowing all around. It hasn't been clarified whether they propose to operate the proposed site in Carranstown in such a dangerous manner.

(g) WASTE HIERARCHY / EU GUIDELINES

1. The EU subscribes to the hierarchy of waste management, i.e. dealing with waste in the following priority order:- prevention, re-use, recycling (including composting), and finally disposal.

   Ludwig Kraemer, Head of EU Waste Management Directorate states 'I would like to set the record straight: the EU Commission does not promote Incineration. We do not consider this technique is favourable to the Environment. We should be promoting prevention and recycling.'

   Margaret Wallström, EU Commissioner states 'My opinion is that in most cases incinerators are not the answer to waste management. The incineration of waste helps reduce the volume of waste to be disposed of. However, the environmental impact of incineration is significant, given that, by incinerating waste, pollutants are only transformed.' She further states that 'the ultimate goal of any local authority should in fact be waste avoidance'.

2. Assuming that Meath County Council is obliged to subscribe to the Hierarchy of Waste Management, then this proposal is not in accordance with any waste management plan developed by Meath County Council, or the North East Region. Given that Meath County Council has not addressed elements higher up such as prevention, re-use and recycling to any great extent. Incineration should not be considered until all the other options have been fully examined .

3. This proposal is untimely as there is as yet, no fully approved regional waste management plan. We note that County Louth has opted not to adopt the proposed regional waste management plan and therefore it is incomplete and any proposal to build an incinerator is premature.

4. The claim that the 'waste to energy plant provides a renewable source of energy' is countered by the fact that on average it takes 3 -4 times more energy to create a product which is recyclable from scratch than to recycle it. As there will be no segregation of waste pre-incineration, it can be presumed that approx 25-30% of the matter would be recyclables. Burning such renewable resources is very wasteful. The incineration of the organic component (a further approx 25 – 30%) which will not be segregated is also a very wasteful use of a resource. The nett energy gain from incineration, when viewing the big picture, is therefore questionable. Furthermore, WTE plants are probably one of the most inefficient ways of generating electricity, while at the same time producing very dangerous by-products (discussed above).

5. In November 2000, the European Parliament excluded 'WTE/incineration' from the list of 'renewable energy resources;.

6. The claim in Australia that 'all waste can be recovered and recycled' is a work in progress, i.e. their goal is Zero Waste Canberra by 2010, therefore it is selective and premature for Indaver to state that this claim cannot be borne out.

7. Incinerators, by the bringing of waste from Louth, Meath, Cavan and Monaghan, and whichever other counties Indaver have touted for business, going against the proximity principle, would provide excessive vehicle emissions. Full diesel-fuelled trucks in, empty trucks out on large round trips. This energy usage should be factored into the nett energy gain calculation.

8. The report claims that 'government's target of recycling of 35% of municipal waste is ambitious. In Galway recently diversion rates of 70% from landfill were achieved in months. Thus a 35% target is very conservative, when benchmarked against Galway and the overseas experience.

9. In the 'Alternative waste to energy technologies' section, these were not researched adequately, as no mention is made to industrial composting. One such composter in the German city of Freiburg, provides the equivalent energy from harnessed methane to power 14,000 households. This also has the added bonus of creating valuable compost. The organic matter to feed this composter comes from a city similar in size and population to Cork. Anaerobic Digestion is another technology which isn't mentioned.

10. The combination of maximum minimisation, re-using and recycling, complete composting and dry landfill was not explored or documented as an alternative waste management technology.

(H) HEALTH

1. There is a body of information which states the potential negative effects of incinerator emissions. It would therefore be prudent to not only assess baseline levels of dioxin and other potential contaminants in air, soil and water, but also in humans and livestock in the vicinity.

2. "WHO Experts Re-evaluate health risks from dioxins" (Press Release WHO/45, 3.6.1998) states that the principal controllable sources of dioxin production are waste incinerators. 1990 daily intake level = 10 picogrammes/kg body weight, in 1998 revised to 1 – 4 picogrammes/kg. State that many populations in developed countries have background levels of 2 – 6 picogrammes/kg body weight.

This gives weight to the baseline survey necessity and also the necessity for further specific research into not only the effects in populations now, but the possible cumulative effects on the young who will be exposed for a much longer time, and the possible effects on their offspring, potentially born with residual dioxin levels.

3. Economic Impact Assessment of Draft EU Incineration Directive, 1999 states that a 400,000 tonne per annum incinerator estimated to cause 48million euros per year in health damage.

4. Regulatory Impact Assessment of EU non-Hazardous Draft Waste Incineration Directive, UK 1999 states that 300 deaths and 550 respiratory hospitalisations are estimated due to incineration in the UK in the past 5 years.

5. 37% increased incidence of liver cancer in vicinity of British incinerators (Elliott, 1996)

6. Irish Doctors Environmental Association – 1999 – 'The Irish Doctors Environmental Association strongly opposes the plans for a waste incinerator in Kilcock, as it does for other proposed sites throughout the country. Our concerns relate to the adverse health effects from toxic substances in the emissions, which, being mainly fat soluble, accumulate in body tissues and are concentrated up the food chain, eventually being absorbed by humans through consumption of eg. cow's milk, meat, fish and eggs and subsequently passed to the foetus in higher concentration. Possible ill effects include altered immune responses and disordered endocrine effects such as decreased fertility, lowered IQ and cancer.

(I) COSTINGS

1. Costings – communities and businesses in the North East will have to carry the burden of costs associated with this development. The proposal does not provide sufficient detail in relation to the likely damage to health, negative impact on industry, agriculture, devaluation of properties, etc. As well as public health, the economic costs and risks associated with incineration – especially in a food producing area, should be fully considered.

2. Furthermore, no cost benefit analysis of alternative waste management options has been set out for comparison purposes. This is a critical omission.

3. Costings - In a recent Meath County Council commissioned study (late 1990's) a cost analysis was undertaken in relation to waste management. A cost of £50 per tonne was noted for incineration and £20 per tonne for landfill. Assuming costs may have risen in the interim (on a pro-rata basis), this MCC report would suggest that incineration is one of the most expensive methods of dealing with waste.

4. The Indaver plant will cost £60 million to build and ongoing running costs will be substantial. The Company have advised that they will have recouped their outlay and be in profit within 15 years. This highlights the fact that incineration is a lucrative business, the cost of which will be borne by businesses and communities throughout the North East. The fact that no model/budgetary details are provided on the likely direct costs to users is totally unacceptable. Residents and businesses in the North East should be in a stronger position to determine methods of waste management and reduction acceptable to them.

5. Costings - Potential devaluation of property. During the Kilcock incinerator proposal of 1999, auctioneers in Kilcock have confirmed that they didn't sell one property for the duration (up to a year). They also had to let staff go. Thus, if an incinerator were commissioned at Carranstown, this would have a very significant negative impact on the value of homes, farms and businesses in the Carranstown, Duleek and Drogheda area.

6. Costings - Ireland has the lowest level of dioxin in the EU. This is not only advantageous to our health, but also to the agricultural industry. Dioxins bioaccumulate in the food chain. Therefore, our low level of dioxin place Ireland in a very competitive position with regard to the export of meat and dairy products. If this is jeopardised in any way, we would lose our competitive edge and suffer economic loss in the food sector.

7. Indaver have not indicated what customers – if any – they have already contracted to use the incinerator facility. So they have neither set out from whom/where they will source waste for the incinerator, nor have they stated where they will dispose of the substantial volume of ash (in varying degrees of toxicity) such a facility would generate.

(J) OTHER

1. Consultation Process - With regard to the statement page 12, pt 1.4 'during the preparation of the EIS an extensive consultation and information programme involving local communities, relevant statutory bodies and other interested parties was carried out.' From the Collins English Dictionary, 3rd Edition, 1991, the following definitions are given for Consult and Consultation:-

Consult:- To ask advice from (someone); confer with (someone), 2. (tr.) to refer to for information: to consult a map. 3. (tr.) to have regard for (a person's feelings, interests, etc.) in making decisions or plans; consider. 4. (intr.) to make oneself available to give professional advice, esp. at scheduled times for a fee. [C17: from French *consulter*, from Latin *consultare* to reflect, take counsel, from.

Consultation: - the act or procedure of consulting. 2. A conference for discussion or the seeking of advice, esp. from doctors or lawyers.

From discussions with many of the neighbours, residents and local people who were involved in this 'consultation', on average 9 out of 10 (as proven by a recent local radio phone-in) people are against the development, and incineration per se. With regard to 'having regard for a person's feelings, interests, etc., in making decisions or plans', there is a strong feeling that no such consideration has been taken on board.

For example, contrary to Indaver's claims, we have been advised in writing that Dr Corcoran, Director of Public Health, North Eastern Health Board, was not consulted with. Indaver later admitted that the 'consultation' with the statutory bodies consisted of posting information, without follow-up or discussion.

2. The Recycling Park – why are the categories for recyclable waste just 'likely'. Should Indaver not have put more effort into confirming markets for their recyclables?

3. Heritage – this proposal would have a detrimental impact on the Boyne Valley Area – an area of natural beauty and outstanding heritage, including Bru na Boinne and the Battle of the Boyne (the Carranstown site lies within the broad catchment area of the latter).

4. With regard to the comment in the EIS that Indaver's Beveren plant in Flanders, which currently operates at 200,000 tonnes per annum and will soon be extended to 350,000 tonnes per annum, is it expected that the proposed 150,000 tonne incinerator will also be extended in the future? This needs to be clarified at this point.

5. It should also be mentioned that the Indaver Incinerator in Beveren is located in a very different area when compared to the proposed development in Carranstown, i.e. highly industrialised, non-residential, non-agricultural, with the nearest population centre being circa 10km away.

6. Public opinion - Over 26,000 people in Meath and 22,000 in Louth signed petitions stating they definitely did not want incineration as a method of waste management.

7. Public opinion – the view is maintained by many residents of the area that it is unethical to site such a development, with so many questions hanging over it with regard to health, pollution, impact on property values, traffic, noise, smell, etc.

8. Public opinion – Indaver would accept that older incinerators posed risks to health and are now being decommissioned. According to the incineration industry, new 'state-of-the-art' ones are being built. However, the risks associated with incineration remain – as instanced by the closure of a so-called 'state-of-the-art' incinerator at Karlsruhe, Germany, last year.

9. Public opinion - The data available is insufficient to make a decision. Data needs to be developed and then synthesised for the following:
   - The user area
   - The service area
   - The Environment
   - Legisation/Economics

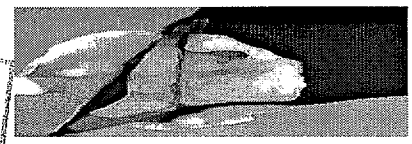
In concluding this submission, we will refer to the Wingspread Statement on the Precautionary Principle:- 'when an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically. In this context the proponent of an activity, rather then the public should bear the burden of proof. The process of applying the precautionary principle must be open, informed and democratic and must include potentially affected parties. It must also involve an examination of the full range of alternatives, including no action.'

The principle of precautionary action has four parts, three of which are:-

- people have a duty to take anticipatory action to prevent harm
- the burden of proof of harmlessness of a new technology, process, activity or chemical lies with the proponents, not with the general public,
- before using a new technology, process or chemical, or starting a new activity, people have an obligation to examine 'a full range of alternatives' including the alternative of doing nothing.

Yours sincerely,

Áine Walsh (Secretary)
FOR AND ON BEHALF OF - **NO INCINERATION ALLIANCE**



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The Secretary,
An Bord Pleanála,
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Irish Life Centre,
Lower Abbey Street,
Dublin 1.

20th January, 2002.

RESPONSE TO ENVIRONMENTAL IMPACT STATEMENT FOR DEVELOPMENT OF A WASTE MANAGEMENT FACILITY AT CARRANSTOWN, DULEEK, CO. MEATH FOR INDAVER IRELAND (REG. REF: 01/4014, PL 17.126307)

A Chara,

Further to your notice of 21st December, 2001, in which you notified the public of the Environmental Impact Statement that was submitted in support of the above mentioned planning application, we have been instructed by our clients, who are third party appellants, **No Incineration Alliance, c/o Ms. Aine Walsh, P.O. Box 2001, Drogheda, Co. Louth,** to submit the following in response to your request for comments on the said Statement.

1.1 Background

Article 28 (1) of the Local Government (Planning and Development) Regulations 1994, states that a planning authority must assess the adequacy of an EIS. This means that a planning authority must ensure that an EIS contains at least the minimum information that is mandatory in order to give effect to Article 5 (3) of the European EIA Directive 97/11/EC.

Article 57 of these Regulations states that "An EIS *submitted pursuant to a requirement under Article 56* ***shall comply with Article 25*** *of the Environmental Impact Assessment Regulations, or any provision amending or replacing the said Article 25".*

Article 25 of the EIA Regulations 1989 was amended by Article 6 of the EIA Regulations 1989 to 1999 and specifies the minimum information necessary in an EIS to comply with Article 5 (3) EIA Directive 97/11/EC which states that the information to be provided by the developer in accordance with paragraph 1 **shall include at least:**

- ◊ a description of the project comprising information on the site, design and size of the project,

- ◊ a description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects,

- ◊ the data required to identify and assess the main effects which the project is likely to have on the environment,

- ◊ an outline of the main alternatives studied by the developer and an indication of the main reasons for his choice, taking into account the environmental effects,

In the following sections of this response we will set out our response to the legitimacy and appropriateness of the Environmental Impact Statement submitted in support of the planning application.

1.2 Assessment of E.I.S. submitted

Many of the issues we have concerns about have been raised in our previous submission to An Bord Pleanála with regard to the above proposed development. These include:-

- human health
- plant health
- water quality
- sustainability
- traffic
- siting suitability
- property de-valuation
- land zoning
- visual amenity
- proximity of peregrine falcons
- hazardous ash production, storage, transportation and final resting place
- tourist industry
- precautionary principle
- animal health
- air quality
- environmental pollution
- the waste hierarchy
- planning issues
- economics
- integrity of farming produce
- cultural significance
- An Bord Pleanála precedent planning decisions in the area
- employment possibilities
- perception issues
- equity
- proximity principle
- polluter pays principle

This submission was substantiated with referenced documents and expert opinion. In the following sections of this response document we will deal with the adequacy of the Environmental Impact Statement submitted, and ask An Bord Pleanála to take our comments into consideration.

1.2.1 Site selection

Indaver have stated in their EIS that the proposed site location is only 200m from the existing Platin quarry. The quarry is approximately 35 hectares in size and 200ft deep. Indaver have failed to assess the impact of daily production operations in the quarry to the proposed site and also the impact the quarry has on the air dispersion model in sizing the emission stack, its GLC's, and influence on plume dispersion.

There are routine explosions in the quarry to extract limestone. Irish Cement Limited have recently received planning permission to extend their quarrying operations significantly in the vicinity of the proposed incinerator site. Indaver have failed to assess the impact of these explosions on their incineration process. Such explosions

will cause both vibrational and electrical interference. This interference will effect the calibration and monitoring of process and environmental conditions on site. When explosions occur, motors on vibrational filters or air suction systems could trip out, also electrical interference could effect the dosing requirements and calibration on activated carbon / urea injection and also the operational efficiency of wet scrubbing systems. Auto samplers and emission data logging equipment on the main stack could trip out. Vibrational interference may also effect shaft alignments and result in excessive maintenance and downtime.

Section 2.10.3 relates to the suitability of site selection under WHO guideline criteria. Indaver have incorrectly ranked the sensitivity of the site w.r.t. 'Coastal wetlands' and 'Coastal areas for shellfish and fishing'.

In the EIS they state that they will utilise an underground water storage tank 1500m cubed for the storage of rain water from 40,000m^2 of hard standing. This rain water will accumulate from roof surfaces and operational access and service areas of the plant. At times of heavy rainfall they can periodically discharge this effluent to a nearby ditch which drains into the river Nanny, this in turn passes through Julianstown and Sonairte (National Ecology Centre) which is adjacent to a proposed NHA of wetland on the estuary, and eventually to the sea at Laytown. Laytown/Bettystown are popular beach destinations for many people in the locality and from further a field. The coastline is also a fishing ground.

In reality, this effluent will contain a cocktail of silt, toxic ash and heavy metals from dust accumulations that are washed off roof and paved surfaces (GLCs can accumulate inside site areas from the dispersion model). This in turn will feed into the Nanny system and effect the wetlands and coastal ecosystem. The sensitivity of the sites should be ranked as high.

1.2.2 Air Pollution – effects on ecosystems

The extent of the plant-life in the surrounding area is skimmed over by the Indaver EIS, the EIS however for the proposed quarry extension in the adjacent lands of Irish Cement Limited gives a more detailed account of the area, highlighting the importance of the nearby (1.4km) proposed NHA, the Duleek Commons, a wetland area of some import. As well as a specific ecosystem of two distinct vegetation types the Commons is also home to many invertebrates, including at least 22 species of snail The surrounding area is also home to extensive arable cultivation. The effects of air pollution on vegetation is extensively documented, as early as 1968 it was estimated that in California alone, air pollution was believed to be responsible for US$500 million damage to agricultural crops (Heggesstad).

Robinson (1970) has classified the effects of air pollution on plants into three general categories (1) acute effects due to relatively short term exposures (hours or days) to high levels of pollutants, (2) chronic effects due to exposure to relatively low levels of pollutants for more extended periods of time (weeks), and 3) long term effects due to the impact of pollutants over decades. Chronic and acute effects are presumably due to the direct action of a gas(es) or particulates on plants. Long-term effects may be caused indirectly by air pollutants; for instance, by by-products of the gas, rather than from the gas itself (e.g. the effect of intrate in the case of oxides on nitrogen).

Accumulation of heavy metals in the soils and vegetation over a period of years may most properly be classified as a long term effect.

It is our contention that the constant operation of the incinerator, along with the other industry in the vicinity (cement factory and proposed gas fired power station) would lead to air pollution effects in the 3 categories outlined above. In the Section of the EIS which deals with' Air Dispersion Modelling Report the following pollutants are listed as being air emissions in varying volumes.

Oxides of nitrogen (NOx)
Sulphur Dioxide ($S0_2$)
Carbon Monoxide
Particulates (Dust)
Hydrocarbons
Hydrogen Chloride (HCl)
Hydrogen Fluoride (HF)
Poly-chloro dibenzo dioxins (PCDD) and Poly-chloro dibenzo furans (PCDF)
Cadmium (Cd)
Thallium (Tl)
Mercury (Hg)
Antimony (Sb)
Arsenic (As)
Lead (Pb)
Chromium (Cr)
Cobalt (Co)
Copper (Cu)
Manganese (Mn)
Nickel (Ni)
Vanadium (V)

Below some examples of damage to plants exposed to varying exposures to some of these pollutants

Plant type	Symptom	Possible causes
Conifers	Tip burn	NH_3; HCl; CL_2; N0x; $S0_2$; F; O_3;
	Red/Yellow/Brown discolouration	NH_3; HCl; N0x; $S0_2$; F
	Dull Grey / Green discolouration	CL_2; N0x; F
	Black discolouration	NH_3
	Chlorosis of young needles	Cl_2; N0x; $S0_2$; F; PAN; K
Broad leaved trees & shrubs	Chlorotic mottle	HCl
	Necrotic stipple	HCl; CL_2; $S0_2$, F
	Necrotic margins	NH_3; HCl; Cl_2; N0x; F
	Interveinal necrosis	NH_3; Cl_2; N0x; $S0_2$; F;
	Interveinal bleaching	HCl; N0x;
	Red discolouration	$S0_2$; F
	Bronzing / glazing	NH_3; Cl_2
	Leaf distortion	$S0_2$; F
	Yellow discolouration	NH_3
	Black discolouration	NH_3, Br_2
	Dieback	NH_3
	Premature necrosis of fruit	F
Narrow leaved plants	Chlorotic mottle	F
	Necrotic stipple	NH_3; F; O_3
	Tip necrosis	NH_3; HCl; Cl_2; $S0_2$; F; Br_2; Ca; Mg
	Interveinal necrotic streaks	NH_3; HCl; Cl_2; N0x; $S0_2$; F; O_3
	Bleached tips	NH_3; $C1_2$; $S0_2$; F
	Red discolouration	NH_3; $S0_2$
	Bronzing / glazing	NH_3; Cl_2; NOx; F
	Necrotic bracts	F
	Necrotic sepals	$S0_2$; F
	Necrotic awns	N0x; $S0_2$, F
Broad leaved plants	Marginal chlorosis	CL_2; F
	Necrotic stipple	HCl; $Cl_2$2; N0x; 0_3
	Tip necrosis	N0x; $S0_2$
	Marginal necrosis	HCl; Cl_2; N0x; $S0_2$; F; H_2S; B
	Interveinal necrosis	NH_3; Cl_2; N0x; $S0_2$; 0_3; PAN; B- H_2S; Hg; Br_2; F
	Bleaching	HCl; Cl_2; $S0_2$
	Red discolouration	Cl_2; $S0_2$; F; Ethylene; NH_3
	Yellow discolouration	NH_3
	Black discolouration	NH_3; HCl; Cl_2
	Dark stipple	NH_3; CL_2; N0x; $S0_2$; 0_3
	Bronzing / glazing	HCl; Cl_2; N0x; $S0_2$; PAN; NH_3
	Leaf distortion	HCl; Cl_2; $S0_2$; F; Ethylene; B; H_2S
	Shot holing	HCl; N0x; $S0_2$
	Necrotic sepals	HCl; N0x; $S0_2$; F; Ethylene
	Necrotic bracts	HCl; N0x; H_2S
	Necrotic petals	NH_3; HCl; F; Hg

Below is an indication of some of the further effects of a number of the pollutants which the incinerator will emit. We also have concern for what possible as yet unidentified pollutants are present in the gases following the combustion of many man made materials, whose composition is intricate and diverse. The toxicity of dioxin has only come to light in the recent past, this is a by-product of the combustion of chlorine containing materials, again we urge the precautionary principle.

Pollutant	Effects	Source
Carbon monoxide (CO)	Affects humans. Combines with haemoglobin in blood, forming carboxyhaemoglobin, which does not dissociate. Deprives brain of $0_{2,}$. Causes faintness, slow reactions and ultimately death.	From incineration
Carbon particles	Blackens buildings, contributes to lung disease.	From incineration
Carbon dioxide (CO_2)	Greenhouse gas, global warming,	From incineration
Methane (CH_4)	Greenhouse gas, global warming	From the organic matter in the waste bunkers
Sulphur dioxide (SO_2)	Forms acid rain, kills lichen, etches buildings, exacerbates asthma, bronchitis and other respiratory conditions	From incineration
Oxides of nitrogen (N_2O, NO, NO_2)	Poisonous. May deplete ozone layer. Contribute to 'acid rain'.	From incineration
Peroxyacyl nitrates (PAN)	Choking 'photochemical smog'	From incineration
Flourine (F_2), hydrogen fluoride (HF)	Fluorosis (bone disease) in cattle. Reduces plant growth; damages leaves.	From incineration
Chlorofluorocarbons (CFC's)	Deplete ozone layer, allowing damaging UF rays to reach organisms, contribute to 'greenhouse effects'.	From incineration of un-separated waste
Lead (Pb)	Cumulative poison in brain, enters bloodstream through lungs (particulate lead) or gut. Mental retardation and death at high concentrations in humans. Lead from spoil heaps kills wildlife in streams and rivers.	From incineration
Mercury (Hg)	Accumulates up food chains. Top predators particularly at risk. Cumulative brain poison, causing nervous discoordination, mental retardation and death. Prevents nitrification in some seas.	From incineration
Cadmium (Cd)	Causes disappearance of cartilaginous part of bone. Aching joints, brittle bones. Kidney damage. Accumulated in shellfish in estuaries.	From incineration
Dioxins	Very poisonous, carcinogen, developmental abnormalities in children.	From incineration

1.2.3 Air Dispersion Modelling:-

Section 4.4.2 of the EIS deals with the Air Dispersion Modelling

It states in the EIS that the terrain has been considered flat for the dispersion model, and that the change in the terrain within the vicinity of the site is not significant enough to influence plume dispersion.

The EIS again has failed to take into consideration the impact of the adjacent quarry and size and congestion of the cement silo farm on the dispersion model. The terrain is certainly not flat, as there is a depression in the landscape, i.e. the quarry only 300m from the proposed emission stack. The quarry is 35 hectares in size and 200ft deep/75m (this is almost twice the height of the proposed stack 40m). The Platin cement silo farm should be considered as a ridge as the 12 silos are higher than the proposed stack, neither of these conditions were applied to the ISC 3 dispersion model.

The limestone quarry under normal climatic conditions would have a different degree of absorption / radiation – transfer of heat than the surrounding agricultural grasslands. At the interface of the above two systems, i.e. close to emission stack their Environmental Impact Statement a greater degree of movement / turbulence. This has not been considered in the dispersion model.

The model has predicted that maximum ground level concentrations of emissions occur approximately 200m NE of the stack. This is still almost within the site boundary. The maximum exhaust flow rate at the discharge temperature of 100°c will be 232,237m^3/HR. Under certain climatic conditions the GLCs will stay on site, be consumed through the air intake system again, and result in the creation of saturated and higher levels of GLC.

The summary to section 4.4.4 of the EIS 'Potential effect of emission via a 40m stack' states:- 'In summary, at sufficient high concentrations the emissions from the waste to energy plant can have a wide variety of toxic effects and could impact on human health either as a result of direct inhalation or ingestion of water and food sources. However, due to sophisticated flue gas cleaning systems at the plant and the dispersion of the emissions from the stack, these substances will pose no threat to human health or the environment.'

The EIS has failed to assess correctly the impact of the quarry and silo farm on the air dispersion model and also on the operational and environmental efficiency of the proposed facility.

1.2.4 Disposal of Boiler Ash and Flue Gas Cleaning Residue

Section 2.5.4 of the EIS deals with the disposal of the boiler ash and flue gas residue. Directive 91/689/EEC states that the above residue and ash is hazardous to landfill if it contains properties listed in H1-H14 of the 'Waste Catalogue and Hazardous Waste List'.

Indaver will hold up to 300 tonnes of the above ash and residue on site, it takes approximately 1 week to do analysis from leachate test, this will determine if the material is classed as hazardous or non hazardous.

If the situation arises that the above material fails the test and is classed as Toxic or Class 9. Then the inventory of this material on site falls into the category of exceeding the Lower Tier Threshold and is thus classified as a **Seveso Site** under SI 476 of 2000.

1.2.5 Natural Gas main pipe running through site:

There is an existing main natural gas pipe line from Drogheda to Navan which runs under the proposed site. It is situated between the warehouse and reception hall j/ sorting plant. The gas main diameter is a300mm @ 60 Bar (density 0.6). The length of piper under the site map ref 2666-22-DR-012 is approx 300 metres.

'Natural Gas' is listed as one of the 51 'named substances' under the First Schedule of the Regulations in SI 476.

The quantity of natural gas present in the pipeline with the site boundary is 763 tonnes. This is 3.8 times in excess of the upper tier Seveso threshold of 200 tonnes. The facility therefore qualifies as a Seveso site under SI 476, there is a potential for a major accident involving one or more dangerous substances at the site.

Indaver as part of their EIS have failed to assess the site as being a Seveso site.

In conclusion we would state that the Environmental Impact Statement is a necessary and preliminary piece of statutory information required by the Bord to arrive at a planning decision. Because the Environmental Impact Statement submitted fails to meet the minimum standards regarding the presentation of same, we would respectfully ask the Bord to refuse permission on the grounds that the information submitted in the Environmental Impact Statement is inadequate to allow the Bord to reach a reasonable decision on the above case.

Please forward all correspondence relating to the above to this address.

Yours Sincerely,

Michael A. O'Neill MIPI

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The Secretary,
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28th August, 2001.

APPEAL RE: NOTIFICATION OF DECISION BY MEATH COUNTY COUNCIL TO GRANT PERMISSION FOR A WASTE MANAGEMENT FACILITY AT CARRANSTOWN, DULEEK, CO. MEATH FOR INDAVER IRELAND (REG. REF: 01/4014)

A Chara,

We have been instructed by our clients, **No Incineration Alliance, c/o Ms. Aine Walsh, 27 Highfield, Drogheda, Co. Louth,** to appeal the notification of decision by Meath County Council to grant permission, by Order dated 31st July, 2001, for a Waste Management Facility at Carranstown, Duleek, Co. Meath for Indaver Ireland. The development comprises:-

A main process building of 13,480 sq.m. incorporating a waste reception hall, waste sorting plant, bunker, operations / turbine building, boiler, grate furnace, ash bunker, demineralisation unit, boiler feed pump, flue gas treatment building, solidification unit, AC unit, turbine cooler and 40 m. high stack.

Ancillary structures will consist of a pump-house building of 200 sq.m., water storage tank, warehouse building of 890 sq.m. incorporating security and drivers' rest area, administration building of 770 sq.m., transformer compound, lay-down area, car parks and an on-site Puraflo effluent treatment system. The facility will also include a community recycling park incorporating a security building, container storage area and canopied area. Road access will be via a new entrance from the R152, approximately 3 km. From Duleek and 4 km. from Drogheda. Following further information the site boundary has been altered to incorporate a deceleration lane, the entrance has been revised to remove the acceleration lane.

In making this appeal we have fully acquainted ourselves with the statutory Development Plan for the area and with the technical reports on the Planning Authority files, and in support of our submission we are attaching a planning appeal document highlighting our clients' grounds of appeal.

We would request an Oral Hearing on this appeal in order to articulate our concerns more fully to the Board and we are enclosing the requisite fee of £180.00 to cover the cost of this appeal and Oral Hearing request.

Please forward all correspondence relating to this appeal to the above address.

Yours Sincerely,

Michael A. O'Neill MIPI

Comment:

Planning Appeal

APPEAL RE: NOTIFICATION OF DECISION BY MEATH COUNTY COUNCIL TO GRANT PERMISSION FOR A WASTE MANAGEMENT FACILITY AT CARRANSTOWN, DULEEK, CO. MEATH FOR INDAVER IRELAND (REG. REF: 01/4014)

Prepared for

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August 2001

APPEAL RE: NOTIFICATION OF DECISION BY MEATH COUNTY COUNCIL TO GRANT PERMISSION FOR A WASTE MANAGEMENT FACILITY AT CARRANSTOWN, DULEEK, CO. MEATH FOR INDAVER IRELAND (REG. REF: 01/4014)

1. INTRODUCTION

We have been instructed by our clients, **No Incineration Alliance, c/o Ms. Áine Walsh, Secretary, 27 Highfield, Co. Louth,** to appeal the notification of decision by Meath County Council to grant permission, by Order dated 31st July, 2001, for a Waste Management Facility at Carranstown, Duleek, Co. Meath for Indaver Ireland.

In making this appeal we have fully acquainted ourselves with the statutory Development Plan for the area and with the technical reports on the Planning Authority files, and, in the interests of clarity, we have structured our appeal submission under the following headings: -

- **Subject Site – Locational Context.**
- **Brief Description of Proposed Development.**
- **Overview of our Clients Concerns.**
- **Grounds of Appeal.**
- **Planning Assessment.**
- **Conclusions.**

2. SUBJECT SITE – LOCATIONAL CONTEXT.

The subject site is located on the western side of the R152, approximately 3 km to the northeast of Duleek. It has a stated area of 101.2 hectares in total and is under grass at present.

The subject site is located in an area that is primarily agricultural in use. While there is an existing quarry, cement plant and 110 kv ESB substation located within the vicinity of the subject site, the area is essentially rural in character. Residential development in the vicinity of the subject site takes the form of ribbon development along the R152. It is also noted that there is a primary school located c. 1 k to the east of the subject site.

3. BRIEF DESCRIPTION OF PROPOSED DEVELOPMENT

The proposed development is described in the application documentation as a, "*Waste Management Facility*" and includes the following elements:

- **Administration,**
- **warehousing,**
- **reception hall,**
- **waste bunker,**
- **sorting plant,**
- **furnace,**
- **ash burner,**
- **operations building,**

- **flue gas treatment,**
- **security buildings**
- **pumphouse, etc'.**

The documentation outlines 3 main operations proposed to be conducted on the subject site as follows:

(1) Community Recycling Plant.
(2) Recycling for Industrial Material.
(3) Waste to Energy Plant.

In terms of volumes of waste handled, the application documentation indicates 2,000 tonnes p/a, 20,000 tonnes p/a and 150,000 tonnes p/a in respect of each of the above operations.

4. OVERVIEW OF OUR CLIENTS CONCERNS.[1]

4.1 OBJECTION IN PRINCIPLE TO INCINERATION.

Our clients are fundamentally opposed to Incineration as a method of waste disposal. Given that the thermal treatment plant is the most significant element of the current proposal, they feel that they have no choice but to register their opposition to the proposal in its entirety.

In the first instance, they are deeply concerned that the Incinerator element of the proposal will give rise to significant impacts on the health and well being of not just those living in the immediate vicinity of the plant, but those in the wider area also. There concerns in this regard are founded on the negative experience of incinerators in other parts of Europe and the U.S. While recognising that the greater issue of the health impacts associated with incinerators is a deeply controversial one, they feel that a precautionary principle should apply and that incineration should be rejected until such time that it is universally accepted to be a totally satisfactory process from the point of view of human health.

In addition to the issue of human health, our clients are acutely concerned regarding the potential impact that the incinerator would have on the receiving environment. In particular, they are concerned that current proposal would give rise to impacts that would adversely affect, existing landscape, air quality, water quality, ambient noise levels and flora and fauna generally[2].

4.2 REJECTION OF LOCATION.

Notwithstanding their concerns regarding incineration per se, our clients contend that the subject site is fundamentally inappropriate for the proposed development. In this regard they are mindful of the concerns in respect of the receiving environment and in particular

[1] Our clients had previously made their concerns known to the Planning Authority when the proposal was before it for adjudication.. A copy of their objection is attached as an appendix to this appeal.
[2] Our clients inform us that, for example, there are nesting falcons in the vicinity of the subject sites. Such birds are comparatively rare and the current proposal could prove a substantial obstacle to their well being.

the impact of the proposed development on the landscape in terms of visual intrusion. Given the level of dependence on agriculture and tourism in the wider area, our clients contend that these existing industries would suffer irreparable damage if the current proposal were to proceed.

While our clients recognise that the existing quarry and cement plant already take from the scenic value of this landscape, they would reject any contention that the existing development forms any precedent for the choice of location for the current proposal. In support of this contention, they would point out that: -

- **The Carranstown/ Duleek area has already "played its part" in contributing to the economic development of the County by facilitating the existing unsightly development in this locality. It would be most unfair therefore to expect these communities to carry yet another intrusive development in this rural area.**

- **The existing quarry/cement plant is, by virtue of the location of the raw materials, site specific. Thus there is some recognition that such developments have no choice but to locate close to the source of raw material. Our clients would argue that in contrast, the current proposal is not site dependent at the applicants imply in their EIS, and that an alternative, less sensitive location, would be more appropriate.**

In short, our clients contend that the subject location is fundamentally inappropriate to a development of this type.

5. GROUNDS OF APPEAL

5.1 1ST GROUND OF APPEAL – INVALID PLANNING APPLICATION.

While the Planning Application was lodged by Indaver Ireland, it is noted that the subject site is in the ownership of a third party. While Indaver Ireland describe themselves as, "purchaser", we note the following: -

- **The applicants have not submitted evidence of a legal agreement or contract specifying that they will purchase the land on receipt of planning permission.**
- **The application documentation does not include the written consent of the subject sites current owners, to the lodgement of the current application.**

It is our contention that the applicants have failed to demonstrate that they have the necessary legal interest in the subject lands to enable them to lodge a valid planning application, as required by the appropriate Planning Legislation.

Therefore, we respectfully submit that the validity of the planning application and consequentially the Planning Authority's decision regarding it is highly questionable in the extreme.

5.2 2ND GROUND OF APPEAL - FAILURE TO JUSTIFY PROPOSED LOCATION.

We would respectfully question the mechanism and findings relating to the identification of the subject site as detailed in the EIS submitted with the application. The section dealing with this issue in the EIS concludes that,

> *"The proposed site was chosen after a comprehensive site selection exercise based on objective criteria. It meets all the evaluation criteria it has been subjected to: technical project related criteria, WHO criteria and criteria suggested in the feasibility study on thermal treatment options for the north east region."*

While we believe there are a number of important concerns arising from the selection procedure, this preliminary objection confines itself to dealing two important areas which we have identified as being of particular concern, i.e. "*Selection Criteria*" (section 2.10.1) and "*Alternative Locations Considered*" (section 2.10.2).

5.2.1 "SELECTION CRITERIA".

Key criteria identified in this section of the EIS included: -

- ***Proximity to Centres of Waste Production-Centre of Gravity of Waste Production.***
- ***Proximity to Transport Infrastructure (National Roads)***
- ***Proximity to Electrical Distribution System.***
- ***Appropriate zoning/land use.***
- ***Availability of Sites.***

Proximity to Centres of Waste Production- Centre of Gravity of Waste Production.

The details regarding the applicants analysis is presented in Table 2.5 of the EIS where 3 areas are highlighted for their minimal haul distances. These locations are Ardee, Drogheda and Duleek and provide what appears to be a "shortlist" of possible locations.

However, looking to our table (table NOA 01), we would contend that when all of the haul figures are examined, we find that the majority of locations are within the 4,000,000 to 4,999,999 total tonne kilometre category.

TABLE NOA 1. Analysis of number of locations per TTK cohort.

Estimated Total Tonne Kilometre (to nearest Million).	Number of locations in this cohort.	Locations.
9,000,000 +	3	Cavan, Belturbet, Clones.
8,000,000 – 9,000,000	1	Monaghan.
7,000,000 – 8,000,000	1	Coothill.

6,000,000 – 7,000,000	3	Dunboyne, Dunshaughlin, Trim.
5,000,000 – 6,000,000	4	Bailieborough, Ashbourne, Castleblaney, Laytown.
4,000,000 – 5,000,000	**7**	**Drogheda, Dundalk, Navan, Duleek, Kingscourt, Kells, Carrickmacross.**
3,000,000 – 4,000,000	1	Ardee.

Therefore, we respectfully contend that the effective short listing of Ardee, Drogheda and Duleek, and the ultimate selection of Duleek, is fatally undermined by the fact that there are in fact 7 towns (out of a total of just 20) that fall within the 4,000,000 – 5,000,000 cohort[3]. When examined from this perspective, we strongly contend that there is little justification for picking the subject site based on the Estimated Total Tonne Kilometre analysis which forms the backbone of the applicants site selection procedure.

Furthermore, we note that the EIS fails to adequately demonstrate how the applicants selected Duleek in respect of the 3 sites short listed, i.e. Ardee, Drogheda and Duleek, hence, it would be difficult to imagine a credible explanation for the selection of Duleek in the context of the 8 towns located in the 3,000,000 – 5,000,000 cohort.

Proximity to Transport Infrastructure (National Roads)

On the issue of Transport Infrastructure, we have previously referred to our client's contention that the existing road is dangerous and has seen many accidents. Clearly the traffic that would be associated with the current proposal could exacerbate this situation.

In addition, we respectfully submit that the issue of traffic must be examined in the context of medium to long-term developments in Drogheda and surrounding areas which will obviously contribute greater traffic volumes onto this stretch of road. There is also the M1 to consider and the possible impacts that this will have on the transportation network in the vicinity of the subject area. This combined with the fact that car ownership rates continue to rise at an alarming rate, would perhaps undermine the contention that the existing R 152 would, in itself, facilitate a development of this type.

On short, we would respectfully suggest that the applicants contention that the subject site is made more favourable because it has frontage to the R152, is questionable given the changes that are likely to take place in the future which could have huge implications for the volume of traffic on this road, hence its capacity to cope with the volume and type of traffic that would be associated with the proposed development.

Proximity to Electrical Distribution System.

The EIS infers that the proximity of the subject site to the existing ESB substation is a factor in favour for its location for the proposed development. This takes account of the fact that the proposed development will produce electricity as a by-product of incineration.

[3] There are in fact 8 towns within the 3,000,000 – 5,000,000 cohort, thus further undermining the selection of Duleek.

However, it is clear from the documentation that electricity generation is at best a by-product of the process; hence the ready connection to this source of electricity should not be a major concern relative to other location factors such as environmental impact.

Furthermore, the documentation fails to indicate the feasibility of providing a connection to the national grid at other locations, thus the case for choosing this site specifically is again undermined.

We would respectfully suggest that given the nature and scale of the proposed development, the ready connection to an ESB substation is a relatively minor factor in adjudication the suitability of the location for the subject proposal.

Appropriate zoning/land use.

It is noted elsewhere in the EIS that Meath County Council recognises that some non-agricultural uses can be permitted in areas deemed to be primarily agricultural. Examples of infrastructure such as masts and wind turbines and site specific industries such as quarrying are noted in this regard.

However, the central issue in deciding whether such non-agricultural activities should be allowed in these locations should be based on two factors: -

- **Is the industry site specific ?.**
- **Is the industry compatible with the location ?.**

On the first issue we have already presented our contention that the proposed development is not, as with a quarry, site specific to the extent that it must locate in this particular area. While the applicants have presented an analysis based on proximity to waste collection, we contend that this analysis does not justify the choice of location in the current instance. The fact is, we respectfully suggest, that the subject development could be placed at any number of more suitable locations. The applicants have failed to make a sustainable case for the location of this development at this particular site.

On the second issue, we would submit that the proposed development due to its height, nature and scale, is totally inappropriate to this rural location and is fundamentally at odds with this agricultural area. We would point out that while quarries and ancillary plants, together with electrical infrastructure have become an accustomed part of the rural landscape – Incinerators clearly have not!.

In conclusion, we would respectfully suggest that industrial type developments must be directed away from rural locations unless there is a genuine, sustainable case permitting them by way of exception. We respectfully contend that no such case is sustainable in the context of the current proposal.

Availability of Sites.

The applicants identify 5 criteria in this regard. We will respond to each in turn.

(1) *Lack of designation as a National Heritage Area or Special Area of Conservation.*

Our Response.
The subject site would appear to be located relatively close to a Proposed National Heritage Area (wetlands commons). Such an area would obviously be very sensitive to any disruption in the existing hydrology by the proposed development.

(2) Topography of site, to allow the large building structures to be built on lower ground, thus reducing the visual impact.

Our Response.

Regardless of the site's topography, the fact remains that the subject development will be intrusive when viewed from a number of areas, including areas that play an important role in this areas tourism industry.

(3) Low Population Density and Distance to Large Residential Development.

Our Response.

We would point out that there is significant ribbon development in the vicinity of the subject site, but the existence of these residences seems to have been ignored in the above statement.

In any event, given the nature of the development, its location is relatively close to the both Duleek and Drogheda.

(4) Access to the R 152 and sufficient road frontage to allow a suitable junction to be built.

Our Response.

Previously dealt with in this submission.

(5) Proximity to electrical distribution system.

Our Response.

Previously dealt with in this submission.

5.2.2 "ALTERNATIVE LOCATIONS CONSIDERED".

Section 2.10.2 of the EIS deals with Alternative Locations Considered. The applicants screened the possible sites by: -

(1) Indavers technical selection criteria.

(2) Steps 1 & 2 of the WHO selection procedure.

(3) Shortlisting criteria from the Feasibility Study for the North East.

While the EIS document does contain some detail regarding criterion number 2 (WHO) it fails to present any detailed information regarding items 1 and 3.

We respectfully submit that reference to the applicant's own technical selection criteria is of little assistance in the absence of a copy of such selection critical.

Furthermore, we respectfully submit that reference to a previous feasibility study is undermined by the fact that: (a) a copy of this study was not included with the EIS and (b) the applicants fail to provide an analysis as to the appropriateness of this study in the context of the present proposal.

In conclusion to this section, we would submit that the applicants have failed to justify the choice of location for the proposed development.

5.3 3RD GROUND OF APPEAL - SPECIFIC NEGATIVE IMPACTS.

We have identified the following specific impacts, each of which is discussed below: -

- **Disposal of Residual Hazardous Waste.**
- **Visual Intrusion.**
- **Impact on Tourism & Heritage.**
- **Impact on Groundwater.**
- **Impact on Traffic.**
- **Impact on Property Values.**
- **Impacts on Human Health.**[4]

5.3.1 DISPOSAL OF RESIDUAL HAZARDOUS WASTE.

While it is not the applicant's intention to process Hazardous Waste on the subject site, it is our contention that the proposal still has serious implications in the context of both the Waste Management Bill 1996 and the National Hazardous Waste Management Plan.

It appears from the information contained in the Environmental Impact Statement that the proposed operation of the incinerator will produce two forms of ash;

(1) "Bottom Ash" – Ash that falls below the furnace grate &

(2) "Boiler Ash" – Ash from the boiler section of the incinerator.

Per section 2.4.7. of the Environmental Impact Statement the former will, "…be sent for reuse or to landfill…" while the latter will, "…be sent to landfill…". These landfill sites appear to be regular, non-hazardous, landfill sites as the texts differentiates between the two types elsewhere in the Environmental Impact Statement.

However, Section 4 of the Waste Management Bill 1996 defines "Hazardous Waste" as any material specified in Part II of the second schedule of the Bill. Items no. 89 and 90 of this schedule specifically relate to materials containing dioxins or furan. Since the incinerator will produce ash that will contain both dioxin and furan, it will effectively produce "Hazardous Waste", albeit as a by-product. The procedures for the treatment of "Hazardous Waste" is set out in the National Hazardous Waste Management Plan which specifies that all Hazardous Waste must be stored in specially designated hazardous waste landfill sites.

In short, the current proposal materially contravenes the provisions of the National Hazardous Waste Management Plan by seeking to reuse the ash or to dispose of it in regular, non-hazardous, landfill sites.

[4] This issue is reviewed in specific submission attached as an annex to this report.

5.3.2 VISUAL INTRUSION.

The issue of visual intrusion must, we would respectfully suggest, be examined in the context of the statutory landscape designations that relate to the area in which the subject site is located. These specific designations are as follows: -

The subject site is located just 3 km from the Boyne Valley that is designated as a World Heritage Site and is of international archaeological importance.

- **The subject site is located in a landscape area of Visual Quality VQ11 –Rural and Agricultural, as set out in Meath County Council's Development Plan 2001.**
- **The subject site is located in close proximity to the area of Visual Quality VQ2-Lower Boyne Valley, as set out in Meath County Council's Development Plan 2001.**
- **The subject site is located just 10 km from a number of Listed Views per the County Development Plan, i.e. views no's VP5, VP6, VP7, VP8, VP13 and VP16. The impact on the view from Bellewstown Ridge (VP16) will be particularly significant.**
- **Bellewstown Ridge is designated as an Area of High Natural Beauty and High Amenity in the County Development Plan.**

In short, the landscape quality of the area in which the subject site is located is well already well recognised and acknowledged at a County, National and indeed International level. It is our contention therefore, that when examined in the wider context, the subject site is in fact located in a landscape that is visually sensitive.

The suggestion put forward in the Environmental Impact Statement is that that the area is not a particularly sensitive one in the context of Sensitivity as set out in the EPA Guidelines for the preparation of EISs. On examination however, it appears that the applicants have come to this conclusion based on their contention that the presence of the Platin Cement Plant and the proposed power station, represent a reduction in the sensitivity of the landscape. In essence, what they appear to be saying is that the visual impact associated with the proposed waste management facility is less significant given that the area is already blighted by the appearance of the cement plant.

We would respectfully reject this analysis for the following reasons; -

- **The existing quarry/cement plant is, by virtue of the location of the raw materials, site specific. There is general recognition that such developments have no choice but to locate close to the source of raw material due to the significant transport costs involved. In contrast, the current proposal is not as site specific as a quarry type operation, and, notwithstanding the locational arguments presented by the applicants, we would suggest that an alternative, less sensitive location, would be more appropriate.**
- **The argument regarding reduced impact by virtue of existing quarry development presented by the applicants is, we respectfully suggest, unsustainable in the long term. If such an approach was adopted generally, then there is the prospect that there could be a proliferation of industrial type**

development all over the countryside by virtue of the operation of existing quarry development.

Therefore, it is our contention that the extent of existing development, particularly site-specific quarry development, should not be used to downgrade the importance of a critical issue such as visual intrusion. We would submit that in the current instance, the many landscape designations assigned to the area around the subject site cannot be undermined to any significant degree by the fact that there is an existing quarry in the vicinity.

Looking to the proposal in more detail, it is stated that the main buildings will have a maximum ridge height of 30 meters above ground level. The chimneystack will be a further 10 meters in height at 40 meters in total. The mitigation measures suggested by the applicants include: -

- **Exploitation of existing topography to locate large buildings to the rear of the site where prevailing ground level is slightly lower.**
- **Use of green, brown and grey cladding on the cladding material.**
- **Landscaping comprising berms and screen planting to act as screening.**

However, notwithstanding the above measures, the applicants in the Environmental Impact Statement concedes that, "...there will be glimpsed and open views of the development from the adjacent road network and from houses in the immediate vicinity of the site..." The suggestion that the landscaping will screen the larger buildings is undermined by the fact that (a) such landscaping will take a number of years to be fully effective and (b) the "glimpses" that remain will still be unacceptably intrusive owing to the scale and nature of the proposal. In short, the proposal will be unacceptably intrusive when viewed from shorter distances.

In the context of views of the facility from greater distances, we respectfully contend that consideration of the existing landscape designations is paramount. In this regard the applicants in their Environmental Impact Statement zone in on the fact that the area in the vicinity of the site is classified as VQ11 Rural and Agricultural in the County Development Plan and that as such, it can, "*...absorb quite effectively appropriately designed and located development in all categories including masts, and wind energy installations, afforestation and agricultural structures.*"[5] However, we would reject any suggestion that a waste treatment plant including incinerator and chimneystack could be equated with developments such as masts or afforestation. It is our contention that the proposed development by virtue of its nature, scale and height, could not be satisfactorily absorbed into the existing landscape.

We also note that the applicants, in their Environmental Impact Statement, rely heavily on the assumption that, "*The character of the landscape and views are already influenced by the Platin Cement Factory and associated quarry, which lends an industrial character to the landscape.*" From this they conclude that, "*...Any impact will be mitigated against by effective architectural treatment of the main building and by the implementation of extensive landscaping.*" We would again reiterate our contention that the existing quarry/

[5] Visual Quality classification, page 58, Meath County Council Development Plan 2001.

cement plant development does not adequately justify this location of this form of development in a rural, agricultural area. Regardless of existing development, the fact is that the proposed development will give rise to visual intrusion in an area that enjoys County, National and International landscape designations.

5.3.3 Impact on Tourism and Heritage.

The landscape in which the subject site is to be located is of International significance in terms of history archaeology and landscape. For example, Newgrange (which is one of the three top tourist destinations in Ireland) is just 10 km from the subject site. We also note that the Tourism/ Heritage industries are very important in the context of employment and make a substantial contribution to the economy of this region.

It is our contention that the proposed development will negatively affect on existing the exiting tourism industry due to its scale and nature. Quite apart from the direct, negative impacts on the landscape in terms of visual intrusion, traffic etc', there is also the issue of perception to be considered. In this regard we would submit that, notwithstanding the quantifiable or tangible impacts such as visual intrusion and noise, the very nature of the proposal would, in itself lead to a significant reduction in the performance of the tourism industry in the region. Clearly potential visitors to attractions such as Newgrange will be put off by the prospect of an incinerator within just 10 kilometres.

In short, given the proximity of the proposed development to what are unique, heritage features and its direct impact on important views of the landscape in which the subject site is proposed to be located, we respectfully submit that the proposed development will result in a significant reduction in the performance of the existing tourism industry.

5.3.4 Impact on Ground Water.

Having received a copy of the Planning Application for comment, the North Eastern Health Board by way of response wrote on the 22nd February 2001 to the Planning Authority requesting clarification on the location of the proposed development vis a vis the issue of compliance with the World Health Organisation 1993 sitting guidelines.

In particular, the Health Board noted that the subject site is located on a limestone reserve and raised questions regarding the likelihood of contamination of the underlying aquifer given the nature of the proposal.

It appears from our inspection of the Planning File that the Health Board did not receive any response to the issues raised in its submission, yet in spite of this, wrote to the Planning Authority on the 27th July 2001 advising them that they had no objection to the proposed development subject to compliance with conditions.

The fact that the Health Board's serious concerns went unaddressed is a matter of considerable concern. The issue of groundwater contamination is a very serious one with implications for the health of water consumers within the general vicinity of the subject site.

We respectfully suggest therefore that the manner in which this matter was addressed and the absence of any rational explanation for the Health Board's "about-face" leaves a

considerable cloud of doubt regarding the appropriateness of the subject sites location on a known limestone reserve.

Finally, quite apart from the issue of human health, our clients area also concerned that problems will arise in respect of the flora and fauna in the vicinity of the subject site.

5.3.5 TRAFFIC.

It is clear from the documentation submitted that the current proposal would have an impact on the existing pattern and amount of traffic in the vicinity of the subject site. The area between the subject site and Duleek village has seen many traffic incidents in the past and there are Garda records to confirm this.

While the application documentation include detailed information with regard to traffic movement, such details are based on model which are based on assumptions regarding the future flow of refuse to the site. Our clients are obviously concerned that traffic flows will alter/ intensify over the life of the proposed plant and that this will exacerbate the impacts associated with such traffic and its impact on the amenity of the area.

They are also concerned that the traffic analysis presented does not fully consider the additional impact of factors such as the completion of the M1 or the future development of areas such as Duleek and Drogheda.

In short, it is our clients contention that the proposed development will give rise to significant delay, congestion and possibly hazard on the existing road network and that this will further impact on the existing character of the area to an unacceptable degree.

5.3.6 PROPERTY DEVALUATION.

The issue of property devaluation as a result of the proposed development is not adequately addressed by the applicants in the application documentation. This is an issue which is of huge significance to those living, and indeed farming, in the vicinity of the subject site. It is also a legitimate planning concern and one, which must be included in the adjudication of the application.

It is our contention that the proposed development will negatively affect on existing property prices due to its scale and nature. Quite apart from the direct, negative impact on residential amenity that will arise in terms of visual intrusion, noise, traffic etc', which will reduce property values, there is also the issue of perception to be considered. In this regard we would submit that, notwithstanding the quantifiable or tangible impacts such as visual intrusion and noise, the very nature of the proposal would, in itself lead to a significant devaluation in property.

In short, given the existing rural character[6] of the area, we respectfully submit that the proposed development will result in a significant diminution in the value of property in the vicinity of the proposed development.

[6] We do not accept the applicant's contention that the essential character of the area has been significantly altered by the existing Platin quarry and cement works. These developments are normally associated with rural areas and so do not significantly impact perception or character of such areas. This is in contrast to the incinerator which will represent a significant departure from the existing character of the area.

5.4 4TH GROUND OF APPEAL - INADEQUACY OF THE EIS.

We respectfully submit that the Environmental Impact Statement included as part of the Planning Application is inadequate in the context of the relevant European and domestic legislation. In particular, we note the following shortfalls.

5.4.1 INCORRECT IDENTIFICATION OF SUBJECT SITE.

The location of the proposed development is incorrectly plotted on some of the maps that accompanied the Environmental Impact Statement. Though only a minor error in itself, it undermines confidence in the remainder of the document to a significant extent. If such a fundamental error such as identification slips through the net, we have to ask ourselves what other errors does the Environmental Impact Statement contain.

5.4.2 FAILURE TO ADEQUATELY CONSIDER ALTERNATIVE SITES.

Section 2.10.2 of the EIS deals with Alternative Locations Considered. The applicants screened the possible sites by: -

(1) Indavers technical selection criteria.

(2) Steps 1 & 2 of the WHO selection procedure.

(3) Shortlisting criteria from the Feasibility Study for the North East.

While the EIS document does contain some detail regarding criterion number 2 (WHO) it fails to present any detailed information regarding items 1 and 3.

We respectfully submit that reference to the applicant's own technical selection criteria is of little assistance in the absence of a copy of such selection critical.

Furthermore, we respectfully submit that reference to a previous feasibility study is undermined by the fact that: (a) a copy of this study was not included with the EIS and (b) the applicants fail to provide an analysis as to the appropriateness of this study in the context of the present proposal.

In short, the consideration of alternative sites is fundamental to the EIA process. Both the parent European Legislation and the Domestic Legislation specify that adequate consideration must be given to the assessment of alternative location for any development for which an EIS is required. We respectfully suggest that the EIS submitted fails to meet the legal standard in this regard and consequently, the proposed development should be rejected on this basis.

5.4.3 FAILURE TO EXAMINE CUMULATIVE IMPACT OF PROPOSALS.

The Environmental Impact Statement makes much of the existence of the Platin Cement Works /Quarry and proposed Power Station in formulating the contention that the area already has an industrial character.

Yet the Environmental Impact Statement repeatedly examines the proposed development in isolation and fails to give any regard to the combined impact of three "industrial" developments, i.e. the cement, power and incineration plants.

We would respectfully submit that an analysis of the cumulative impacts of the three operations would be required to adequately assess the overall impact on the area in terms of traffic, visual intrusion and noise etc'.

5.4.4 Failure to Assess Impact on Property Prices.

As previously stated, property owners in the vicinity of the subject site are extremely concerned at what impact the proposed development will have on the value of their homes and lands.

We would have expected this matter to have been dealt with in the Material Assets section of the Environmental Impact Statement however, in the current instance, this important issue is effectively ignored.

We respectfully submit that this is undermines the Environmental Impact Statement at a fundamental level which is inexcusable given the likely impact a development of this type and scale is bound to have on property prices.

5.4.5 Flora and Fauna.

The Environmental Impact Statement fails to adequately examine the issue of impact on flora and fauna. This is perhaps best demonstrated with respect to the existing falcons that nest at the quarry site and whose future success is not adequately addressed in the Environmental Impact Statement.

5.5 5TH Ground of Appeal – Incineration in the Context of Waste Management Hierarchy/ National Waste Management Strategy.

We believe that the proposal to build an incinerator as part of the solution to the North East's waste management problem would be ill advised and pre-mature. The waste hierarchy endorsed by the EU and by our own government start with the most favoured option being prevention, minimisation, re-use, recycling, with energy recovery and disposal being the least favoured options. It is also a common misconception that incineration makes waste disappear, it merely transforms it to approx 30% of it's previous mass by weight, the remaining 30% requires treatment and landfill. This is comprised of fly ash and bottom ash. Fly ash is highly toxic and needs to be treated as hazardous waste. The bottom ash contains concentrated levels of heavy metals, and, by the classification of the recently published 'Hazardous Waste Management Plan' for Ireland, is also hazardous. By burning 150,000 tonne of waste per year, the incinerator could be creating approx 40,000 tonne of hazardous waste.

Margot Wallstrom, EC Commissioner, Environment Section advises that in her opinion 'in most cases, incinerators are not the answer to waste management. The incineration of waste helps to reduce the volume of waste to be disposed of. However, the environmental impact of incineration is significant, given that, by incinerating waste, pollutants are only transformed – for example, they are concentrated in the incineration ashes, which in turn must be disposed of'. (Personal Correspondence 14.9.00 with Brian Crowley MEP)

The proposed incinerator in Carranstown is for waste from the four counties of Louth, Meath, Cavan and Monaghan, none of which have separated waste collection to date,

therefore all waste will enter the incinerator, this waste could potentially contain recyclables of a very high calorific content such as PET bottles, paper, etc.

We also believe that the proposal is premature and perhaps unnecessary when we learn from the experience of communities abroad and in Ireland that have managed to reduce their waste going to landfill by volumes such as 60-70% (Remora, Galway), 53% (Daventry, UK), 73% (Bellusco, Italy), 51% (Nova Scotia) and 68% in Ontario, Canada by adhering to the above waste hierarchy.

It is our contention that The National Targets which Ireland wishes to achieve are achievable with long term sustainable planning and without incineration. These targets, to be achieved over a 15 year period are:-

- Diversion of 50% of overall household waste away from landfill
- Minimum of 65% reduction of biodegradable waste consigned to landfill
- Recycling of 35% of municipal waste
- Recycling of at least 50% of construction and demolition waste within a five year period with a progressive increase to at least 85% over 15 years.

With the above in mind, we believe it would be immoral to burn resources which could be used if processed and recycled. Jones in 'Mass Balance and the UK Economy' advises that far more energy is actually saved by recycling materials than burning them due to the fact that significantly more energy is required to produce virgin materials than to recycle. It has been estimated that for every tonne of 'product we buy, ten tonnes of resources have been used in the manufacturing process.

A possible workable example for Ireland = Wellman International recycle 5 million PET bottles a day, none of which come from Ireland. Ireland throws away 350 million PET bottles a year. Wellman imports all their plastics, they employ over 400 people and have been in operation in Ireland for 27 years.

In short, we respectfully suggest that the case for the current proposal is not justified by the National Waste Management Plan or an analysis of waste hierarchy.

5.6 6TH GROUND OF APPEAL - CONTRAVENTION OF PRINCIPLES OF SUSTAINABLE DEVELOPMENT.

Incineration in the context of sustainability and sustainable development.

Sustainable development is generally described as development that meets the needs of the present generation, without jeopardising the ability of future generations to meet their needs, that is, living within the carrying capacity of the Earth. Post Rio (UN Conference on Environment and Development, Rio, 1992) sustainability should be a key goal of our society - decoupled from resource depletion. This is clarified by consideration of our current system of resource use, which follows a predominately linear pattern. Resources are extracted, used to manufacture a product that is bought by a consumer and subsequently thrown away. The rapidly increasing amounts of waste generated have reached critical levels. In fact, industrial development and its associated waste products has accelerated at a rate far surpassing the adaptive capacity of natural systems and if

wastes continue to be produced at current or increased volumes, then any 'management' system will eventually become overwhelmed.

On the other hand, the rapid depletion of the Earth's natural resources is endangering the supply for future generations. Global calculations show that humans are consuming over one third more than nature can reproduce. The rate for industrialised countries is even higher. The current consumption levels of the industrialised world, along with the energy required and the greenhouse gases as a result, are unsustainable.

There is an imbalance between our current development patterns and the natural capacity of the Earth's systems to adapt to the over consumption of resources and to absorb waste at its current rate of production.

Currently an inequitable distribution of the worlds resources exists, which the following UK House of Commons report highlights. '*At present 20% of the world's population use 80% of the world's resources: the other 80% - the population of the developing world – uses only 20% of these resources. Such inequity cannot continue. Traditionally it has been believed that as the less developed world developed, it would use more and more resources and that the world's supply of resources would expand to accommodate that; any shortage of raw materials would either stimulate the search for new supplies or encourage the use of alternatives. Now, we are having to face the fact that such a level of resource use would push the world way beyond what is sustainable; so that either the developing world has to be held back or the developed world has to find ways to sustain current standards of living while using far fewer resources; maybe as little as 10% of the resources we use now.*

Such a revolution in resource use, and possible reuse is the real driving force behind today's needs for the developed world to take waste minimisation and sustainable development seriously.' [7]

Traditionally, the primary focus has been on what to do with waste after it has been produced i.e. end of pipe solutions. For sustainable development, the *closing of the material loop* must be achieved, i.e. turning our present linear use of resources into a cyclical one. *To close the material loop* there needs to be an incremental reduction in the amount of virgin resources feeding into the production chain coupled with a continuous decrease in waste produced.
The EU Waste Management Hierarchy, which lists waste management options in order of preference, aims to promote sustainable waste systems. According to this hierarchy prevention and minimisation of waste are the most favourable option. Anything that cannot be prevented or minimised should be reused, repaired, recycled or composted. Energy recovery and landfill are the least favourable options.

Sustainable waste-resource programs focus on the upper and middle parts of this hierarchy. Such an approach furthers the development of cyclical production and

[7] UK House of Commons Environment, Transport and Regional Affairs Committee, (1998), *Report on Sustainable Waste Management.*

consumption patterns and thus the advancement of closed loop processes. Unlike options such as landfill or incineration, recycling and reuse result in material being returned to the production process, where it can be made into the same or similar product from which the material arose, or it can be fashioned into something entirely different. This means that for the economy as a whole there is a reduced need for primary extraction, hence resources are saved and there is a reduction in the environmental effects from the production, processing and transport of the raw material, which also results in considerable economic savings. Recovery of energy from waste may appear to have a similar effect, yet on closer examination it becomes evident that this is not the case. Recovering energy from waste by incineration can only recover the energy contained within the actual material and of course this can only be recovered once. The energy used in the extraction of resources, in transport etc. cannot be recovered. Conversely this energy can be saved by methods such as reuse and recycling.

For many substances, recycling cannot occur indefinitely (for example, due to shortening of fibers in newsprint recycling), but usually recycling can take place more than once. Therefore, there is an element of circularity in the recycling process that is absent in the case of incineration with energy recovery. Also, sustainable development requires a reduction in raw material usage. Incineration effectively results in these material resources 'going up in smoke'.

Incineration as an outdated technology

Waste incinerators are not new: they were first developed in the late nineteenth century, and became the main means of disposal in some European and North American cities in the early twentieth century, until their costs rose above that of landfill. A number of countries that were unsuited for landfill (Japan, the Netherlands, Denmark, Switzerland, for example) came to burn the majority of their household waste. Others, such as some US states, looked to incineration in the late 1980s when landfill shortages were forecast. What is new is the introduction of stricter and increasingly expensive controls on the incineration process.

As a technology, incineration is about the destruction of materials and the management of the associated hazards. Pollution control constitutes a major proportion of the cost, technological capacity and space requirement of an incinerator. Therefore, the incineration process involves spending vast sums of money on the destruction of potentially valuable materials and the control of the pollutants. This contravenes the objectives of sustainability, which require recovery and conservation of materials and resources.

Many modern incineration plants recover energy from the waste materials. Many view this as an advantage of a modern incineration process. However, the energy produced is merely a by-product and mixed waste incinerators are inefficient energy producers. Also the more preferential alternatives to incineration are also more preferable in energy saving terms. For example, far more energy is actually saved by recycling materials than burning them due to the fact that significantly more energy is required to produce virgin materials than to recycle. It has been estimated that for every tonne of 'product' we buy, ten tonnes of resources have been used in the manufacturing process[8]. Reuse and recycling have a far better energy recovery record, with savings of up to 70-90% despite energy lost in transport and cleaning compared to an expected efficiency of 25% recovery from

[8] FoE UK & CRN (1998), Recycling Works, UK.

incineration[9]. This fact is reiterated by the a recent report by the European Commission, which asserts that in general recycling is preferable to incineration in energy terms[10] . This is further reiterated by the following examples,

- Recycling aluminium cans in the United States in 1996 saved enough energy to power a city the size of Philadelphia for one year.[11]
- Germany has 53 incinerators burning 14 million tonnes of waste per annum. The burning of this massive amount of waste produces 0.5% of German energy requirements. The incineration of every single atom of waste produced in Germany would provide 1.5% of all German energy requirements.[12]

Also the utilisation of this energy by-product requires capital investment. For example for home heating systems, massive capital investment would be needed to distribute the heating system.

Incineration, particularly in light of sustainability objectives, is obviously a technology that belongs to the previous industrial era. The following quote from an article recently published in The Guardian newspaper, in response to the British Government's proposal to introduce a number of new incinerators, highlights the fact that incineration is a dying industry." *Europe is moving to phase out the building of huge incinerators just as Britain is planning a new chain across the country as part of the government's waste strategy, Ludwig Kraemer, head of the EU waste management directorate, revealed last night. In France, Belgium, Holland, Italy, Germany and Portugal no more new incinerators are being built because the public will not stand for them"* [13].

Economics of Incineration

The incineration of waste materials involves large financial costs, in terms of both capital investment and operational costs. A 420,000 tonnes incinerator now requires an investment of £125 million. A typical waste incineration contract over 25 years costs £1 billion, once recycling, composting, residual landfill and the return on investment are taken into account.[14]

External costs of incineration:

- **Ash and Residue**
  Generally speaking for every three tonnes of waste materials incinerated, one tonne of ash and other residue are created. This ash and residue has then to be treated before land filling or directly land filled. Due to stricter environmental controls the cost of landfill is expected to increase in Ireland considerably in coming years. Also approximately 5% of the incineration residue is classified as hazardous waste and has to treated accordingly.

- **Health effects**

[9] Earthwatch submission to MCCK consultant group (1997) Local Authority Waste Management Policy suggestions.
[10] Review of Waste Management Strategy, European Commission, COM (96) 399, 30 July 1996.

[11] The Worldwatch Institute http://www.worldwatch.org/alerts/981217.html
[12] Der Grune Punkt, (1998) Edition 3: Waste Incineration Processes in Germany.
[13] Hencke, D., (2000), The Guardian, Friday May 19.

[14] Murray, R. (1999), Creating Wealth from Waste, Demos, UK.

A report for the European Commission suggests that for every tonne of municipal waste burnt between GBP£21 and GBP £126 worth of environmental and health damage is caused [15]

A 400,000 tonne per annum incinerator is estimated to cause 48m ECU per year in health damages.16

In relation to emissions of particulates, it has been estimated that the total health damages due to chronic effects of primary and secondary particulates alone, from a single 400,000 tonne/year incinerator, costs up to 48,000,000 ECU/year.17

- **Effects on the agricultural economy**
  Incineration also poses a threat to the quality of Irish agricultural produce. In 1999, 1 gramme of Dioxin caused $3 billion worth of damage to Belgium's food industry.

  According to a Seanad debate report in June 2000, Sen. JJ Walsh was quoted the following,
  "I understand that one of the major food producers in the region was contacted by overseas customers to secure a guarantee that there was no incinerator within 40 kilometers of the company"

Studies have shown that the more sustainable alternatives to incineration are also more preferential in economic terms. A number of such case studies are presented below.

1. Seattle, Washington
   In Seattle a fast-track proposal was initiated in the mid-1980s to cite one large or several smaller incineration facilities. In response to citizen concerns about environmental impacts of incineration and the substantial expenditure of City funds required to site and construct incineration capacity, Seattle's City Council instructed the Engineering Department's Solid Waste Utility to look at how much waste reduction and recycling could be achieved if similar amounts were spent on diversion instead of incineration. **The resultant Environmental Impact Statement compared the reduction and recycling alternative to several incineration alternatives and found reduction and recycling preferable in terms of overall economic and environmental (including energy, air pollution, water pollution, mining waste and water use) impacts.**[18]

2. Halifax, Nova Scotia
   In 1990 Halifax's Metropolitan Authority (a public corporation governed by elected representatives from the City of Halifax, the County of Halifax, and two smaller

[15] ETSU (1996), Economic evaluation of the draft incineration Directive, European Commission.

[16] Economic Impact Assessment of Draft EU incineration Directive, 1999

[17] Howard, V, Department of Foetal & Infant Toxico-Pathology, University of Liverpool.

[18] 10 Seattle Solid Waste Utility, Final Environmental Impact Statement - Volume 1: Programmatic Alternatives, Volume II: Recycling Potential Assessment and Waste Stream Forecast, Volume III: Seattle Waste-to- Energy Plant Alternatives, Appendix A: Waste-to-Energy Project Description, Appendix B: Air Emissions Factors, Appendix C: Air Quality/Odor/Noise, Appendix D: Health Risk Assessment, Appendix E: Recycling Potential Assessment and Waste Stream Forecast, Appendix F: Economic Analysis, and Appendix G: Ecology and Water Quality, prepared by a variety of engineering and consulting firms including Gershman, Brickner & Bratton, SCS Engineers, Resource Conservation Consultants, CCA, Fernandes Associates, and Sound Resource Management Group, July 1988.

municipalities in Halifax County - the City of Dartmouth and the Town of Bedford) determined that "incineration would be a sound environmental choice and provide dependable waste management for the Region."[19] Upon reviewing the Metropolitan Authority's rationale, the City of Halifax became concerned about the cost and environmental impacts of incineration, and established the City of Halifax Waste Management Task Force to review waste management options. The resultant study concluded that **3Rs alternatives were cheaper than incineration, had better long-term economic and employment impacts, conserved energy, and did not entail the public health risks associated with the incineration option.** With respect to this last point it is important to note that the Task Force's study also concluded that the incineration technology proposed by the Metropolitan Authority did not represent Best Available Technology (BAT). Upgrading to BAT for controlling emissions was estimated to nearly double construction costs for the proposed facility.[20]

3. Further research in the UK suggests that a system involving a recycling scheme and landfill is preferable to incineration only or even incineration combined with a recycling scheme, in economic terms. However, given that not all costs of environmental impacts have been included these figures need to be interpreted with caution. The authors of the study suggest that including "missing" externalities is likely to show an increased benefit for recycling, but importantly they suggest that weaknesses in this type of analysis makes these decisions political in nature and that politicians should recognise that the public want increased recycling with reduced roles for landfill and incineration[21].

Reduction and recycling are preferential to incineration in economic terms, yet incineration can stifle the development of such initiatives.

Increased diversion rates, as a result of alternatives such as recycling and potential declines in quantity or heating value of disposed waste pose significant threats to the economic viability of incineration facilities. For example, the Quinte, Ontario, Blue Box 2000 diversion system has reduced annual residential waste disposal from over 900 kilograms to about 320 kg, while reducing the portion of burnables in waste disposal from 56% to 47%. At system maturity waste disposal is projected to be just 257 kg per year, and burnables are expected to comprise just 33% of this disposed waste[22]. At the same time that there are risks from insufficient waste quantities and too few burnables, there also are significant economies of scale for incineration facilities. Further, incinerator vendors profit more when building larger facilities. For these reasons incineration facilities may be sized based on relatively pessimistic projections for potential diversion levels.

[19] Memorandum to Chairman and Members of the Metropolitan Authority from R. Mort Jackson, Executive Director of the Metropolitan Authority, regarding Solid Waste Master Plan Recommended Solid Waste Management System, dated December 31, 1990.

[20] The City of Halifax Waste Management Task Force, Review of Waste Management System Options, prepared by Sound Resource Management Group, Inc. in association with Angus Environmental Limited, March 1992.

[21] Waste Watch & ECOTEC Research and Consulting Ltd., Beyond the Bin: The Economics of Solid Waste Management Options. London.

[22] Robert Argue, REIC Ltd., "3Rs Diversion Potential," presentation at Recycling Council of Ontario's Forum on Energy from Waste: Understanding the Issues, May 4, 1995.

Paper and paperboard, wood and plastics also comprise most of the burnable portion of solid waste. Without combustible waste materials to supply heating value, solid waste incineration requires consumption of substantial amounts of auxiliary fuel and generation of steam or electrical energy is impossible. When the combustible portion of incinerated waste declines, net operating costs escalate -- both because marketable energy, and consequently revenues, decline, and because costs for auxiliary fuel increase [23]. **Therefore incineration poses a threat to the viability of the more preferential waste management options. They are also inflexible as authorities are locked into producing enough waste materials to feed the incinerator for a protracted period. According to Ludwig Kraemer, head of the EU Waste Management Directorate, "*An incinerator needs to be fed for about 20 to 30 years and in order to be economic it needs an enormous input. For or 20 to 30 years you stifle innovation, you stifle alternatives, just in order to feed that monster which you build*".**

Privately-owned incinerators typically shield themselves from risks of inadequate waste flow by requiring host communities disposing of waste at the incinerator to pay substantial fixed annual fees or to guarantee that certain quantities of waste will be delivered for disposal. Whether publicly or privately owned, incinerator capacity may prove to be too large relative to attainable diversion levels. **When this occurs, businesses and households end up paying for idle incineration disposal capacity, having feasible and cost-effective diversion programs postponed until population increases or economic growth results in additional waste generation, and/or in the worst case having existing recycling programs cancelled or curtailed**[24]. Examples of such occurrences in the USA are provided below.

- Norwich, Connecticut
  All four incineration facilities developed by the Connecticut Resources Recovery Authority (CRRA) have experienced difficulty meeting committed tonnage. Waste streams were overestimated, recycling underestimated and the impact of an economic downturn not anticipated. Norwich, for example, has a mandatory recycling program and has paid annual penalties exceeding $300,000 for failing to deliver its contracted minimum waste quantity of 25,000 tons to CRRA's plant in Preston.[25]

- Springfield, Massachusetts
  The City of Springfield contracted with a privately-owned incineration plant to handle up to 58,000 tons per year at a fixed annual fee of $2,600,000. Trash disposal in the city then declined by 12,000 tons due to recycling and composting, with no reduction in the annual incineration fee. The average $100 per ton cost of these diversion programs was cheaper than the cost of garbage collection and incineration. But the diversion program reduced disposal tonnage below the 58,000 guarantee, and resulted in Springfield paying several hundred thousand dollars to the incineration facility for waste it recycled and didn't need to have incinerated[26].

[23] Morris,J., Ph.D. (1996), Competition between Recycling and Incineration, Economics Sound Resource Management, Seattle, Washington.
[24] Morris,J., Ph.D. (1996), Competition between Recycling and Incineration, Economics Sound Resource Management, Seattle, Washington
[25] Apotheker, Steve, "Waste-to-energy and recycling: Tango or tangle?", Resource Recycling, September 1994,

[26] Morris,J., Ph.D. (1996), Competition between Recycling and Incineration, Economics Sound Resource Management, Seattle, Washington.

- La Crosse County, Wisconsin
  La Crosse County filed a successful lawsuit against its consultants, Black and Veatch, and Gershman, Brickner and Bratton, because the firms overestimated the capacity that would be needed at an incineration plant opened in 1988. The County only used half the facility's capacity, and had to join with other EFW facility host communities to obtain an exemption, both from Wisconsin's state law requiring adoption of volume-base garbage collection fees wherever a 25% diversion goal was not met, and from Wisconsin's disposal bans[27].

- Smithtown, New York
  To protect its EFW facility the Town of Smithtown filed a lawsuit against a local hauler, USA Recycling Inc., to prevent the firm from sorting out paper, metal and wood from commercial waste before taking the residue to the Town's incineration plant. This despite that fact that New York state has a 60% diversion goal[28].

As incineration requires potentially recyclable material to operate more effectively it poses a threat to more economically and socially preferential options. Opportunities for recyclers are particularly significant. Faced with diminishing primary resources and tighter regulation of energy use, major industrial sectors have been shifting their sources of supply from secondary to virgin materials. A typical example is paper. Over the past decade or so the paper industry has been transformed by the necessity to protect rainforests and biodiversity. Improvements in deinking technology have cut costs so that, in Germany, France and Britain, it is now 35% cheaper to produce newsprint from recycled paper than virgin pulp. The same situation is visible for other industries. Foundries for aluminium auto parts are using recycled cans. Glass factories can now use up to 90% recycled inputs and new technologies are emerging for recycling electronics and plastics. [29]

However, to operate efficiently incinerators need materials which could otherwise be recycled, reused or composted. **Therefore incineration removes a valuable opportunity in social and economic terms. On an international scale, many regions are driving waste diversion from landfill of solid waste way beyond Irish targets, and are creating jobs and providing further social and economic benefits. Rather than seeing resource constraints and tighter regulation as a brake on economic growth, governments are beginning to recognise that the emerging 'secondary materials' economy and 'eco-efficiency' offer opportunities to stimulate innovation and create new sources of wealth and jobs.** For example, the province of Nova Scotia, Canada increased its solid waste diversion from landfill and incineration rate from 7% to 51% between the years 1995 to 2000. One of the goals of the solid waste-resource management strategy for the region was to maximise on the economic opportunities

[27] Morris,J., Ph.D. (1996), Competition between Recycling and Incineration, Economics Sound Resource Management, Seattle, Washington.

[28] Morris,J., Ph.D. (1996), Competition between Recycling and Incineration, Economics Sound Resource Management, Seattle, Washington.

[29] Murray, R. (1999), Creating Wealth from Waste, Demos, UK.

associated with waste materials. To date, over 3,000 jobs have been created as a direct result of the strategy.

As incineration poses a threat to the development of more sustainable, preferential methods of waste management, it also threatens the economic and social advantages of such methods. For example the benefits of recycling expand beyond the saving of energy and other resources. It can help revitalise existing industries and attract new industries to urban and rural communities. Recycling is an economic development tool as well as an environmental tool. Reuse, recycling, and waste reduction offer one of the most direct development opportunities for communities. Discarded materials are a local resource that can contribute to local revenue, job creation, business expansion, and the local economic base. For example, just sorting and processing recyclables alone sustains 5 to 10 times more jobs than landfilling or incineration[30]. A UK study has shown that attaining the national target of 30% recycling could potentially create 45,000 jobs[31].

5.7 7TH GROUND OF APPEAL – CONTRAVENTION OF DEVELOPMENT PLAN PARAMETERS.

The subject site is within the functional area of Meath County Council and is governed by the statutory Development Plan for the area, which is the Meath County Council Development Plan 2001. We respectfully contend that the proposed development would contravene a number of important Development Plan Parameters. These are reviewed in brief as follows:-

Meath County Council County Development Plan 2001, Volume One,
"Objectives for the County at Large"
Page 9
Section 2.3 – "Opportunities" (extract)

- *"The county contains rural cultural landscapes of high quality such as the Boyne valley, which contain archaeological remains of international interest and which underpin a growing tourism industry."*

Comment.
We submit that the placement of an incinerator in such close proximity to the Boyne Valley materially contravenes the above objective and should be rejected on this basis.

Page 26
Section 2.7.3 – "Solid Waste Disposal"
"The review of the County Development Plan will embrace the recommendations of the Council's consultants in relation to recommended options for waste disposal and management. At present, the existing system is dependent on landfill with little segregation of waste with recovery of compostible wastes and / or recyclables. Major investment has been identified for a new landfill at Knockharley near the N2 road in the eastern part of the county and this new sanitary landfill will be

[30] Institute for Local Self Reliance & GRRN, GRRN Green Paper #3: Create Jobs from Discards, USA.
[31] Waste Watch (1999), Jobs from Waste, London.

operated in association with management practices aimed at recovering organic and recyclable waste fractions.

- Future Waste Management Action will be informed and have due regard to the Regional Waste Management Plan.
- The Waste Management Strategy will be based on four core tenets;
- Public awareness and local authority support for waste minimisation and recycling.
- Provision of improved recycling facilities.
- Development of waste handling processes including the consideration of thermal treatment to reduce bulk and landfill needs while yielding an energy return.
- The provision of residual landfill capacity for the short, medium and long term at strategic suitable locations."

Comment.
The proposed development is, at best, premature pending the provision of the separation and recycling options identified in the Development Plan. While we recognise that the proposed development will incorporate such facilities, we submit that evaluation of a waste separation and recycling plant should be permitted prior to the making of any decision regarding incineration.

Page 28
Section 2.8.4 – "Landscape Protection"
"Areas of high amenity in Meath include the Boyne and Blackwater valley areas, Slieve na Calliagh and Lough Sheelin, shoreline, Hill of Tara and Skyrne Hill and a range of views and prospects throughout the county. The County Development Plan will have regard to the Landscape Guidelines being prepared at present, in assessing development proposals vis-à-vis landscape impact.
Objectives for these areas will include:

- Protection of such areas from visually damaging development or proposals that would cumulatively erode landscape quality.
- Promotion of areas for appropriate development, primarily leisure tourism or recreational based development.
- Reviewing the extent of area currently designated as being of high amenity. This will specifically address the division of the county into Landscape Character Groups and identification of sensitivities within each area.

Comment.
The proposed development due to its nature, scale and form, will undoubted have an negative impact on the landscape and will be visible from a number of points both close to and far from the subject. In addition, it will represent a significant addition to the existing impact caused by the Patin factory and quarry. The proposed power station would obviously add further to the issue of visual intrusion.

In short, we submit that the current proposal by itself, and indeed taken with existing and permitted development, would cause a significant erosion of the landscape quality taking

into account the views from visually sensitive areas. In short, the current proposal materially contravenes the Planning Authority's objectives in this regard.

Page 29
Section 2.8.7 – Protection of "European Sites"
"The review will embrace designated candidate National Heritage Areas (NHA's), SAC's and SPA's and should aim to:

- Protect such sites and their settings and, where appropriate, catchments for development that would endanger such sites.
- Ensure that drainage proposals are consistent with the protection of such sites".

Comment.
The site of the proposed development is relatively close to a proposed NHA, i.e., Duleek Commons. We respectfully suggest that there is not a satisfactory degree of separation between the subject site and Duleek Commons, hence the proposal would contravene the Development Plan in this regard.

Section 2.8.8 – "Archaeology and Heritage"
"The commitment of Meath County Council to the conservation of the prime archaeological resource in the county – the megalithic cemetery at Bru na Boinne, can be seen in its support for the implementation of the Boyne Valley Management Plan. In addition, considerations of proposals, both public and private, in sensitive archaeological contexts or areas with heritage buildings makes it necessary to consider:

- Protection of the archaeological potential of an area including its setting.
- Conserving heritage buildings where reasonable and necessary.
- Implementation of Government policy on protection of architectural heritage.

The Planning Authority shall have regard to the "Heritage Appraisal of Development Plans" a methodology for planning authorities prepared by the Heritage Council and shall provide for the integration of the methodology into the plan at the earliest possible date.
The Planning Authority shall review the format of Volume 3 of the plan in relation to the conservation issues to take account of impending ministerial regulations."

Comment.

Having regard to the subject site's proximity to archaeological and heritage sites, and the importance of these sites, especially their role in the tourism industry, we respectfully suggest that the current proposal would materially contravene this section of the Development Plan.

Page 61

Section 3.6.9 –" Views and Prospects"
"The Meath landscape contains a wide range of points where either there are fine views or which in themselves are landmarks or prospects. The conservation of these amenities are vital to the tourism attractions of the county. The Rural Detail Maps indicate the location of such features, which are also listed in Volume Three. Where development is envisaged adjacent to such features, the Planning Authority will pay close regard to the potential effect on the amenity value of these items with an over-riding objective of their protection."

Comment.
The proposed development will in fact be visible from within a Listed View, i.e. V16 Bellewstown Ridge. Therefore, it would clearly contravene the above objective.

Meath County Council County Development Plan 2001, Volume Two,
Written Statements and Detail Objectives for Towns and Villages:
Page 36
Section 12.1.3 "Strategic Development Issues"
"Considering the strategic location of Duleek, its heritage, its capacity for growth and potential for tourism, it is considered that there are four principal development issues facing the village:
Issue 3:
The issue in relation to the conservation of the village considerable architectural and archaeological heritage through instruments such as Town Renewal Plans and conservation support. In addition how to employ Duleek's distinctive character as a component of the County's tourism base and **thereby diversifying employment in the Duleek Area further."**

Page 37
Section 12.2.2 Archaeology and Heritage
"Much of the attractions of Duleek relate to its archaeological and architectural heritage. The town's origins were effectively put in place by an early Christian Monastery, which was subsequently developed by the Anglo-Normans into the core structure of Duleek, which is present today. There is a particularly strong collection of heritage items on Church Lane, including St. Kieran's Church, the Church of Ireland Church and the Abbey. These features and the enclosures they frame established much of the plan form of Duleek. It is a core development objective of the Planning Authority in relation to Duleek that this heritage is protected and conserved and development proposals in the areas of archaeological interest indicated in the urban detail map will be referred to Dúchas. The observations of Dúchas will be taken into account by the Planning Authority in the decision on such proposals.
There area also items of architectural interest, and trees which are to be preserved and protected respectively. These items are detailed in the specific development objectives section".

Comment.

The subject site is proposed to be located in relatively close proximity to Duleek. Given the nature and scale of the proposal, it is our contention that it will have a significant negative impact on the Heritage value of Duleek. If this development were to proceed, then Duleek would be known by the general public for its incinerator – not its heritage.

We respectfully submit that the proposed development would materially contravene the Development Plan objective relating to Duleek and the protection of its heritage.

Meath County Council County Development Plan 2001, Volume Three, Conservation
Page 29
Site Name: Duleek Commons
Site Code: 001578

"This NHA is 1 km. northwest of Duleek, occupies a level drained marsh and is associated with the floodplain of a tributary running from Thomastown marsh to the river Nanny. It is fairly dry around the periphery where Hard and Soft Rush can be found. The centre is wetter with wetland species such as Water Mint, Water Forget-me-Not, large stands of Yellow Flag, Jointed Rush and bulky sedges. The rare spike-rush was recorded her in one of its very few inland locations."

Comment.

Once again, having regard to the nature of the proposed development and the relative proximity of the subject site to the NHA site, we respectfully suggest that the current proposal would materially contravene this important section of the Development Plan.

5.8 8TH GROUND OF APPEAL - PRECEDENT DECISIONS.

There are two precedent decisions which we wish to bring to the attention of An Bord Pleanala.

(1) Reg Ref; 00/1107, An Bord Pleanála Pl17.121102

This proposal related to a site outside Duleek, close the subject site in the current proposal, and was for development work to facilitate an Agripark.

While the Planning Authority granted permission for this development, An Bord Pleanála refused permission for 4 reasons including,

- **Development was for unzoned lands.**
- **Traffic hazard vis a vis the R150/152 junction.**
- **Unsustainable Development.**
- **Impact on residences in the vicinity.**

We respectfully submit that the reasons for refusal are equally appropriate in the context of the current proposal.

(2) Ref: 99/2242, PL 09.120926

This proposal related to a proposed power station at Dunstown, Kilcullen. An Bord Pleanala upheld a decision to refuse permission. We contend that the decision is relative to the current proposal because the applicants had argued that although proposed to be located in a rural area, the proposal would be acceptable having regard to exiting ESB

infrastructure in the vicinity. This is similar to much of the argument presented in the current proposal.

However, An Bord Pleanála rejected this analysis and included reasons relating to ;

- **Unzoned land - Development would be incongruous due to height and scale etc.**
- **Contravention of landscape designation in Kildare County Council Plan.**

We respectfully submit that these reasons for refusal are appropriate in the current instance and that the Higher |Authority has rejected the notion that existing infrastructure sets aside concerns regarding impact on rural character as the applicants seem to be suggesting in the current proposal.

6. CONCLUSIONS

Having regard to the foregoing, we respectfully call on An Bord Pleanala to overturn the decision of the Planning Authority and to refuse planning permission for the proposed development.

Mark Rave.

O'Neill Town Planning.

O'Neill Town Planning

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The Principal Officer,
Planning Department,
Meath County Council,
County Hall,
Railway Street,
Navan,
Co. Meath.

16th July , 2001.

RE: PRELIMINARY OBJECTION TO APPLICATION FOR PLANNING PERMISSION FOR WASTE MANAGEMENT FACILITY AT CARRANSTOWN, DULEEK, CO. MEATH, FOR INDAVER IRELAND.

(REG REF: 01/4014)

A Chara,

On behalf of our client, **No Incineration Alliance, PO Box 2001, Drogheda, Co. Louth**, we wish to submit this preliminary objection to the proposed development as set out above.

We include a number of photographs, map and copy of precedent decision to support the points made in this submission.

1 Introduction.

Our client, **No Incineration Alliance, PO Box 2001, Drogheda, Co. Louth**, is an umbrella group made up of concerned residents groups and individuals living in the immediate vicinity and the wider area surrounding the site, that is the subject of the current planning application.

Our client is hugely concerned by the current proposal believing it to be fundamentally inappropriate to this rural location and respectfully urges the Planning Authority to refuse permission for this development.

In the interests of clarity, we will set out the remainder of this preliminary objection under the following headings:

- *Brief Description of Subject Proposal.*
- *Context of Site Location.*
- *Development Plan Parameters.*
- *Summary of Our Client's Concerns.*
- *Planning Assessment.*
- *Conclusion.*

2 Brief Description of Proposed Development.

The proposed development is described in the application documentation as a, "*Waste Management Facility*" and includes the following elements:

- *Administration,*
- *warehousing,*
- *reception hall,*
- *waste bunker,*
- *sorting plant,*
- *furnace,*
- *ash burner,*
- *operations building,*
- *flue gas treatment,*
- *security buildings*
- *pumphouse, etc'.*

The documentation outlines 3 main operations proposed to be conducted on the subject site as follows:

(1) Community Recycling Plant.
(2) Recycling for Industrial Material.
(3) Waste to Energy Plant.

In terms of volumes of waste handled, the application documentation indicates 2,000 tonnes p/a, 20,000 tonnes p/a and 150,000 tonnes p/a in respect of each of the above operations.

3 Context of Site Location.

The subject site is located on the western side of the R152, approximately 3 km to the northeast of Duleek. It has a stated area of 101.2 hectares in total and is under grass at present.

The subject site is located in an area that is primarily agricultural in use. While there is an existing quarry, cement plant and 110 kv ESB substation located within the vicinity of the subject site, the area is essentially rural in character. Residential development in the vicinity of the subject site takes the form of ribbon development along the R152. It is also noted that there is a primary school located c. 1 k to the east of the subject site.

4 Development Plan Parameters.

The subject site does not have a specific zoning objective in the County Development Plan so it is deemed to be an agricultural area.

The Plan accepts that a limited number of uses such as, masts, energy installations and afforestation can take place in rural areas providing they are satisfactory designed and located. The special nature of quarrying is also acknowledged and the fact that such activities are confined to the location of viable deposits.

5 Summary of Our Client's Concerns.

Our clients have a number of serious concerns regarding the proposed development. These are set out in summary form below.

5.1.1 Objection to Incineration.

Our clients are fundamentally opposed to Incineration as a method of waste disposal. Given that the thermal treatment plant is the most significant element of the current proposal, they feel that they have no choice but to register their opposition to the proposal in its entirety.

In the first instance, they are deeply concerned that the Incinerator element of the proposal will give rise to significant impacts on the health and well being of not just those living in the immediate vicinity of the plant, but those in the wider area also. There concerns in this regard are founded on the negative experience of incinerators in other parts of Europe and the U.S. While recognising that the greater issue of the health impacts associated with incinerators is a deeply controversial one, they feel that a precautionary principle should apply and that incineration should be rejected until such time that it is universally accepted to be a totally satisfactory process from the point of view of human health.

In addition to the issue of human health, our clients are acutely concerned regarding the potential impact that the incinerator would have on the receiving environment. In particular, they are concerned that current proposal would give rise to impacts that would adversely affect, existing landscape, air quality, water quality, ambient noise levels and flora and fauna generally[1]

5.2 Choice of Location.

Notwithstanding their concerns regarding incineration per se, our clients contend that the subject site is fundamentally inappropriate for the proposed development. In this regard they are mindful of the concerns in respect of the receiving environment and in particular the impact of the proposed development on the landscape in terms of visual intrusion. Given the level of dependence on agriculture and tourism in the wider area, our clients contend that these existing industries would suffer irreparable damage if the current proposal were to proceed.

While our clients recognise that the existing quarry and cement plant already take from the scenic value of this landscape, they would reject any contention that the existing development forms any precedent for the choice of location for the current proposal. In support of this contention, they would point out that: -

> *The Carranstown/ Duleek area has already "played its part" in contributing to the economic development of the County by facilitating the existing unsightly development in this locality. It would be most*

[1] Our clients inform us that, for example, there are nesting falcons in the vicinity of the subject sites. Such birds are comparatively rare and the current proposal could prove a substantial obstacle to their well being.

unfair therefore to expect these communities to carry yet another intrusive development in this rural area.

The existing quarry/cement plant is, by virtue of the location of the raw materials, site specific. Thus there is some recognition that such developments have no choice but to locate close to the source of raw material. Our clients would argue that in contrast, the current proposal is not site dependent at the applicants imply in their EIS, and that an alternative, less sensitive location, would be more appropriate.

In short, our clients contend that the subject location is fundamentally inappropriate to a development of this type.

5.2.1 Traffic Implications.

It is clear from the documentation submitted that the current proposal would have a significant impact on the existing pattern and amount of traffic in the vicinity of the subject site. This area has seen many traffic incidents in the past and there are Garda records to confirm this.

While the application documentation include detailed information with regard to traffic movement, such details are based on model which are based on assumptions regarding the future flow of refuse to the site. Our clients are obviously concerned that traffic flows will alter/ intensify over the life of the proposed plant and that this will exacerbate the impacts associated with such traffic and its impact on the amenity of the area.

They are also concerned that the traffic analysis presented does not fully consider the additional impact of factors such as the completion of the M1 or the future development of areas such as Dulcek and Drogheda.

In short, it is our clients contention that the proposed development will give rise to significant delay, congestion and possibly hazard on the existing road network and that this will further impact on the existing character of the area to an unacceptable degree.

6 Preliminary Planning Assessment.

6.1.1 Procedural Concerns.

We have examined the application documentation at the offices of the County Council have noted an important procedural concern.

While the Planning Application was lodged by Indaver Ireland, it is noted that the subject site is in the ownership of a third party. While Indaver Ireland describe themselves as, "purchaser", we note the following:-

The applicants have not submitted evidence of a legal agreement or contract specifying that they will purchase the land on receipt of planning permission.

The application documentation does not include the written consent of the subject sites current owners, to the lodgement of the current application.

In short, it is our contention that the applicants have failed to demonstrate that they have the necessary legal interest in the subject lands to enable them to lodge a valid planning application, as required by the appropriate Planning Legislation.

Therefore, we respectfully submit that the Planning Authority should call on the applicants to clarify this matter before proceeding with the adjudication of the application.

6.2 Rationale for Choice of Location.

We would respectfully question the mechanism and findings relating to the identification of the subject site as detailed in the EIS submitted with the application. The section dealing with this issue in the EIS concludes that,

"The proposed site was chosen after a comprehensive site selection exercise based on objective criteria. It meets all the evaluation criteria it has been subjected to: technical project related criteria, WHO criteria and criteria suggested in the feasibility study on thermal treatment options for the north east region."

While we believe there are a number of important concerns arising from the selection procedure, this preliminary objection confines itself to dealing two important areas which we have identified as being of particular concern, i.e. "*Selection Criteria*" (section 2.10.1) and "*Alternative Locations Considered*" (section 2.10.2).

6.2.1 "Selection Criteria".

Key criteria identified in this section of the EIS included: -

Proximity to Centres of Waste Production-Centre of Gravity of Waste Production.
Proximity to Transport Infrastructure (National Roads)
Proximity to Electrical Distribution System.
Appropriate zoning/land use.
Availability of Sites.

Proximity to Centres of Waste Production- Centre of Gravity of Waste Production.

The details regarding the applicants analysis is presented in Table 2.5 of the EIS where 3 areas are highlighted for their minimal haul distances. These locations are Ardee, Drogheda and Duleek and provide what appears to be a "shortlist" of possible locations.

However, looking to our table below (table NOA 01), we would contend that when all of the haul figures are examined, we find that the majority of locations are within the 4,000,000 to 4,999,999 total tonne kilometre category.

TABLE NOA 1. Analysis of number of locations per TTK cohort.

Estimated Total Tonne Kilometre (to nearest Million).	Number of locations in this cohort.	Locations.
9,000,000 +	3	Cavan, Belturbet, Clones.
8,000,000 – 9,000,000	1	Monaghan.
7,000,000 – 8,000,000	1	Coothill.
6,000,000 – 7,000,000	3	Dunboyne, Dunshaughlin, Trim.
5,000,000 – 6,000,000	4	Bailieborough, Ashbourne, Castleblaney, Laytown.
4,000,000 – 5,000,000	**7**	**Drogheda, Dundalk, Navan, Duleek, Kingscourt, Kells, Carrickmacross.**
3,000,000 – 4,000,000	1	Ardee.

Therefore, we respectfully contend that the effective short listing of Ardee, Drogheda and Duleek, and the ultimate selection of Duleek, is fatally undermined by the fact that there are in fact 7 towns (out of a total of just 20) that fall within the 4,000,000 – 5,000,000 cohort[2]. When examined from this perspective, we strongly contend that there is little justification for picking the subject site based on the Estimated Total Tonne Kilometre analysis which forms the backbone of the applicants site selection procedure.

Furthermore, we note that the EIS fails to adequately demonstrate how the applicants selected Duleek in respect of the 3 sites short listed, i.e. Ardee, Drogheda and Duleek, hence, it would be difficult to imagine a credible explanation for the selection of Duleek in the context of the 8 towns located in the 3,000,000 – 5,000,000 cohort.

Proximity to Transport Infrastructure (National Roads)

On the issue of Transport Infrastructure, we have previously referred to our client's contention that the existing road is dangerous and has seen many accidents. Clearly the traffic that would be associated with the current proposal could exacerbate this situation.

[2] There are in fact 8 towns within the 3,000,000 – 5,000,000 cohort, thus further undermining the selection of Duleek.

In addition, we respectfully submit that the issue of traffic must be examined in the context of medium to long-term developments in Drogheda and surrounding areas which will obviously contribute greater traffic volumes onto this stretch of road. There is also the M1 to consider and the possible impacts that this will have on the transportation network in the vicinity of the subject area. This combined with the fact that car ownership rates continue to rise at an alarming rate, would perhaps undermine the contention that the existing R 152 would, in itself, facilitate a development of this type.

On short, we would respectfully suggest that the applicants contention that the subject site is made more favourable because it has frontage to the R152, is questionable given the changes that are likely to take place in the future which could have huge implications for the volume of traffic on this road, hence its capacity to cope with the volume and type of traffic that would be associated with the proposed development.

Proximity to Electrical Distribution System.

The EIS infers that the proximity of the subject site to the existing ESB substation is a factor in favour for its location for the proposed development. This takes account of the fact that the proposed development will produce electricity as a by-product of incineration.

However, it is clear from the documentation that electricity generation is at best a by-product of the process; hence the ready connection to this source of electricity should not be a major concern relative to other location factors such as environmental impact.

Furthermore, the documentation fails to indicate the feasibility of providing a connection to the national grid at other locations, thus the case for choosing this site specifically is again undermined.

We would respectfully suggest that given the nature and scale of the proposed development, the ready connection to an ESB substation is a relatively minor factor in adjudication the suitability of the location for the subject proposal.

Appropriate zoning/land use.

It is noted elsewhere in the EIS that Meath County Council recognises that some non-agricultural uses can be permitted in areas deemed to be primarily agricultural. Examples of infrastructure and site specific industries such as mining and quarrying are noted in this regard.

However, the central issue in deciding whether such non-agricultural activities should be allowed in these locations should be based on two factors: -

Is the industry site specific ?.

Is the industry compatible with the location ?.

On the first issue we have already presented our contention that the proposed development is not, as with a quarry, site specific to the extent that it must locate in this particular area. While the applicants have

presented an analysis based on proximity to waste collection, we contend that this analysis does not justify the choice of location in the current instance. The fact is, we respectfully suggest, that the subject development could be placed at any number of more suitable locations. The applicants have failed to make a sustainable case for the location of this development at this particular site.

On the second issue, we would submit that the proposed development due to its height, nature and scale, is totally inappropriate to this rural location and is fundamentally at odds with this agricultural area. We would point out that while quarries and ancillary plants, together with electrical infrastructure have become an accustomed part of the rural landscape – Incinerators clearly have not!.

In conclusion, we would respectfully suggest that industrial type developments must be directed away from rural locations unless there is a genuine, sustainable case permitting them by way of exception. We respectfully contend that no such case is sustainable in the context of the current proposal.

Availability of Sites.

The applicants identify 5 criteria in this regard. We will respond to each in turn.

(1) *Lack of designation as a National Heritage Area or Special Area of Conservation.*

Our Response.
The subject site would appear to be located relatively close to a Proposed National Heritage Area (wetlands commons). Such an area would obviously be very sensitive to any disruption in the existing hydrology by the proposed development.

(2) Topography of site, to allow the large building structures to be built on lower ground, thus reducing the visual impact.

Our Response.

Regardless of the site's topography, the fact remains that the subject development will be intrusive when viewed from a number of areas, including areas that play an important role in this areas tourism industry.

(3) Access to the R 152 and sufficient road frontage to allow a suitable junction to be built.

Our Response.
Previously dealt with in this submission.

(4) *Proximity to electrical distribution system.*

Our Response.

Previously dealt with in this submission.

6.2.2 "Alternative Locations Considered".

Section 2.10.2 of the EIS deals with Alternative Locations Considered. The applicants screened the possible sites by: -

(1) Indavers technical selection criteria.

(2) Steps 1 & 2 of the WHO selection procedure.

(3) Shortlisting criteria from the Feasibility Study for the North East.

While the EIS document does contain some detail regarding criterion number 2 (WHO) it fails to present any detailed information regarding items 1 and 3.

We respectfully submit that reference to the applicant's own technical selection criteria is of little assistance in the absence of a copy of such selection critical.

Furthermore, we respectfully submit that reference to a previous feasibility study is undermined by the fact that: (a) a copy of this study was not included with the EIS and (b) the applicants fail to provide an analysis as to the appropriateness of this study in the context of the present proposal.

In short, the consideration of alternative sites is fundamental to the EIA process. Both the parent European Legislation and the Domestic Legislation specify that adequate consideration must be given to the assessment of alternative location for any development for which an EIS is required. We respectfully suggest that the EIS submitted fails to meet the legal standard in this regard and consequently, the proposed development should be rejected on this basis.

6.3 Precedent Decision.[3]

We would respectfully draw the Planning Authority's attention to a recent decision regarding a comparable proposed development at Boycetown, Kilcock, Co. Kildare, Reg ref, 618/99 PL09.112536 refers.

Kildare County Council refused planning permission for the Thermal Waste Treatment Plant quoting 14 reasons for refusal. Following both first and third party appeals to An Bord Pleanála, the higher authority upheld this decision including 3 reasons for refusal.

Reason 1 of the Board's decision related to traffic hazard and the impact that the proposed development would have in this regard.

Given our concerns regarding the traffic situation on the R152, we respectfully submit that a similar reason for refusal would be equally appropriate in the current instance.

Reason 2 of the Board's decision related to subject sites location in an agricultural area, close to adjacent housing and Montessori school and concluded that the proposed development would be inappropriate at this location.

[3] A copy of this decision is attached to this submission.

Given the subject sites location in an agricultural area and its relative proximity to residences and a school, we respectfully submit that this reason for refusal is equally applicable in the current instance.

7 Conclusion.

Having regard to the foregoing, we respectfully call on the Planning Authority to Refuse Planning Permission for the subject development.

Please forward any correspondence to the above address.

Yours faithfully,

Mark Rave

O'Neill Town Planning.

Incineration Pollutants & Health

The following part of the submission takes the form of notes taken at various lectures on the toxicology of some incinerator pollutants, beefed up with some further reading we've been doing on the subjects covered to supplement the topics.

We feel that it is important to flag these points – both these specialists are highly esteemed in their respective fields, and both have had extensive experience in the field of incineration opposition. They both subscribe to the below ethos.

To sin by silence when they should protest makes cowards out of men.

(Abraham Lincoln)

Environmental hazards and human life – Sandra Steingraber, PhD

Ecologist, author and cancer survivor. Sandra Steingraber, PhD is an internationally recognized expert on the environmental links to cancer and reproductive health. She is a Professor of biology and serves on the US government's National Action Plan on breast cancer.

From her book 'Living Downstream' – "No matter how you look at it, scooping garbage into an oven and setting it afire is an equally primitive alternative to digging a hole in the ground and burying it. The former contaminates the air; the latter, groundwater."... "No matter how improved or what they are called, incinerators present tow problems that landfills do not. First, incinerators only transform garbage; they don't provide a final resting place for it. There remains the question of where to put the ashes. Second, these cavernous furnaces create, out of the ordinary garbage they are stoked with, new species of toxic chemicals. In addition to producing electricity, they generate hazardous waste."

"The first problem flows from a primary law of physics. Most of us at one point or another in our education probably had it memorized: matter an neither be created nor destroyed. Every single atom fed into an incinerator survives. If 1,900 tons of garbage per day go in, 1,8000 tons per day also come out, albeit in a chemically altered form. Some of this matter rises as gas or tiny particles and is released into the air as stack emissions. (much of the gas is carbon dioxide). The rest of it is captured as ash, which requires disposal.

The second problem is more an issue of chemistry than of physics. Somewhere between the furnace and the top of the stack, on the papery surfaces of fly ash particles, tin the crucible of heating and cooling, carbon and chlorine atoms rearrange themselves to create molecules of dioxins and their closely related organochlorine allies, the furans. … such conditions are created by combinations as banal as newspapers plus plastic wrap plus fire.".

Dr Steingraber chose to speak of pollutants specific to incinerators which can affect conception, preganancy and child development.

Opening statement of her talk was = "We live in a Soup of Contaminants"

At 38 Dr Steingraber was pregnant with her first child, she has worked/studied for 20 years as a biologist/ecologist, specialising in the effects of pollutants on each organism within an ecosystem. When she became pregnant, she realised that she herself was a habitat and started assessing the possible pollutants at various stages of life.

The blood / brain barrier is something which stops some pollutants passing from the blood stream into the brain. It is formed when a child is approx 7 – 8 months old. The brain is 50% fat. If a child is exposed to fat-soluble contaminants before the blood / brain barrier is formed, these could cause huge damage. Such contaminants are dioxin, mercury, lead, etc.

PAH's – polycyclic aromatic hydrocarbons – v. long chain of carbons – in air pollution – present in incinerator emissions. Also present in cigarette smokers – it has been proven that PAH's kill eggs in humans and women who smoke reach the end of their fertile life by a year or two before non-smokers. If we are exposed to high level PAH's could have significant effects on fertility rates in the future. PAH's, by attaching to certain reactors in eggs, cause death of them.

Studies have shown if a father is exposed to solvents, diesel fuel, turpentines, - raise risk of cancer of the nervous system in offspring. Significant for haz incinerator.

Implantation – process of implantation disrupted by exposure to endocrine/immune-disrupting chemicals – questions now being posed – not great records on miscarriages – no database or body of information on miscarriage or spontaneous abortion, therefore very difficult to assess. It is suggested that exposure to pollutants could be a contributing factor to the above. This is one thing that will be difficult to prove – if we have no baseline data on miscarriage rate, then how can we assess if it rises? The lack of information on incidence internationally and in Ireland makes cause and effect impossible to identify.

Embryo – week 5 to 10 – this is when a complete human being is formed, the size of a paperclip. Beyond this, it is all developmental of what has been formed.

Birth defects such as holes in heart, cleft pallet, other physical defects happen in this period. Research has shown some of these can be attributed to exposure to pesticides and solvents. These defects are on the increase

There is good evidence that dioxin is also a teratogen (chemical that can cause birth defects).

There is an EU birth defect registry – this is not really developed across the States, but some, such as California have good records and research in this area.

Week 10 onwards = foetus – if toxic exposure happens in this period, especially between months 5 and 6 – the effects are usually developmental / eg. lower IQ, cognitive, attention deficit disorder, behavioural problems, mental retardation. Caused by **lead, mercury** and some other **heavy metals**. As no blood brain barrier, and these pollutants cross the placenta, developing foetus have no defense. Only in 1990's lead free fuel legislated for in Ireland, lead free paint, etc., but lead still present in every-day things today. Lead was recognised as a problem in the 1920's and recommendations were made to get it out of the system as much as possible. Mercury present in light bulbs, batteries, thermometers and other goods that can make their way into the waste stream. When burnt, mercury vaporises, it doesn't go away, comes back down in snow, rain, dust particles, gets into the marine system, eaten by benthic organisms, makes way up the food chain, each time becoming more toxic (through concentration) by factors of 100's, benthic creatures > crustaceans > fish > humans > breastfed babies, or other such routes. Mercury becomes methylated in fish, binds with carbon, this form is far more toxic than pure mercury. This can cross the placenta very easily, can alter brain formation and nervous system architecture, paralyses the migration of neurons in brain development.

It is estimated that there are 60,000 infants in the US annually at risk of exposure damage by lead and mercury. It is also estimated that an increase in the amount of children with behavioural problems, ADD, lowered IQ, learning disabilities, etc. – a whole generation of children who will overwhelm the schools system on account of special needs. How could Ireland cope? We already see how it treats it's children with disabilities (Catherine Synnott case) and many others.

Mercury has also been linked to autism – some children with autism have been found to have elevated levels of mercury in their systems, could come from mothers – mercury used as preservative in many vaccines, including anti-D, through fillings in teeth, through the food chain. The household goods mentioned above that contain mercury would all be in the average dustbin, therefore make their way to the incinerator into the foodchain in a highly toxic form.

PCB's – present in pesticides, etc., can mimic and flush out thyroxin which forms naturally in the system and is essential for functioning of endocrine system, thyroxin is essential for foetal brain development. Also effects balance and coordination.

Babies pack on weight in the last tri-mester, PAH's disrupt ability to carry proteins across the placenta. Studies in Los Angeles, Beijing and the Czech Republic have proven that cigarette smoking mothers' babies are on average ½ lb lighter than non-smoking mothers. This difference is attributed to the PAH's in smoking.

At certain times of the year when air pollution is highest, find correlation between lower birth weight children.

Low birth weight has implications for life-long problems such as blood pressure, obesity, etc.

Some chemicals can damage the placenta itself. Placenta produces hormones which help pass messages in each direction, eg. when the babies body starts calcifying, sends message to get calcium from mother to strengthen skeleton.

Labour is initiated by the placenta. The Placenta Clock can be disrupted causing premature birth – there is a trend of premature births in women in the 20 – 34 year bracket which is reaching epidemic proportions. It has been estimated that it can cost on average US$1 million to bring a pre-mature baby from the date it is born, to the date it is meant to be born. There are also the issues of long term illnesses, reduced immunity, weight issues, etc., which are always associated with pre-mature babies.

DDT, PAH's and PCB's have been proven to cause damage to the placenta.

PAH's enter the environment, no matter how good the scrubber system on the incinerator stack.

With more women having their children later in life, there is a longer time for the mother's to accumulate fat soluble pollutants. Therefore higher chance of elevated pollutants in children born to these mothers.

By allowing an incinerator into our community we expose ourself to:- "one pollution-control mishap, one Seveso-style explosion, one overturned ash truck and a brisk wind – and the community would regret its decision forever. Even if accidents never happened, they argued, the emissions that were now said to pose little or no risk might someday be revealed as hazardous. Nobody really knows what was in garbage anyway, how could developers be so sure what would come out the stack?"

She further states to "beware of Greeks bearing gifts" – i.e. 'fact finding' trips abroad, community liaison committees, funds for local community projects, offers to fund campaigns, flowers for people in the community if they learn they're sick, offers to buy out houses, etc., are all pretty sinister tactics for 'buying' an in with a community. If their industry was so above board, and safe, why would there be a necessity for such tactics?

Stealing from your grandchildren – the toxicology of incineration – Dr Vyvyan Howard MB, ChB, PhD, FRCPath

Dr Vyvyan Howard is a lecturer in infant and foetal toxico-pathology (Developmental Toxico-Pathology, Dept of Human Anatomy and Cell Biology, Liverpool). He is a well known author on issues relating to health and the environment, particularly incineration.

The was one of the editors of the 'Incineration and Human Health' report which was comissioned by Greenpeace UK – we've included either the full doc, or at least the executive summary of this in all submissions (MCC, ABP, the Louth Strategic Development Plan, with this submission to the EPA and we've been advised that this has gone via another source the HRB).

Dr Howard's (VH) afternoon lecture started with a critique of the 'Risk Assessment' methodology used to quantify the potential risks. He argued that these look at things through computer/mathematical modelling in a vacum – i.e. if this person living so far away eats something which is so far away from the plume, they'll have a ?% chance of developing whatever – no assessment of weather conditions, cumulative effects of other background pollutants, seasonality, diet, etc.

Strong point made regarding the tolerable level – this is usually assessed based on a 150lb adult – not the 7lb new born baby – how can they be expected to be exposed to the same amount of pollutants in their air, food, groundwater, etc.

At the moment in the UK there is a 1 in 3 incidence of cancer, in males this is nearly as high as a 1 in 2 risk. The incidence of cancer is far higher than previous, but the mortality is not much higher than previous – this is a function of the improvements in treatment. What is causing it?

Dr Lichtenstein (New England Journal of Medicine, 2000) reported his findings of a study of 45,000 sets of identical twins – he wanted to find out if incidence of cancer was genetic or environmental – there was only a 10-15% incidence of twins having the same cancer – therefore he surmised that the incidence was down to environmental experience.

VH is a strong proponent of the Precautionary Principle as outlined in the 1996 Wingspread Statement.

VH showed a very interesting slide which evaluated the development costs, duration of exposure, dose, choice and lifetime exposure for pharmaceuticals against food as an illustration of how little testing and analysis goes into food which is readily available at any dosage for a possible lifetime exposure. He was doing this in the context of potential contamination of the food chain by pollutants from incineration and other industries.

He also concluded there was no immediate cause and effect – i.e. you can't say you've got cancer because you live next door to an incinerator – the exposure can be over years, and we don't have the technology yet to prove it. He gave the example of asbestos exposure and the occurrence of mesothelioma and asbestosis – up to 40 years after exposure. Again – precautionary principle.

In the issue of risk assessment – VH spoke of genetically modified food – there is no baseline data – so where do we start from – there is no exposure data – who eats what? Not being monitored. VH thinks it is an

uncontrolled experiment – if GM is causing changes – how do we know – we could have been eating it for ages.

An article was published in 'Nature' entitled 'Precautionary Principle Stifles Innovation' – VH et al responded in 'Nature' Vol 401 – 16.9.1999 – stating that it is a tool for decision making – it deals in expectation not just probability – i.e. benefits if succeeds and costs if wrong.

He stated that in undertaking risk assessments for developments – (normally commissioned by the proponents of the development) – the imperative is usually a financial one.

Risk assessment – main tool used to stop the Precautionary Principle

Risk assessment was designed by engineers to assess the reliability of engineered structures, i.e. stuff that can be easily quantified with regard to load bearing, environmental conditions, construction materials, integrity of structures – this usually leads them to over-design a project, eg. the Millenium Bridge in London (wobbling – much further funding had to be put into it to fix it up), the Comet Airliner – the first 3 disintegrated mid-air – they forgot to assess the effect of such low temperature on the structure and used square windows in the original designs.

Risk assessment has 4 phases:-
Hazard identification – if you don't know what might go wrong – won't test for it.
Hazard assessment – takes time and money
Exposure assessment – very expensive and difficult to assess
Risk assessment – this uses models

Often the first 3 steps are skipped and a risk assessment model is used – not at all foolproof, especially in ecosystems – not all factors identified – never mind assessed.

From discussions with Indaver, they have advised that no risk assessment has been taken for the proposed site in Carranstown, as they contend it is not a Seveso site. There are however fire certs, etc. being worked on. We would wish for a far more extensive risk assessment, looking at the whole site and operation in totality. Looking at the interactions between the cement works and it's associated pollutants and practices, the proposed power station and it's associated practices and pollutants. Many issues which are of potential danger to human and animal life listed in the Waste Application are simply dismissed or we are advised that they will have no significant impact.

'we should remember that risk assessment can be likened to a captured spy, if you torture it long enough, it will tell you what you want to hear' - quote from a former US EPA Director.

Pesticides – we/farmers were being told if we don't use these 'we're going to starve', they in turn have caused:-

- Loss of biodiversity
- Soil degradation
- Pollution of biota

GM food – we're currently being told – if we don't use these 'we're going to starve'

A similar statement is being foisted on us from the incineration industry – i.e. if Ireland doesn't have incineration as part of an 'integrated' waste management strategy, we're going to be buried under our own waste. Environmentalists can sometimes be the ones accused of extolling the Dooms Day messages, but this time the shoe is on the other foot and we, the concerned residents of the North East are saying that there are alternatives to incineration which will help alleviate the waste issue, without compromising our health, wealth and hertigate.

Persistant Organic Pollutants (POPS) - Organochlorines – these are not natural, i.e. they don't occur in nature, they come from processes such as incineration.

Organic chemicals – i.e. carbon based – if they persist in the body – it means we've no way of getting rid of them (for all natural organic chemicals, we have enzymes that break them down and get rid of them) - it means they're un-natural. For all natural organic chemicals in the body there's an enzyme to break them down.

40 million tonnes of chlorine are produced globally annually – plastics, solvents, medicines, pesticides, etc. – there are over 11,000 products which contain chlorine – 35% of the chlorine globally is in PVC.

The UNEP/ OSPAR – POPS Treaty – Dirty Dozen – PCB's, Dioxins, Furans, Aldrin, Dieldrin, Endrin, DDT, Chlordane, Hexachlobenzene, Mirex, Toxaphene, Heptachlar. Some of these can be stopped outright – i.e. just stop producing them, eg Aldrin, Deildrin, Endrin, etc. Some of them need to be phased out as they have accumulated in bodies. The longer the half life, the more they bioaccumulate – i.e. body burden.

7 – 10 years is the ½ life of dioxin in the body. POPS go across the placenta and are also expressed in breast milk.

They bio-magnify through food webs – eg. from airborne, get down into marine body, back up through the food chain to man, with breast-fed babies getting the most concentrated dose. Below is a schematic of this.

Strength	level in food chain	
1	water	
2500	plankton	
45000	crustacean	
1,000,000	fish	
3,000,000	predator fish	
25,000,000	man (top predator)	- above this is the breast feeding child.

95% of matter in our bodies comes through the food chain.

Dioxins are produced at the combustion of organic chemicals.

Waste incineration changes waste into:-

- Gases
- Particulates
- Ash

At the end of the operation exactly the same mass but manage to disperse much of this through emissions.

In Germany it is possible to request to have your body burden of dioxin measured to see if it's okay to breastfeed your child.

400 nursing mothers were assessed and followed up in Rotterdam (Env Health Perspectives, Vol 107, No. 1, Jan 1999). Body burden was taken at birth - follow up for 6 – 7 years – shown that in higher body burden cases there was incidence of:-

- reduction in intelligence
- altered immune system
- disruption of hormones including thyroxin
- reduced immunity

Particulates –
Local problem
Smaller they are, the more toxic they are – if less than 1/10 micron – acts as catalyst – becomes highly chemically toxic.
Smallest particles – hardest to abate
Metallic particles – cause free radical generation.

Dockery & Pope et al (NEJM, 329:1753-1759 (December 9) 1993) - An association between air pollution and mortality in six US cities:-

½ million questionnaires

PM10 atmospheric loading

15% difference in mortality between most and least polluted towns.

Incinerator ash

- Bottom ash – clinker (toxic) - though incinerator companies will argue that it isn't and propose road building, house building schemes using it (Byker, Edmonton, examples of this fallacy reported elsewhere in this submission.)
- Fly ash – arrested in filters (highly toxic)

The waste stream is very different now to when incineration was used in the past, eg. 100 years ago the waste would have been much less and also far more uniform, paper, cloth, organics, etc. to incinerate this wouldn't have been half as dangerous as incinerating our current waste stream, eg. plastics, glossy paper, oils, medicine bottles, bleached papers, PVC's, and other household stuff.

The toxicology of most known incinerator emissions is unknown.

The way the interact with each other is unknown.

There are many as yet 'unknown' incinerator emissions.

Dioxin – current body burden – VH advises this is the way to work out any basis for exposure – by assessing how much a person has as an individual – not by guesstimating the average daily exposure for a population – this doesn't take current, background,

The average US citizen has 10ngI-TEQ/kg body weight – but 1% of the US population has 30 – 40ng I-TEQ/kg body weight – i.e. 3 – 4 times more than the average, their body burden is higher for whatever reason, therefore to be exposed at what is deemed a 'safe' daily intake level could push them over the edge.

Experimental rats @ 100ng I-TEQ/kg bodyweight have severe allergic reactions.

All these estimates are likely to be under estimates.

The 1999 Belgian Food Crisis - 25 – 40 litres of old transformer oil which contained approx 1g of dioxin – contaminated the foodchain, did billions of dollars worth of damage to the food industry and Belgium's name in general. Luc Hens has estimated that up to 8,000 cancers could be directly related to this one incidence.

Body burden of breast milk – over 6 months of breastfeeding can reduce the body burden of the mother by 50% - i.e. they are passing the dioxin in their body over to their child.

70 – 100 times higher intake by babies than by adults.

If breastfed – in 1st couple of months will receive at least 16% of total lifetime exposure.

Koppe et al, 2002 – Health Impacts of Waste Management 135-154 (ISBN 0-7923-6362-0) – for this group of pollutants produced by incinerators there are already data which confirm that PCB's etc have an effect on the next generation.

Dioxin Monitoring –
EU Standards = twice a year
Incinerator Company advise they'll do = 4 times a year and use the AMESA system. Again we raise the issue that this system, though maybe the best on the market at the moment, falls short on many counts. 1) it doesn't do real time readings

2)it smooths data over the test period

3) there could be a delay of 4 – 6 weeks before realising that the incinerator is creating more dioxin than it should, at which time it is a case of stable doors and bolting horses

4) it is completely self-regulated.

5) will it capture the brominated and chlorinated dioxins?

Dioxin often underestimated – as in many forms – can amalgamate with Bromines or Chlorines and not be read through traditional analysis methods (outside the range they read at, or are set for). Brominated or chlorinated dioxins – these substances are found in all computers, flame retardant materials, and many others.

WHO Safety Standard on Dioxin – 10 years ago it was set at 10 picogramme per kg per day – 3 years ago it was revised to between 1-4 picogramme per kg per day. Again – VH stresses the need for body burden assessment – not daily intake quotas.

VH showed a table which is issued to fishers in the Great Lakes of America – it lists the 49 pesticides which are recognised as being known endocrine disrupters by various bodies, the levels of these in the fish of the lake and which fish can be eaten in what quantities, if at all. We mention this as an illustration as to how much damage we have done, and also the time lag between doing the damage and realising that all is not well.

Age of onset of puberty - Paediatrics 1997 – took measurements of PCB's and DDT in parents of 17,000 patients (female) who reported to clinics suffering from early onset of puberty, some children as young as 24 months. This trend is on the increase. VH wondered what the implications were for the children and the health service in later life, i.e. hormone treatments, breast cancer, etc.

Studies from the UK and Hungary have shown that hypospadias (male condition - governed by testosterone) has shown a vast increase.

80% of current dioxin in circulation globally is caused by incineration.

Risk assessment = assumption is that there is a zero level of background dioxin body burden.

Need to insist on baseline data.

We believe that the Food Safety Authority have recently commissioned a report on the baseline levels of dioxin in the Irish population. This report is currently being written up and hasn't been published yet – the early indications from the results are that Ireland has a lower amount of dioxin in the study sample than any of the other EU member states.

VH – 30% of small respirable particles are less than 10 micron in diameter (PM10) come from the actions of waves – water evaporates – particles remain airborne – these are lovely binding sites for pollutants.

Vyvyan Howard made the point repeatedly that **'Ireland was sitting on a goldmine'** with a view to our level of pollution and purity of agricultural produce – as time goes on the premium will go up and up for such high value produce.

Dr Howard first became interested in the subject about 12 years ago when there was an incinerator proposed for his neighbourhood, Birkenhead. He looked at it initially, as we all did, and thought, waste to energy – fantastic. He then listened to a couple of Greenpeace people and started assessing the toxicology of some of the known emissions and became instrumental in the campaign to stop the incinerator. This he did, and a few others in the area in the interim. He has been involved in helping people all over the world by sharing his knowledge in the known effects of pollutants – more potent though is his advocacy of the lack of knowledge of so many pollutants, what they are, what their effects are, what their interactions are, etc.

Environmental Pollution and Health – there's a big gap – it's not taught at medical school – therefore many issues unless well documented, will go undetected.

VH was asked 'what were the 4 main lies of incinerator companies?' – he responded

1 that's only steam

2 bottom ash is safe

3 lot of energy back (made argument of false economy – energy to produce, etc.)

4 risk assessment

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