

Noeleen Keavey

Submission 11

From: alcedonua [alcedonua@eircom.net]
Sent: 30 October 2006 19:06
To: Licensing Staff
Subject: Poolbeg incinerator ref W 0232-01
Attachments: Incinerator EPA let rev 1.doc

office

Dear Sirs,

Attached please find my submission on the Licence Application by Dublin City Council for the proposed waste incinerator at Poolbeg.

While I trust that this will be clear and self explanatory, I would be very pleased to clarify any points of difficulty or offer any further help, if so required.

Trusting that the EPA will see fit to refuse a licence for this ill-advised proposal.

Yours faithfully

Maurice Bryan
Conservation Adviser
22 Butterfield Park,
Rathfarnham, Dublin 14.
Tel 01 4931877

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**Maurice W. Bryan B. Sc., C. Eng., M.I.E.I., Eur. Ing.
Conservation Adviser**

Telephone and Fax 01-4931877
e-mail: alcedonua@eircom.net

22 Butterfield Park,
Rathfarnham,
Dublin 14,
Ireland

31/10/2006

The Secretary,
Environmental Protection Agency,
Johnstown Castle Estate,
Co. Wexford.

Applicant: Dublin City Council.
Development: Proposed mass-burn incinerator and associated facilities.
Site: Pigeon House Road, Dublin 4.
Reference: W 0232 – 01.

Dear Sir,

Pursuant to the notice issued by Dublin City Council (hereafter called "the Council") on 30th June 2006, and as someone who has been involved with the Dublin Regional Waste Strategy from its inception, I urge the EPA as strongly as possible to refuse a licence to this project.

I do this on two main counts: Firstly that the proposed facility is a flawed, dangerous, extravagant and unsuitable solution to the waste problems of the Dublin Region in itself and, secondly, that the site chosen is grossly unsuitable and unsustainable even if the decision were taken that such a plant should be constructed. My objection is based on many years experience of the design and execution of large projects as well as on extensive work in the field of wildlife conservation and planning considerations.

My objection will be in two sections, corresponding to the EIS and the Licence Application. This is necessary as there are significant discrepancies between the two documents. My comments on the EIS are largely those already submitted as an objection to An Bord Pleanála, and if there are some sections that are not applicable to the EPA I trust that they will be overlooked.

However, before commencing detailed examination I feel it most important to refer to the contractual situation and conditions under which the application is being promoted, which I feel to be of great importance.

Much of the potential for future problems appears to arise in the commercial approach taken by the Council, where a convoluted and apparently confused "public private partnership" approach has been selected as the basis on which to proceed. This has involved the placing of a contract with a commercial concern to design, build and operate the facility for a minimum of 25 years with options for extension. This contract apparently (see below) binds the Council to produce some fixed amount of suitable waste, said to be in the region of 600,000 tonnes per annum, for the period of the contract, thus immediately removing any incentive for more environmentally friendly waste

strategies like prevention, minimisation or recycling. Indeed, as these strategies are adopted and begin to fulfil their promise (as they are already doing) it will be necessary for the Council to import suitable waste from outside the Region, thus increasing costs even more, adding further to traffic load and further increasing Kyoto loads from the already grossly excessive Irish levels of greenhouse gas emission.

In considering the contract it should be noted that this document has remained shrouded in secrecy, and the suspicion must arise that it contains provisions that make it a "licence to print money" for the chosen contractor. This suspicion is reinforced by the actions of the Council, which first promised at an information meeting in 2005 to make available the heads of agreement to the writer and then, after many months and many reminders, eventually produced a document so edited that it contained almost no information other than section titles, and certainly none that was of any use in evaluating the exposure of the Council and the citizens.

(This document and the associated correspondence can be made available to the EPA if it is felt that they would help in its consideration of the application.)

It is also to be noted that there appears to be an extraordinary contractual situation at present where a prime contractor has been selected, on what basis we are not told, and a contract has been placed for a plant that has not yet even been designed, to process a quantity of waste that is not yet fixed! Based on past experience of similar badly structured projects, especially with the Authority, this must pose huge budgetary dangers for this one, with a great probability of numerous change orders, disputes, schedule delays and breaches of performance conditions.

This situation has also produced the extraordinary result that there is very significant confusion between the Council and the Contractor throughout both the planning and licence applications. The simplistic view would be that the Council would deliver waste to the proposed facility and the Contractor would thereafter be responsible for its safe disposal, but this demarcation is frequently crossed, and there is no clear definition of who would ultimately be responsible for the safe and efficient operation of the incinerator. This is the kind of confusion that it was hoped to resolve by examination of the contract, but given the sad record of the Council in past major projects it may not even have been addressed, and this may be why the terms are being kept secret.

Indeed it could be argued that as the Council will neither build nor operate the facility they have no legal interest in the planning application, which should have been submitted by the contractor.

Lodgement of the application at this stage equally compromises the assessment process. It appears that the contractor selected will not even manufacture the bulk of the equipment but that, if the project is permitted, will then commence the design of the plant and the procurement of equipment and services, on what basis is not stated (e.g. against stipulated performance criteria, for lowest cost or whatever, though statements in the EIS strongly suggest that cost will be a major factor). This means that there is currently no guarantee of the performance characteristics of the components of the process plant, so that figures given for overall performance are mere estimates.

Thus most of the apparent "statements of fact" contained in the EIS are just pious intentions at this stage and are not grounded on any solid factual basis, leading to the suspicion that much of its contents could later be varied and/or breached.

This suspicion of the way the project is being approached is reinforced by the experience of the adjacent Sewage Treatment Plant, where the EIS stated unequivocally that "no odour will be apparent at the boundary of the site"! Subsequent performance demonstrates beyond question how little reliance can be placed on such a statement based purely on theory and aspiration.

While the EPA might feel that this is a financial situation that does not concern the performance of the proposed facility, it is, in fact, of fundamental importance. If the contract is not properly drawn up and executed there will be incentives and opportunities for "cheeseparing" in design, construction and operation that could well lead to accidental discharges and other similarly serious consequences. There are many examples to draw from where this has happened, and this process has too many potential hazards for chances to be taken!

The references in the EIS to "political and economic factors" are particularly chilling. What these infer is that there is a limit to the waste charges that would be acceptable to domestic and commercial waste producers, so that the construction and operating costs of the facility would be constrained by this. As the operator is to be a commercial concern a position could be reached where the facility was forced to run at a loss, and nobody can fail to appreciate the considerable danger of "corner cutting" that would then arise. It is for this reason that the apparent ineptitude of the Council in its structuring of the project is so heavily emphasised.

ENVIRONMENTAL IMPACT STATEMENT.

(Please note that the section numbering throughout this document follows those of the EIS and the Licence Application.)

3.0 Need for the Project.

Regional Waste Strategy: When the Regional Waste Strategy was first put out for consideration I was consulted by an SPC member of one of the Councils concerned and broadly endorsed the document. This was on the basis that it closely followed the European waste hierarchy which listed possible waste treatment methods in the following priority.

1. Prevention
2. Minimisation
3. Re-use
4. Recycling
5. Energy recovery
6. Disposal

When the Strategy was adopted it was assumed by most of those concerned that there would soon follow a plan to implement these processes in this order of priority. This has not happened!

It is to the credit of the local authorities concerned that considerable progress has been made in the recovery of waste through recycling. National Government also deserves great credit for its innovation and determination in the driving through and implementation of its policy on plastic bags, which now has world renown as a shining example. However, when considering the key strategy, prevention, almost no progress has been made, and the weak measures outlined in sections 3.8.2 to 3.8.4 show that there is no incentive within the Region that will make any significant difference. The Green Schools Project, worthy as it is, leads to the mistaken belief that collecting drinks cans will cure the ills of the planet, and may actually be counterproductive in promoting complacency before the hard questions have even been addressed.

In virtually ignoring the benefits to be obtained from effective prevention there can be no doubt that the Region and the Council were under very severe pressure from the Department of the Environment, whose then Minister was clearly obsessed with incineration as a national strategy for complying with European directives, presumably as an easy option that would not require any real political action from the Government or upset strong commercial vested interests. To force through this wrong choice, legislation was introduced that gave the power of decision in the adoption of this method to the officials of the authorities concerned, thus greatly weakening the democratic rights of the affected citizens and eroding the powers of the elected representatives. It now seems almost certain that this process of erosion of democracy will even proceed further with the adoption of the "Infrastructure Bill".

The reason that incineration is placed so far down the EU hierarchical pyramid is the high levels of inefficiency that are inherent in the process when looked at overall. The greater fraction of the calorific value of the incoming waste stream will derive from paper and wood residues, produced from packaging and construction waste, and from oil-derived plastics. Most plastics are rather poor fuels, as well as having a large energy impact, being derived, through high-energy absorbing processes, from hydrocarbon feedstock. Paper and wood, by definition, have also absorbed a significant amount of energy in their primary processing, so that the energy supposedly "recovered" by power generation at an incinerator has, in fact, been purchased at a considerable energy cost before it is ever made available. The energy value present in the biological fraction of the waste stream would be better recovered by more suitable biological or bio-mechanical processes that would not have the inherent hazards of incineration. There have been very strenuous efforts made at Council and Government level to portray the incinerator as a "waste to energy" plant where energy is magically produced at virtually no cost, financial or environmental, but when the whole cycle is examined this is far from the truth, and the correct approach would have been to prevent the gross waste involved in waste streams like packaging by suitable legislation and/or incentives on the lines of the plastic bag initiative.

It is clear that the adoption of incineration in preference to prevention, minimisation, re-use and recycling is that the latter would involve a degree of cost and discipline for the commercial interests concerned, whereas the cost of incineration falls more on the citizen. The vested commercial interests potentially affected have mounted an effective campaign of resistance. This is, of course, a negation of good planning and will, no doubt, eventually be examined by the relevant European authorities.

This is all the more strange because the Minister for the Marine and Natural Resources has recently launched a scheme to support the widespread adoption of wood pellet burning boilers, for which recycled construction timber would be a ready and high-grade source of ready-dried raw material. This apparent anomaly highlights the difficulties that incineration would introduce and the confusion in Government policy.

In the meantime the Council has been forced to adopt a waste disposal system that has inherent dangers and future problems that will become more significant as time passes. The sad fact is that adoption of prevention would cost comparatively little compared with the incinerator and would ultimately benefit the consumers as well as the environment.

It should be noted in this context that recent reports from Germany indicate that municipal incinerators there are experiencing difficulties because the success of recycling has so reduced the calorific value of the waste stream that additional combustible material has now to be added. This underlines the unsuitability of incineration as a technology when reduction and recycling are being seriously implemented and the fallacy of the contradictory position adopted by the Council.

4.0 Site selection.

The EPA might regard the site selection as purely a planning matter, but this would be to ignore the full impact of the Council's decision on the receiving environment and, potentially, on the health of the adjoining communities, so that it must be considered as relevant to the licence application.

The selection of the site has consistently been called into question, especially by those in the receiving communities, and appears to be dangerously flawed.

A reasonably comprehensive site selection process was undergone at an early stage in the project and four sites short-listed. **It must, however, be emphasised that no public consultation process was undertaken at this stage!** The site at Poolbeg was apparently chosen for three main reasons, which were, firstly, that the site already belonged to the Council, obviating a procurement process; secondly that the area already had a number of large industrial and generating facilities so that the populace were less likely to object; and, thirdly but most importantly, **that the Eastern By-Pass would provide easy access to the M.50 ring road before the incinerator began operation (originally scheduled for 2004).** (See EIS page 4-10, noting that this has been modified from the corresponding statement in the original Site Selection report.) A further consideration was not overtly stated, but was very evident by implication, namely that the prevailing wind would be most likely to disperse the plume resulting from any accident away from the populated area of the City.

The first consideration was the usual response of seeking the easiest solution to a difficult problem rather than the correct one.

As to the second, the massive and ongoing level of protest against the decision by the residents of the communities affected and the level of support that they have received clearly shows this idea to have been sadly mistaken. In contrast it is strongly argued that the people of the receptor communities have already taken more than their share of the ugly and polluting side of the infrastructure that serves the Dublin Region, and that common justice would demand that any new facility would be located elsewhere. The base level of health in the Ringsend area must also suggest that this area is poorly able to tolerate any more industrial emissions with hazardous potential.

Thirdly, as part of the subsequent so-called "consultation" process the attention of the Council was drawn at a very early stage to the unpalatable fact that, far from being completed, the Eastern By-Pass was not now even under consideration and that the transport justification for the site was, therefore, in ruins. (The "consultation" process will be considered in detail later in this document). Far from taking any real notice of the input from the meetings the Council has proceeded to devise a series of "sticking plaster" remedies, each less credible than the last, and all changing with such frequency that there can now be no credence given to any. The transport situation is exacerbated by the various proposals for the exclusion of heavy goods vehicles from central Dublin, and would appear guaranteed to increase already serious traffic congestion, despite detailed studies in the EIS that purport to show that the addition of hundreds of lorries each day to the narrow, often choked streets of the area, would have no significant effect. (See Section 7.0 of the EIS).

One feature of the site that is now being strongly promoted as an advantage appears to derive from the failure of one of the aspects of the original proposal, namely that **there would be a ready market for the bottom ash arising from incineration.** This market does not now seem to exist, so that it will be necessary to export this waste fraction in addition to the fly ash, and the accessibility of the Pigeon House Harbour has been expropriated for this purpose. This is another example of the "sticking plaster" approach being adopted, where expedients to overcome flaws in

the concept are put forward as examples of good planning! The extra cost of exporting the bottom ash would, of course, add seriously to the overall cost of waste disposal for the Region.

Page 4-10 also states "A major advantage of the Poolbeg site is the relatively large distance between the land and residential areas. The closest major residential neighbourhoods are all located greater than 1 km from the Site". This is a somewhat strange claim, given the stress placed in other sections on the lack of impact of the plant on such developments. More importantly it does not recognise the fact that the Council has given permission for a very large development well within the 1 km distance, and has ambitious plans for residential and commercial development of the area that would be much closer if eventually realised. This would appear to raise the risk factor in the second last category of table 4.5 from "medium" to "high"

Under the heading "Coastal Areas Subject to Floods" table 4.3 of the EIS states that the site is not prone to flooding. This is true at present, but the site is low lying and very close to the shoreline, where it must certainly be considered to be at future risk if the ever increasing predictions for sea level rise and increasing storm severity are fulfilled. This is especially relevant given the long design life of the facility, and this aspect should receive much more rigorous examination than just a bland statement. This also applies to table 4.5 under "Riverine Areas subject to Floods".

Table 4.6 appears misleading in several aspects. Under "Response time of emergency services" the site is given a maximum rating, yet this is quite variable, and could be slow at times of maximum traffic congestion – it is quite common at busy periods for every access road to the proposed site to be completely blocked! It is also given a high rating for access to sewers, yet the quoted closeness to the Ringsend Sewage Works is of doubtful benefit as this plant is apparently already working at full capacity, if not overloaded.

Under "transport restrictions" it is suggested that waste acceptance hours would be set to minimise impact on other traffic. In April 2006 it was firmly stated that acceptance would be restricted to the hours of 7-10 p.m., but this clearly conflicts with the EIS section 7, showing the degree of confusion that appears to exist.

It is stated that there are no structures that would restrict HGV weight or height, which again is patently untrue as HGV restrictions are being imposed by the Council from the beginning of 2007, and major reliance is placed on the new Port Tunnel which also imposes height restrictions on vehicles proposing to use it due to short-sighted design specification.

Under section 4.2.43 and 4.2.44 it is worth noting that the European Commission expresses concerns about neighbouring residential areas. This conflicts with the many assurances in the EIS that the proposed plant would be safe.

Section 4.2.47 states confidently that all the requirements of the Stockholm Convention have been considered and addressed. It is contended that this is patently not the case if they are considered impartially:

- The volume of forthcoming waste cannot accurately be predicted for the reasons stated in 3.0 of this submission.
- The transportation infrastructure is far from adequate, as will be shown in section 7.0
- There is at present no market identified for the separated materials, which will have to be exported for disposal, other than tramp metal.
- The options for the disposal of residues are thus limited to transport across national boundaries, which is subject to stringent regulation.

The statement in section 4.3.3. that "of all three (alternative) sites there is clear evidence of much more human activity in terms of residential, commercial or industrial life than currently exists, or is likely to exist, in the vicinity of the Poolbeg Site" can only be classed as extraordinary in the light of

the "South Bank Framework Plan" (to use one of its titles) which has been heavily promoted by the Council, though consistently refused by the communities and their elected representatives. This envisages a new road running right past the plant, high density residential development and a high level of recreational activity, all of which would conflict with this statement. It does appear again that there is significant confusion within the Council offices.

In consideration of all the above, the statement in section 4.5.1 that "there were no major constraints identified" is deliberately misleading and quite wrong.

A further benefit of the site has been identified is the potential for "district heating" of adjoining developments. No credence should be given to this, as the potential for district heating has been available since the Ringsend power station was commissioned in 1955, was strongly advocated by the "District Heating Association" in connection with the Poolbeg Power Stations that first generated in 1972, and has been consistently ignored since.

It should also be noted that Dublin City Council passed a motion expressly prohibiting the erection of an incinerator on the Poolbeg Peninsula, and that it was necessary to introduce a new Waste Act to allow this to be overridden on a legal technicality.

5.0 Proposed development.

It is here that the real difficulties arise for those trying to assess the proposed facility, given that no technical details other than an outline specification can be made available as no design has yet been done. (See above). Thus all that is being addressed is a design concept, which would seem to be far too early in the cycle for an application to be made for a licence from the EPA, and leaves many planning questions very much "in the air".

Section 5.2.1 attempts to provide a measure of reassurance by promising to use **Best Available Technology**; this was also promised several times at the "information meetings" organised for the Council. However the real situation is made plain in section 5.11.41, where a factor in the design of the flue gas treatment system, justifying use of less than best technology, is quoted as "**tolerable disposal charge for the incoming waste (both market and political factors exist!)**". This very plainly shows that the cost of the facility will have a significant impact on the design, and that the "market and political factors" will govern the selection of equipment. This is further illustrated in appendix 5.1 section 5.1.49 where it is stated that the use of double fabric filters in the flue gases was not selected because this would entail "increased electricity consumption", thus removing a major safety measure. In the same appendix section 5.1.60. It is stated that no sulphide or ammonia stripping would be installed, again on grounds of cost (the mercaptans in question are very odoriferous substances, is this a repeat of the sewage plant?) **So much for the reality of the BAT claim!** This is all the more disquieting because of the "public private partnership" business structure selected, of which there is now sufficient experience in the UK for public service projects to show that it leads to corners being cut and generally unsatisfactory performance.

The "political and market" influences are a polite way of saying that the costs of this plant will be levied on the citizens as waste charges and on the business community as disposal charges. In the case of the former there is a known resistance, especially in the catchment area of the Council, to paying service charges of any kind, and the business community is currently warning that any increase in costs will seriously damage the competitiveness of the Irish economy. Both of these factors strongly suggest that there will be very significant future pressures on the operator to reduce costs, an extremely dangerous situation when a potentially lethal process is being proposed.

It is not proposed at this stage to examine every detail of the plant, firstly because of the sketchy information provided and secondly because this would be another theoretical exercise of doubtful value. Instead comment will be restricted to certain points in the section that obtrude.

In section 5.2.1 it is noted that it is proposed to install a single turbine/generator set, presumably again in the interests of economy. This at once inserts a weak point in the process, in that if either of these components should fail the plant would become inoperative. Turbines and generators are mature technology and now very reliable, but failure is not unknown, and in such an instance it would be most unlikely that the set could be repaired and restored to service within the one week capacity of the waste hopper. In this case what action would be taken? This should be stated. If waste had to be diverted from the incinerator facility where would it go, given that all the adjacent landfill will apparently be exhausted long before the proposed commissioning date?

In section 5.3.1 reference is made to the constraint of the Irishtown Nature Park. This should be extended to include the compensatory roosting/feeding habitat for Brent geese set aside by the Council which is significantly nearer the site.

The proposed layout in section 5.5.1 with the entrance from Pigeon House Road appears to clash with the proposed Framework Plan, another clear sign that transport arrangements have not been fully worked out.

The design concept in section 5.5.6 will be considered in section 6.0.

The "closed loop" system proposed in section 5.5.21 for process water waste does not appear sustainable, in that some soluble and/or dispersed pollutants captured in the scrubber could be fed back to the flue gas treatment system and, at least in theory, captured again when they next reach the scrubber to repeat the process. This could increase steadily the level of contamination until the scrubber can no longer extract the whole load and a fraction would be discharged to atmosphere. If, on the other hand, they are used for cooling and humidification of the bottom ash this would absorb the pollutants and might reach a level of contamination where it is no longer acceptable for export under the EU directive. This does seem to warrant much closer examination, and will be referred to again under section 10, as it does not appear to be a really satisfactory way of dealing with this stream, though it would reduce costs, of course.

Considering the random nature of the incoming waste stream and the certainty of spillage at some future date, a silt, grit or oil trap as described in section 5.5.25 is inadequate, as it would not extract dissolved pollutants, so there is some hazard of such materials being discharged to the sewer and hence, eventually to Dublin Bay.

Given the current stretched position of the Dublin Region water supply a projected demand of 253,500 m³ per annum would seem an unsustainable load, and the use of grey water from the adjoining sewage plant would appear to be the only way to provide supply to the plant. Needless to say the proposed use of solid and liquid sewage residues was never disclosed in any of the information meetings and has only now arisen.

The grid connection along the extended South Bank Road proposed in section 5.5.37 assumes that this road will be extended. While provision for this is made in the Framework Plan it has been very strongly resisted, and there is considerable doubt as to whether it will ever happen. This would leave the cable way leave possibly sterilising land that might be needed for some other purpose, and this routing should be reconsidered. This cable should, of course, be underground.

The proposal in section 5.5.39 to use sewage sludge is also a complete surprise to the communities, though it is not inherently unwelcome, especially as the uptake of dried sludge as fertiliser, for which such optimistic projections were made, apparently has not materialised (could

this be a side effect of the Nitrates Directive?). However the injection of a wet sludge into the furnace intakes must reduce the overall efficiency of the process because of the energy lost in drying the material, and so reduce the projected return from the overall system.

As already said, the hours stated for waste acceptance, from 08.00 to 22.00 totally contradict the stated times of 19.00 to 22.00 that were firmly announced at the information meeting on 22nd February 2006, which offers more indication of confusion and of traffic policy being "cobbled together". Either would cause congestion and disruption, though the extended hours would possibly have less impact on the residents of the adjoining communities.

Section 5.6.3 refers to the incoming waste being limited to "only pre-approved types of waste" being accepted. As this stream will be generated from public and private sources, and the raw material will not be sorted, this appears to be a counsel of perfection that is most unlikely to be achieved in practice. No indication is given as to whether this would be controlled by the Council or by the contractor, but in either case serious difficulties can be anticipated.

Section 5.6.6. states that incoming waste will be inspected after it has been tipped into the bunker. This appears ridiculous, as it would then have mixed with other material already there, and the task of extracting the unacceptable material would be many times harder. If waste is to be inspected, this should surely be done at reception floor level.

Section 5.6.7. is reassuring that the negative pressure environment in the intake hall will prevent the emission of dust and odour, which is most welcome. However, given the large quantities of raw waste that will be in the reception bunker the question must be raised as to what would happen in the event of a prolonged outage, particularly in hot weather? As the raw material has already been collected at depots and baled it must be assumed that the organic portion will already be well decayed, and that any delay when the fans were not working must make possible the emission of odours. It would be of interest to find out how this situation would be addressed. In this situation the danger of spontaneous combustion in the bunker would probably be greatly increased.

Section 5.6.11 notes that the bunker would have a maximum capacity of one week's normal input of waste, and that the input would be diverted in the event of a serious breakdown. No detail is given of what would then be done with the waste, and this should surely have been stated at this stage.

The system of waste selection and balancing described in section 5.6.12 appears liable to create uncertain operation, given that this depends on "the skill and judgement of the operators" like a magazine competition. Certainly for this to operate with any degree of effect the waste would have to be un-baled before tipping, for which no provision would seem to have been made. Even so, any lapse of concentration by the crane operator, say at the end of a long shift, would appear liable to cause process instability and downstream problems. It is implicitly accepted in section 5.6.24 that variations in the calorific value of the feedstock would cause process upsets downstream.

Section 5.6.14 is explicit with regard to the duplicated plant, but does not address what would happen when the turbine and generator were down for inspection and maintenance, which would appear to be a similar situation to that arising under section 5.6.7.

Section 5.6.18 again refers to the introduction of sewage sludge as an input feed. This has already been addressed above and its effect noted, and while it is beyond doubt that transport as sludge in a pipe would be the most economical method it is worrying that no estimate is given for the change in overall efficiency that this modification would bring. This is, however, typical of the lack of detail surrounding the whole project that makes it so difficult for the community to evaluate.

Reference will be made later to the control of the moving grate system described in section 5.6.19. The preference for the moving grate system over the more modern fluidised bed is somewhat surprising, but the expertise of the designers has here to be taken on trust, though again there must be some suspicion that cost might have been an influence.

The brief reference to process control in section 5.6.29 is unsatisfactory, as much more detail should have been given, including a schematic diagram at very least. This system is of extreme importance, as it governs the successful operation of the furnace, which, in turn, determines to a significant extent the constituents of the waste streams.

It is noted that the residence time of the material on the grate is of the order of one hour. However the gaseous material will pass through much more quickly, which will, in itself, pose a challenge for control. The main variables will be waste stream composition, combustion air flow and grate speed, which must be balanced to achieve optimum conditions, and it would be interesting to know the lag times anticipated in the measurement of the significant variables and the recovery time of the control system following an excursion. These are not, of course, provided.

The main point is that it is upon the successful operation of this system that the concentration of the various output constituents depends, and that any failure here could lead to greatly increased output of toxic material, e.g. dioxins which would then rely on the integrity of the filtration and scrubbing systems for their successful removal. It is accepted that the residence time specified by Europe for minimal carry over of these substances is 2 seconds at 800°C, and that this should be achievable provided the waste stream has adequate calorific value, though the operating temperatures in the other parts of the plant are much below this, but the use of CCTV as a measurement tool again implies reliance on the skill of the operator here, which also gives cause for some alarm.

It has to be remembered that it was the operation of a commercial incinerator below the critical temperature as an economy measure that led to the disaster at Ballydine.

The proposed use of rappers to clean the dust from the boiler suggests the generation of a significant noise output, as these devices are by no means quiet and generate sharp noise shocks that are disturbing. It is not clear if this output has been considered in section 9.

It is assumed that the treatment for removal of contaminants from the flue gas described in section 5.6.52 will depend on the addition of a significant excess of activated carbon, given that the adsorption process will have relatively little time to take place, though the proposed use of bag filters will assist the process to some degree. Further reference will be made to the efficacy of bag filters in this duty at a later stage, but it is clear that total reliance is placed here on their maintained integrity, and it is most disturbing here to be told that **single filter elements are being proposed instead of double, in the interests of economy. (Section 5.1.49)**

It is assumed, in the absence of any hard information, that pressure drop across the filter elements would be monitored and that there would be a crash shut-down if a filter element ruptured, but in that time there would be a significant discharge of pollutants, and this scenario should have been addressed in the EIS. It is not clear if the adoption of bag filters, which are a rather ancient technology, was preferred to more modern methods like precipitators on cost grounds, though all removal systems are, of course, subject to the risk of failure to some degree.

Section 5.6.58 again refers to the closed loop system for scrubber washings, though there is some confusion as to whether this would ultimately be used to cool and wet fly ash or bottom ash, both are stated (and maybe both are intended!).

Sections 5.6.61-63 once again touches lightly on the important subject of emissions monitoring without providing any detail. **Monitoring dioxin levels on a fortnightly basis and heavy metals on a "regular" though unspecified basis is hardly satisfactory for such dangerous substances!**

It is accepted that there is not, at present, a reliable method of measuring dioxins levels on line, so that this parameter cannot be used for direct process control, though it is to be hoped that this situation will soon change, and the same probably holds true for most of the metals. However, given the serious danger that would result from the stipulated levels being exceeded it would not seem too much to require, if all other contrary considerations were ignored and the project were allowed to proceed, that these levels be tested daily and the results transmitted on line to the EPA who could then take appropriate action within a reasonable time frame. Historical recording of events would be of only academic interest in the case of an accident.

Section 5.7.6. refers to the Stockholm Convention and the quotation under (b) strongly supports the case argued above under section 3.0 that other methods of disposal should have been preferred to incineration. It is remarkable that the Council chose to ignore this.

Section 5.8.3. makes some splendid promises regarding the future housekeeping of the facility. Sadly these have no legal force, nor is it clear by whom they would be enforced. It is not uncommon in such situations for the promises to be forgotten when the plant has been in operation for some years and economic pressures arise.

The past record of Dublin City Council in dealing with unauthorised waste disposal, oil leakages and similar problems arising over the years on the Poolbeg Peninsula gives no assurance whatsoever that any such provisions would be enforced by that body, and this kind of "creative writing" without addressing the issue must be one more reason why the project should be refused. **It required the threat of European action to persuade the Council to enforce a ruling by An Bord Pleanala that 43,000 tonnes of illegally dumped waste on the Fabrizio site must be removed! The Council must not be allowed any part in any regulatory process if the process is to retain a shred of credibility.**

The section on safety training and procedures (5.9.3 and 5.9.4), while welcome, is no more than would nowadays be expected for any similar plant. It is worrying that no special training appears to be proposed for the removal of the flue gas residues from the plant, as these are highly toxic and any accident would have the most serious consequences for the personnel involved, and most probably also outside the plant.

In section 5.9.5 it is stated that Hazop studies will be carried out at some unspecified time. While this is normal practice for any process plant dealing with hazardous materials, it appears strange that an outline study has not been completed before the application for permission was submitted.

Some concern must arise over section 5.9.11 that deals with the situation of fire in the waste bunker and notes that there is no provision for removal of excess firewater in this situation. While it is accepted that the bunker is very large it is not impossible to foresee a situation where a plant stoppage led to spontaneous combustion that required a great amount of water to extinguish, which would then be extremely difficult to remove as the saturated waste would be almost impossible to ignite. It would seem prudent to make some arrangement for removal of surplus water in this situation, especially as it would be contaminated.

Section 5.9.14 (a) tacitly admits that a malfunction in the proposed plant would cause a major emergency in Dublin, and reinforces all the fears of the surrounding communities and the public at large.

Section 5.10.2 promises to maintain key environmental information on the internet. If, however, levels of dangerous substances were only being measured at infrequent intervals (see section 5.6.61 - 5.6.63) this information would offer very little reassurance.

Section 5.11 briefly refers to some alternatives considered in the selection and design of the chosen process. This basically comprises a set of statements put down without any supporting evidence such as calculations, which, perforce, have to be taken at face value, so no comment seems necessary at this stage, other than on a few obtrusive points.

The decision to enclose the process plant in one envelope is justified in section 5.11.6. The visual aspect of the project is discussed in section 6.0, but it is very evident that the enclosure would add significant cost to the project, which makes it all the more surprising when there is evidence of economising in the selection of the process plant.

As already said, it is pointless to consider the alternative processes in the absence of any real information. However the rejection of fluidised bed and gasification technologies because they are not capable of handling the huge throughput proposed must beg the question:

Why was consideration not given to the use of several smaller facilities located at strategic points adjacent to the source of waste? Such a strategy would have offered much greater flexibility, reduced transport costs, access to the electricity network and, quite possibly, overall economies, and should still be explored even at this late stage. Suitable locations would include Glenamuck/Ballyogan and Huntstown, which have easy access to the ESB grid, among others.

The question of water condensation (section 5.11.30-5.11.31) will be considered fully in section 15.0, but here it has to be said that the use of Liffey water for cooling has the potential to cause severe environmental damage which could lead to the shutting down of the plant, and this should be reconsidered.

Any proposal to abstract and return cooling water from the South Dublin Bay SAC would be very strongly resisted, and the fact that it was considered again underlines the ignorance of the proposers of the importance of this site.

The reference to market and political factors in section 5.11.41 is again noted as being extremely damaging to any confidence in the project. It is also noted that this section refers to selection criteria for the stack emission control, some of which are only guesswork at this stage.

Section 5.11.45 yet again displays the cost-cutting method adopted for the project, where the best technology is not being adopted because there would be a cost penalty!

In other words, the project is proposed using the cheapest technology that the Council and the contractor feel would be acceptable, hardly a philosophy designed to give confidence to the receiving communities.

6.0 Landscape and Visual Impact

In an effort to make the process plant more attractive to the community the Council proposes to enclose all but the waste ash ship loading plant at the dockside in a building. Much space is given in the next section of the EIS to lavishing praise on the resulting structure and suggesting that it would be an architectural embellishment to that part of Dublin. This is, of course, totally subjective and must be judged by each individual. However, whether or not this appeals, there can be no

doubt that the enclosure will add a great amount to the cost, as most of these facilities are normally left in the open like other process plant, and the massive enclosure would not be necessary if a more suitable site were found or the one monstrous facility were split into more, smaller units that could be dispersed near to the points of origin of the waste.

Some benefit derives from the enclosure in the proposed negative pressure regime for the intake hall, which would go towards preventing the odours of fermenting biological waste being sensed outside the building. This is obviously stressed following the devastating failure of the adjoining sewage treatment plant to contain the offensive emissions that it produces, though given the amount of air that would have to be contained there can be no guarantee that this system would work unless air locks were incorporated – this is not stated, of course.

In section 6.3.1. and several times thereafter reference is made to the Poolbeg Action Area Framework Plan FDA 13. It cannot be stressed often enough that this plan is in draft form, has been rejected by the relevant Committee and everyone else concerned, including the adjoining communities and is, quite probably, illegal as proper consultation processes were not followed in its preparation. It therefore has no force and is a flawed basis for any aspect of the present application. This makes sections 6.4.31 to 6.4.37 irrelevant to the present application, other than to note that the proposed incinerator must have some impact under the Seveso Directive, taken in conjunction with the other infrastructure facilities on the peninsula, on any future residential development, but this is a matter for future consideration.

Section 6.4.1 refers to the "South Bull Wall". No such structure exists, indicating a hurried preparation of this section of the EIS by persons unfamiliar with the area and a lack of essential review before publication. Similarly, section 6.4.4. places Ringsend, Irishtown and Sandymount 1 to 2 km east of the site, where they would get rather wet. These districts lie **west** of the site!

The aerial photograph, figure 6.1, while of excellent quality, is clearly selected to give the impression that the site is remote from the city. It does not show the conglomeration of residential development at Sandymount which is certainly important and would suffer impact from the facility, were it allowed.

Section 6.4.5. makes reference to a small beach east of the sewage plant. This has now been significantly degraded by some unexplained works executed by the Council, though it can still recover by natural action if the interference is ended.

Section 6.4.10 refers to "undeveloped land extends to the southern shore of the peninsula". Apart from ignoring the walk to the Nature Park this also fails to mention the use of this area by the Brent geese. Indeed it does seem that the authors have little, if any, knowledge of the importance of the conservation designations of the South Dublin Bay. These lands were originally an important feeding and roosting ground for the Brent geese. It was agreed between the Council and BirdWatch Ireland that they would be temporarily used by the Dublin Bay Project as a pipe lay down area on the understanding that they would be given back to the geese on completion of the project. This has not happened, and the area requires rehabilitation, especially since the storage of huge quantities of industrial material there without apparent authority by a neighbouring industrial concern earlier this year. However there is no agreement for its use as a construction site in respect of the present proposed facility, and it is a measure of the autocratic approach typical of the Council that it should be automatically assumed that this is permissible.

In this context reference should be made to a recent opinion by the Advocate General of the EU Commission (Case C-418/04) that is highly critical of Ireland's failure to protect properly the areas of conservation importance, in Dublin Bay and elsewhere, in which costs were given against Ireland. The full judgement will not be issued for some months, but the protection of these areas is clearly a matter that can no longer be ignored by the Irish authorities.

Section 6.4.10, in referring to "elevated vantage points such as Mount Merrion, Deerpark, Mount Anville" is again being superficial, as it is actually quite difficult to obtain an unobstructed view of the site and its surroundings from any of these places due to building development and vegetation.

Section 6.4.24 refers to the "potential to develop a walking and cycling route along the perimeter of the Bay". While no exception can be taken to this concept in principle it has to be accepted that its harmonisation with the conservation designations mentioned above and the complicated design needed to avoid it being inundated has not progressed far, so that it is of no apparent relevance to this application.

The same considerations apply to section 6.4.25. It is quite certain that any significant increase in recreational use, particularly any involving mechanised sports, would not be allowable in the SAC/SPA or its surroundings.

These considerations also apply to the objectives in section 6.4.27, and are actually contradicted by several objectives in the City Development Strategy "Dublin – A City of Possibilities". This confusion has produced the flawed "Framework Plan" and is severely handicapping any reasoned discussion of the future of the Poolbeg Peninsula and its hinterland.

Section 6.4.30 rightly emphasises the impact that access and traffic will have on the area, as considered in section 7.0.

The statement in the summary, section 6.4.46, that "the peninsula is an important amenity and recreational resource, particularly in its association with Dublin Bay" is a most excellent summary of the situation, and appears completely in conflict with the present application, which will obviously lead to significant loss of amenity.

Turning now to the excellent photomontages and conceptual drawings, which are carefully executed to minimise the impact of the proposed structure on the landscape, the actual design of the facility must now be considered. While architectural form is a highly subjective subject, on which each person must form their own opinion, it has to be said that, to the writer, the resultant overwhelming mass is chiefly reminiscent of a Mesopotamian ziggurat! No doubt the citizens of Dublin would choose an appropriate designation, as they do for other extravagant novelties!

Photomontages are notoriously deceptive in that the actual impact on the viewer depends on a complex interaction of all the elements of the landscape, but it has to be admitted that the real effect of the huge mass of the building, (some 1,300,000 m³, see also section 6.6.8), would only have a really overwhelming impact on the North Port area and from Ringsend and Irishtown to Merrion Gates. The impression in figure 6.4 probably shows this best. It is beyond question that the visual impact on the coast walk and the Nature Park (Section 6.6.17) would be immense and would seriously diminish the amenity in these areas.

The monumental impact of the plant obviously derives from its giant size, arising in turn from the very high throughput proposed. Changing the design philosophy to the provision of several smaller plants each serving an appropriate area would, of course, overcome this problem.

Section 6.6.3 again refers to the "masterplan" for the area. One reason for the overwhelming opposition to this document was the confusion it displayed over the development of the area around the incinerator site, with emphasis on recreation and the "ecopark" (whatever an "ecopark" may be? It is not a recognised conservation classification!). This section again highlights this confusion.

Section 6.6.8. suggests that the development "would not have a significant impact in terms of the contribution of the Peninsula to the landscape". This again is subjective, but to this writer, at least, it is blatantly wrong, as a structure of such huge size and mass must become the focus of the site from every vista and thus affect all other components of the landscape. It is really very hard to understand how it could act "as a catalyst for the envisaged rejuvenationof the peninsula" (section 6.6.16.) which does appear to be only a piece of poetic licence.

It is also admitted (section 6.6.22. that it "may well be perceived as having a negative impact", which is something of an understatement.

A worrying statement appears in section 6.6.24., which suggests that the project could be abandoned in a half-finished state. This almost beggars belief, and the thinking behind this statement demands the closest scrutiny, as if this is a possibility then it absolutely demands that the facility should never be granted permission.

The proposed extent of glazing and the concept of "visibility and openness" (section 6.7.4) give rise to concerns about visual disturbance that will be considered in section 14.0.

7.0 Traffic.

The impact of the proposed incinerator on the traffic situation in the area poses a major problem, which is recognised by the Council in the extent of work reported in section 7, much of which is valuable. This gives great assurance that the project would have virtually no effect, but these assurances are shown to be of little value when the following quotation from the Order of the Executive Manager of Dublin City Council No. S.1416, dated 24th April 2006, is considered: **"The existing serious deficiency in private car capacity on the road network within and adjoining the peninsula means that traditional car dependant forms of transport will not be able to meet the transportation needs of the proposed development"**. This refers to a commercial and residential development in the vicinity, but is a good indication of the real traffic situation on the Poolbeg Peninsula and its environs. This, it should be said, is without any consideration of the traffic generating potential of this other residential/commercial development that is currently in the appeal process.

(It should be noted in passing that at 19.00 hrs on 26/9/2006 every road in the area and every approach to the East Link Bridge was jammed almost solid, and congestion warnings were being broadcast! This is not an infrequent situation.)

The transport strategy set out in the EIS involves very considerable journeys for the major part of the waste, many of them on the already clogged M.50, and would thus again add to the already considerable costs that this development would produce. It should also be noted that potential congestion on the M.50 and other approach roads would play havoc with the proposed scheduling of the arrival of the HGVs to the incinerator site, while the smaller refuse trucks will be subject to the vagaries of central Dublin traffic. This makes it almost inevitable that there will be considerable interference with other traffic on the Pigeon House Road despite the extra traffic lane proposed at the site entrance as well as on all the roads surrounding the area. If experience in other countries in similar situations is any guide the relatively small expansion currently begun on the M.50 will have been overtaken by traffic growth by the time it is operational, based on the current rate of growth in car use.

Section 7.3.16 notes that there are significant omissions in the accident data, which is confirmed by general experience of motorists in Dublin city, where reporting "material damage" accidents to the Gardai is considered a waste of time and effort. However personal experience of the residents

amply confirms the congestion in the Sandymount-Irishtown-Ringsend area, particularly at peak periods.

The section on "public transport", 7.3.18 to 7.3.21, confirms that for all practical purposes there is no public transport available to the site or, indeed, in the Peninsula as a whole.

The proposed cycle track is again referenced in section 7.3.22, and it must again be emphasised that this remains a concept that, anyway, would have little or no influence on the traffic in the area of the project.

In section 7.3.27. reference is made to a temporary restriction on the height of HGVs. All the indications are that this restriction, which particularly concerns the Northern Port Tunnel, will be permanent on account of the design error in the height of this project.

Consideration of a Dodder Bridge (section 7.3.32.) has been started, chiefly in connection with the large commercial development already referenced, but it has not progressed beyond the concept stage, and is bedevilled with problems of access and the uncertainty regarding the Eastern By-Pass. It may or may not ever be built, but it is certainly many years in the future.

In sober fact the statement in section 7.3.33 that accessibility will "greatly improve" in the area is not supported by evidence and, given the population growth figures being used, appears most unlikely to be realised.

In Appendix 7.1 the DTO also refers to the Framework Plan, apparently also being under the common delusion that it has some validity.

The question of the reception hours for waste has already been addressed above, but it is again emphasised that the hours quoted in section 7.5.1 differ from those stated to the community.

Section 7.5.2 refers to "a number of private transfer stations located in close proximity to the M.50 Motorway" which could be used as a source of waste. This is the first time that such a possibility has been mentioned, as until now it has been definitely stated that the waste would either arise from a catchment area close to the proposed site or from the three municipal baling stations at Ballyogan, Ballymount and Kilshane Cross. This is a fundamental change to the proposed management plan and further highlights the futility of the supposed consultation process and the way in which the project changes from day to day. This is really most unsatisfactory, and the applications should not even be considered until the Council has determined what it actually wants, as proper consideration is impossible in the present state of flux.

There is also confusion in section 7.5.6. regarding the disposal of the flue gas waste, as it has variously been stated that this would be brought directly to the quayside and the bottom ash brought to South Bank Road. The true intention of the Council needs to be determined. This will be further addressed in section 10.0., but is of importance because of the highly toxic nature of the flue gas waste.

The figures given for truck movements in section 7.5.11. do not appear overly alarming until the already congested state of the roads is considered. The area already suffers a very significant load of HGV traffic, causing disturbance, delay, nuisance and danger on the inadequate roads of the Peninsula and its hinterland, which is verified by the statement from the Executive Manager already quoted. In such a situation the residents of the area know well the level of danger and nuisance to which they and their children are exposed, and these are already at such a level that a further increase of the amount proposed is simply not acceptable.

Employee trip generation would not be of great significance, but the suggestion in section 7.5.18 that they should use the meagre public transport available is just ridiculous and betrays a total ignorance of weather conditions on the Peninsula, particularly in winter!

The maintenance figures given in section 7.5.22. add to the load, and are another component of the traffic that was not previously disclosed. In the maintenance situation it would also seem reasonable to assume a greatly increased level of delivery and other support traffic, indicating an unsupportable situation.

The convoluted traffic distribution set out in section 7.5.24 again indicates an element of desperation to justify the flawed siting of the project on the Peninsula, and would certainly impact heavily on both the cost of waste disposal (a direct charge to the citizens and to business) and the carbon emission load which is already spiralling out of control. It should also be noted that this strategy was conceived for vehicles owned or under the control of the local authorities and is rather unlikely to be adopted by private or "once-off" deliveries.

In this connection it must be asked if it is proposed that the incinerator would be open to private deliveries on the same basis as the current landfill dumps and, if so, has this random traffic load been incorporated into the survey? Queues at the existing dumps at certain times would indicate that this could be quite a significant factor. If the incinerator is not open to them, where would private deliveries go?

In section 7.5.26. it should be noted that the Council HGV strategy is presently only conceptual, and that its efficacy will only be determined when it is implemented. There is significant opposition to it, and it may yet fail.

The waste deliveries from the private facilities postulated in section 7.5.28. would not seem to be under the control of the Council or the operator, either for routing or for scheduling, as traffic conditions on the M.50 could easily play havoc with transit times.

Section 7.6 refers to the impact of a proposed metro system. This is still on the drawing board and so even the first one (to the Airport and Swords) could not be operational until at least 2014, even assuming that the planning process were relatively uncontested, which seems unlikely.

The extensions to both Luas lines mentioned in the same section would also take considerable time, and there is significant doubt regarding the viability of either, given the very low carrying capacity of this system. The proposed Green Line extension appears certain to be overwhelmed by the load from the developments it is hoped to serve, and so would be of no use whatever to this project.

It has already been said that the Eastern By-Pass (section 7.6.3.) is far in the future, if it ever appears, but it has some relevance to the project in its potential impact on the area east of the Dodder mouth, which calls into question the whole viability of a proposed bridge at this location until definition has been achieved.

Section 7.6.7. states that traffic models for 2012 and 2027 were considered. While the first may have some relevance, the second has none, as all the indications for hydrocarbon supply and climate change signify that models (and even social organisation) obtaining today will have changed out of all recognition by 2027.

It is noted that South Bank Road would experience some of the worst congestion, even without the proposed commercial/residential developments there, and this must surely ring alarm bells.

Section 7.6.36 notes the availability of rail access in the Northern Port. This was repeatedly pointed out to the Council during the "information sessions", emphasising the much improved transport facilities this offered, but was ignored along with all other constructive suggestions. This further indicates that the Poolbeg site was determined from the outset and has been doggedly pursued irrespective of any changes of circumstances, leading to the present deeply unsatisfactory situation where a seriously flawed proposal is being forced upon the community as the only possible alternative!

The proposed location of the service yard (section 7.6.57.) appears likely to increase disturbance to roosting and feeding birds, and will be further considered in section 14.

The impact of construction traffic on the roads of the area would appear to be overwhelming, dangerous and a great nuisance. This is based on the writer's experiences during two years working on the construction of the Poolbeg "A" ESB station in the early 1970s, when Pigeon House Road was virtually destroyed by the traffic, and houses along the route were submerged in the road dirt generated as well as subjected to intolerable noise. This is of particular importance given the historic character of the road and the good heritage reasons for its preservation.

The suggestion that construction workers should use public transport (what public transport?) (section 7.7.10.) is patently ridiculous, and, again based on experience, the use of private buses is very inefficient and would be resisted by contractors. As for cycling and walking, tell that to a tired construction worker after a 12-hour shift! The suggestion that workers be "grouped" is just not realistic, as each sub-contractor will insist on making his own arrangements to retain control of his working hours, especially under the usual overtime situation that inevitably occurs as deadlines loom.

Peak traffic in the approach roads to the site builds from about 07.30. Given the stated starting time of 08.00 this would seem to coincide exactly with the workers' arrival, giving the lie to section 7.7.16.

Under section 7.6.1. it would be strongly contended that the proposed locations for the transit storage of bottom ash and fly ash are the only ones available in the crowded Peninsula, and no particular virtue should be claimed for their selection.

In summary, then, it has to be accepted that there are severe traffic problems in the area of the proposed incinerator and along most of the access routes, despite the evidence adduced from computer modelling. There are no impending developments that will improve this situation in the foreseeable future, and this makes a compelling argument for the rejection of the project, certainly on the site proposed.

8.0 Air quality and climate.

A great deal of work has been done in this section, much of which has to be accepted on face value, given that the citizen has neither the facilities to reproduce the measurements made nor access to the various computer programmes used.

The elevated values for particles and nitrogen compounds are noted. These do not come as any surprise. In fact the high baseline level of particulates combined with the recent research showing that incinerators discharge a significant load of micro-particulate matter and the relatively poor health levels discovered in the Ringsend area combine to suggest that there could be a very significant impact on public health if the incinerator were allowed to proceed.

However this is speculation and underlines the serious flaw in that **no Health Impact Statement has been prepared for the proposed facility** which should, by itself, require that the application be refused.

Section 8.2.14 notes the very serious situation with regard to Irish emissions of GHGs, which seems almost certain to lead to the imposition of swingeing penalties unless some government takes very stringent corrective action, which does not seem too likely. In this situation the impact of incineration versus biological treatment must surely be reconsidered.

Section 8.2.17 makes an interesting argument for omission of the wood and paper fraction from the carbon emission load on the basis that this is subsequently replaced by new growth. This argument, however, dishonestly ignores the inconvenient fact that the bulk of this waste fraction comprises processed material that has consumed a great deal of energy in its manufacture that cannot be reclaimed as growth, and so this fraction has a considerable nett GHG load. If the proposed project is seriously being considered for approval this calculation should be re-worked, as the implications of the Kyoto load for the overall economics of the process are considerable, and would have an impact on the selection criteria and evaluations that led to the adoption of this technology. Of course this energy loss would not be incurred if prevention were adopted as the preferred strategy.

No explanation is attempted for the elevated level of PCCD/PCDF measured in February 2004. It has to be suspected that this may coincide with a temperature inversion period, a characteristic phenomenon of the area, but this deserves further investigation.

The modelling system is described in section 8.3.6 and seems robust. It must be said again here that the community in the area has no confidence in predictions based on such techniques given the bitter, drawn-out experience of the sewage treatment plant and the many broken promises given by the Council.

It is not stated in section 8.5.10 if the "shoreline fumigation" effect described was modelled, and, if so, with what result. This would appear very likely to arise and could, in combination with an inversion, have a significant effect.

Dublin Airport is some distance from the site (section 8.3.14) and at a considerable elevation. It has a micro-climate of its own that is quite distinct from that of the site area. Thus the data used must be considered suspect, especially given the higher proportion of onshore winds that seem now to be occurring in Dublin Bay. This is noted in section 8.3.16. where the suggestion is made that the proximity of the Dublin Mountains is skewing the results vis-a-vis Dublin Airport. It would seem equally possible that the micro-climate mentioned above and the proximity of the sea could be having a distorting effect.

Section 8.4.17 again underlines the serious Irish situation regarding GHGs and the difficulties that will arise in reducing these emissions to the allowable limit. Much reliance is being placed in the short term on carbon trading, but only emission reduction will achieve the desired result in the long term, and the time cannot now be far distant when this will be demanded by world opinion.

Section 8.4.18. confidently predicts that the emissions from the incinerator would comply with the Stockholm Convention. Here it has to be again stressed that all these predictions are only estimates, and that the composition of the waste feedstock streams cannot be predicted with any degree of accuracy (despite the assurance of section 8.4.23).

The calculation in section 8.4.39 would seem to further reinforce the suggestion that the comparative calculations should be revisited.

It is accepted that the construction phase would be the most likely to cause pollution, and the mitigation measures set out in section 8.5.3 are certainly impressive, if they could be enforced.

Section 8.5.4. says that movements raising dust would be curtailed until the problem were rectified. This does not seem likely to happen on a busy site with an approaching deadline, it is certainly not the usual experience!

Section 8.5.11 is optimistic regarding the effects of construction dust on adjoining residential areas. In dry summer weather it is certainly more than possible that an onshore breeze would carry dust into Ringsend, Irishtown and Sandymount.

Section 8.5.15 is interesting when it talks of the facility "recycling" recovered metal. This is not, it would seem, proposed for the Poolbeg site, but would be done by the end importer after the bottom ash had been shipped abroad. This means that any benefit arising from this activity will not accrue to Ireland. Apart from any other consideration the building envelope proposed does not appear to have space for an additional metal removal process, which would be quite large given the quantities to be processed.

9.0. Noise and vibration.

Most of the material in this section has to be taken on trust as they are only estimates in any case, and they seem generally very reasonable.

The figures given for the rear of the building in table 9.3 cause some concern because of potential impacts on wildlife. This will be addressed in section 14.

For the same reason any pile driving or steam blowing (section 9.3.11) would not be permissible between October and April (inclusive) because of the impact on the SAC/SPA. These shock noise sources would also appear very likely to have potential impact on the adjoining residential areas.

Sound generated from the site would appear to be a considerable problem during construction, and if for some reason permission were given for the project this would undoubtedly require further discussion and the imposition of suitable remedial conditions.

If construction is permitted on a 24-hour basis the sound levels predicted in figure 9.10 would be sure to have some disturbing effect on those resident in the areas, and suitable conditions should be inserted if permission is granted to ensure that this is avoided.

The noise profile in figure 9.14 would, without any doubt, have a serious effect on the wintering migrant flocks, and this will be addressed also in section 14.

Section 9.4.8. states that noise characteristics would be measured after the facility was completed. **While this might be of academic interest it has to be pointed out that by that stage it would be too late to stop the project! This is a particular problem in the case of the Waste Licence, as by the time the plant were commissioned there would be no alternative method of disposing of Dublin's waste and, again like the sewage plant, it would not matter what defects were present or damage being caused, the incinerator would have to be kept running. Obviously the risk would be considerably mitigated if there were several smaller plants instead of one monster!**

10.0. Residues and consumables.

This section is also rather vague on detail, presumably because this has not yet been addressed, which again gives rise to concern, as the processes involved are of fundamental importance to the safety of the proposed plant.

Section 10.3.4 states that the bottom ash will be stored on-site in the bottom ash bunker until exported. The drawings show this blocked in on the western side of the furnaces. To comply with EU regulations for cross-border transport of waste that require the appropriate licence to be given in one month from the date of application, this must have the capacity to hold at least two month's ash (more than 20,000 tonnes) this has to be a large structure, and considering the dust and pollution hazard in dry weather it does seem that there is potential for problems in housekeeping in this area.

Obviously with the storage bunker in this location screening and segregation of tramp metal from the waste would not be possible, so that the ash will be exported without any processing, in which case much of the suggested benefits from the recovery of waste metals will obviously not accrue to Ireland. Section 10.5.3. also addresses this subject but does not give detail. The introduction of scrubber water into the bottom ash would further inhibit any recovery from this stream, as there would be a contamination threat to any sorting process.

Section 10.3.8. describes the collection and transport system for the flue gas waste, which is to be collected in silos and then transferred to sealed containers carried on HGVs. This is by far the most hazardous operation performed in connection with an incinerator and the silos are also on the west side of the furnaces. Storing and transferring this material inside the building envelope does suggest a degree of hazard for the operating personnel, and surely no licence could even be considered until details of the safety regime here were provided.

Section 10.3.11. makes fleeting reference to the control systems for ash handling, which again have obviously not been given any real consideration. This is a critical section of the system and full details should have been included in the application.

There seems no doubt that the flue gas ash would be classified as hazardous under the codes, making it essential that it is exported at considerable cost. This will again increase disposal charges to the citizen and the commercial operator.

Section 10.5.7. refers to the transport of the flue gas waste in the sealed containers via a marine terminal. It should be made clear if there would be a period of storage involved here or if the HGVs would go straight from the silo to the ship. If storage were necessary there would need to be special provisions made for security of the hazardous material, and these should have been stated.

There are several somewhat confusing references to the storage of ash at a site off South Bank Road, and it is not completely clear whether this refers to bottom or fly ash, though presumably the sealed containers of fly ash would be stored here pending shipment, as it could not be economic to "double handle" the bottom ash. If this is the case there should be elaborate measures stipulated for rigorous security to eliminate any risk to the residents of the nearby housing developments.

The quantities of process consumables being stored on site appear normal for a process plant of this size and there are adequate regulations existing for their control. The steady accumulation of chemical storage and other hazardous materials on the Poolbeg Peninsula is, of course, a matter of some concern, as is the location of a high-temperature process close to a sphere of compressed Methane on the sewage plant, but the cumulative hazard will doubtless be considered under the provisions of the Serveso Directive.

The proposed requirement of 250,000 tonnes of process water per annum seems likely to cause problems, given the current overstretched situation of the Dublin water supply. No doubt this is why it is proposed to use grey water from the sewage plant.

11.0 Soils and geology.

This section provides a comprehensive study of the site conditions and does not produce any unexpected results.

Sections 11.3.4. and 11.3.5. quite rightly draw attention to the problems that can arise on a coastal site, and it is somewhat remarkable that this is the only reference to difficulties that might arise from climate change and consequent sea level rise. Placing the facility towards the northern side of the site goes some way to reducing this threat, and the elevation also helps, but it does not appear that any investigation has been done into the future risk, and this should certainly have been done in the light of the **OPW Flood Control Report** which recommended that no major infrastructure projects should be built **within 100 metres** of a coastline susceptible to flooding. Sea level rise would also increase the uplifting effects of ground water noted, and this should also be factored in to consideration of the application, as it could destabilise structural elements.

The contamination noted in sections 11.3.30 to 11.3.32. are no more than would be expected from the history of the site as an uncontrolled landfill.

The most obvious deduction to be drawn from this section is that the chosen site would impose significant difficulties and extra costs on the design and construction of the facility, costs which would again be reflected in the downstream costs of waste disposal for the Dublin Region. These costs could be avoided by building smaller plants on more suitable sites.

12.0 Water.

In this section there is a most comprehensive theoretical examination and computer simulation of the probable effects of imposing an extra thermal and biocide load on the Liffey Estuary, arising from the decision to use water cooling for the condenser.

While it is appreciated that this would extract the highest energy return from the generation cycle, it does appear to invite problems.

While the computer can predict how the thermal and biocide load will dissipate, at least in general terms, it cannot predict the effect of the increased load on fish and other marine fauna. In particular the effect on the breeding population of Liffey Salmon can only be established under operational conditions, and it seems unlikely in the highest degree that any threat to this population would result in the closure of the incinerator. Therefore all the talk of "monitoring" is an empty exercise, and the risk to the fish has to be assessed and judged at this stage of the planning process.

The following comments were offered by a qualified biologist and put the case well.

"Dublin City is considered the last capital city in Europe to have a run of native salmon (i.e. Liffey salmon, not artificially stocked). This would be at distinct risk from thermal and chemical plumes which are inadequately quantified and whose impact is utterly unknown, as admitted in the hugely variable models, so that the Precautionary Principle must apply.

The discharges already arising from Synergen and Poolbeg have a RWTW on average (30.3 m³/sec) that almost equates to the maximum discharge of the three rivers (35.5 m³/sec) and greatly exceed the summer flows.

WFD does not allow for a further deterioration in water quality and demands improvement. This development would threaten remedial measures. Even low bar of BANTEC would prohibit it.

Section 12.1.21. This acknowledges the risk to Anadromous and Catadromous species, and, in the absence of adequate modelling and impact assessment, as evident, this alone should stay development.

The risk to fisheries is acknowledged and inadequately assessed.

Black guillemots nest in the Great Wall just downstream from the proposed discharge point.

Dead porpoise, seals and pelagic sea birds have been discovered in the river in the last year alone. As there is no adequate baseline work on their populations or use of this area, or of the impact of the proposed discharge this should be fully examined before any consideration is given to granting permission.

Section 12.2.9 demonstrates the "experimental" nature of the proposed development and the inadequacy of knowledge of the possible impacts and the frighteningly overall emphasis of this EIS on the primacy of BAT practice over the Precautionary Principle. When public health becomes an environmental quality, the EU Commission demands the latter approach.

The ecotoxicity is based on models, with inadequate baseline data, and largely drawn from the lower trophic levels and more tolerant species. WFD would insist on water quality of salmonid quality being maintained where it exists and return to same where it does not.

Sections 12.4.8 and 12.4.10 demonstrate the inadequacy and uncertainty of the modelling about the thermal plume and fails to convince that it would not span the river or remain on the surface in times of low flow and spring tides. Indeed sections 12.4.13 and 12.4.15 highlight the absence of contingency provision in such situations and the absence of information.

Section 12.4.39 is loosely written, and is certainly not a guarantee.

In summary, the inadequate information and data and the over-reliance on poor modelling, together with the lack of any allowance for contingency, mean that nothing in the river would be safe."

These comments certainly appear to confirm that there would be a serious risk from the proposed cooling system.

Given the steadily increasing disturbance arising from increased maritime activity in the Port, the polluted state of the Tolka Estuary established during the baseline study carried out at the behest of the Council (quite possibly arising from runoff from the old landfill at Dunsink) and the already heavy load imposed on the Liffey it would seem hazardous to an unacceptable degree and completely contrary to the Precautionary Principle to allow this system of condenser cooling to be used at this location.

13.0 Human beings.

This section attempts to identify potential impacts of the proposed incinerator on the surrounding communities. Much of its contents are subjective and can only be described as aspirations which could only be verified in the years after the facility was commissioned, so it is not proposed to deal with these in detail.

The health effects of incineration will be addressed in a later section.

The employment that the proposed facility would generate in the surrounding area (section 13.1.3.) could not be expected to be significant, especially given the recent recruitment tendencies in the construction industry, which now relies almost completely on migrant labour. This is confirmed by the effect of similar large projects in other areas of the city.

It has to be said that the Community Gain Fund in section 13.1.4. is generally regarded in the affected communities as a **bribe to accept a dirty industry**. Benefits from similar funds on past projects have had a very uneven impact and sometimes become extremely divisive.

District Heating (section 13.1.5.) has been available from the existing power stations for half a century without any interest from the Council or from private developers.

There have already been efforts to redevelop the old Pigeon House power station as a science museum and also as a transport museum, the only result of which was to have the roof removed and leave it open to the elements so that structural deterioration was accelerated. Any initiative in this direction faces enormous difficulty and cost due to the large number of mass concrete turbine blocks, and other foundations which take up a great proportion of the useable space, and whose removal would be a very considerable task.

These problems are only noted to show that the "silver lining" promised if the incinerator were to be given permission are not really grounded in fact but is mere aspiration.

Mr. Haase's study (section 13.2.2.) raised very important issues, and the EIS is deliberately misleading on this subject, which will be fully addressed in the appropriate section.

It is true that the community was encouraged to provide feedback as stated in section 13.2.6. What is conveniently omitted is that this feedback was totally ignored!

Section 13.3.2 states that the first Poolbeg ESB station opened in 1965. It was actually in 1971, which again shows the lack of knowledge of those who prepared the EIS.

Section 13.3.20. refers to the development of tourism, proposing "canoeing, rowing, fishing and windsurfing". This shows again an ignorance of the requirements of the protected areas and/or a vision in some quarters that is quite at variance with their ongoing conservation.

Section 13.3.21. again refers to the proposed cycleway around the Bay, giving it the correct status as a "proposal".

Sections 13.3.31. and 13.3.32. are written in extremely general terms and are so vague that they provide no reassurance to those who have considerable concerns regarding the effect of an incinerator on the adjoining and wider communities.

Section 13.3.34. is also vaguely reassuring about health, but does admit in its last clause that there is some evidence of health effects on neighbouring populations. Recent work does indeed confirm this, and the subject will be addressed later.

Section 13.3.54. *et seq* considers the risk to the food chain. It is noted that dioxin concentrations in cow's milk in the Dublin area are rising, though these do not yet approach danger levels. What is not said is that a significant emission of dioxins following an accident, if the wind were in the right quarter, would leave large tracts on County Dublin unable to sell food for the next several years.

Section 13.3.83. notes that the FSAI rightly emphasises the necessity for proper management of any incinerator if food is not to be adversely affected, together with subsequent monitoring over a wide area. It does not say, however, that monitoring can only act in retrospect and that if an unacceptable level of dioxin or other contamination were found in food the whole area surrounding the measurement point would be sterilised for food production for years to come.

Section 13.3.90 is dismissive of the body of recent reporting of incinerator problems, to which it must be pointed out that this section of the EIS was compiled by the proposed contractor, who must surely have a vested interest in making the technology appear bland and harmless! There is a great deal of material to the contrary now available through the internet, much of it suggesting that the current risks are understated. The qualification regarding "modern" plants should also be noted, thus disregarding the considerable history of problems and accidents involving "older" facilities – the dividing line between older and modern is not stated, nor does it seem that there is magic "new" technology proposed for this facility that would make the process inherently safer.

The evaluation of potential risks to humans arising from normal operation and accident seems to have been reasonably done, though it is possible to conceive other scenarios which could have health implications. It has to be repeated here that a mass-burn incinerator of this huge size has to pose some threats, especially considering the toxic nature of the outputs, and it remains quite wrong to construct such a facility so close to a major centre of population and in among areas of great natural heritage importance.

14.0 Terrestrial ecology.

It is noted that this section is based on two visits to site, in May and August 2003. This is quite inadequate for the preparation of an EIS, especially when the chief importance of the adjacent SAC/SPA lies in the populations of winter migrant birds that it holds. A study for an EIS of this importance should have been carried out over a complete year, especially given the long period of time that this application has been in preparation.

The flora lists appear reasonably comprehensive, and there is no suggestion that the site contains any protected or endangered flora species.

Section 14.3.26. notes the presence of Skylarks on the open ground to the south of the site. In fact, because it is proposed to use this area as a construction compound, it thus becomes part of the site and has to be considered as such. This habitat is rapidly disappearing from the Dublin area due to development and is now quite scarce, so that it should be retained for the many bird, insect and animal species that need it. Skylarks appear to be declining sharply in numbers and should be preserved where possible. **This means that the proposed use of this area would be severely damaging to a bird species of conservation concern as well as much other wildlife.**

Section 14.3.28. discusses a Grand Canal pNHA situated 2 km east of the site. With respect, this should surely be west! Again the EIS was prepared by someone unfamiliar with the area, which must raise concern.

Section 14.4.2. considers the effect of the project construction on the population of Light-bellied Brent Geese and draws a dangerous conclusion "...the geese within Dublin Bay are well used to high levels of disturbance and background noise and are unlikely to be much affected by construction activities. Even if disturbed, which would be temporarily, they have many other sites

in Dublin Bay to retreat to." This is **most strongly contested** as being totally inaccurate, especially as it is proposed to use the open ground south of the site for the construction period, about three years in total.

The real position is that the Brent geese in South Dublin Bay are coming under ever increasing pressure and are showing increasing signs of stress. Their traditional feeding/roosting ground in Sean Moore Park is under threat from a proposed enclosure 8 metres high (which is at present appealed to An Bord Pleanála), one object of which is to deny that site to them. Already they are subject to ongoing and illegal disturbance, possibly orchestrated, and to the hazard of large nets, floodlighting, etc. They have some compensatory habitat north of the Nature Park (shown as amenity grassland on figure 14.1) which was designated by the Council for their use as a feeding/roosting area when the ground to the south of the site was taken for works in connection with the Dublin Bay Project. They now use both the grassland and the open ground, where they are still subject to disturbance, e.g. from "quad bikes" being illegally used, and if the construction compound were sited as proposed this whole area would almost certainly be too subject to noise and activity for their continued use.

The geese do not have "many other sites" around Dublin Bay that are as suitable as this. Because of disturbance they are increasingly being forced to travel inland to parks and other open spaces, but have to return to the Bay at night, thus expending extra energy in unnecessary flight. This also deprives them of valuable feeding time and, as herbivores, they need every available minute of feeding to build up their reserves for the spring migration north and the stress of breeding. If they have not been able to replenish their energy reserves due to ongoing disturbance it appears probable that there will be higher casualties on migration and reduced breeding success, thus jeopardising the sustainability of the population.

Being displaced from this area for such a long period could well deliver the final blow to this population which could be permanently displaced and lost to the people of Dublin. Similar pressures in Belfast Lough led to just such a result, and the geese have never returned. When it is considered that over 7% of the world population of these birds (but this 7% is only 2,000 birds, underlining the fragility of their status) winters in Dublin Bay it can be seen how important this habitat is for their survival, and how essential it is to prevent any damaging impact on their numbers.

The attention of the EPA is again directed to the recent opinion of the Advocate General (Case C-418/04) referred to above.

One of the construction activities that would be necessary due to the selection of this difficult site would be extensive pile driving (the piles at Ringsend power station extended almost 40 metres!) This is, by its nature, a noisy activity and would certainly cause severe disturbance, not only to the geese but to all the other wildlife of the adjacent Bay. Other protected birds include large populations of Waders that feed in the sediments of South Dublin Bay beyond the shoreline when the tide is out. These birds again need to be able to feed at the right tide conditions, and need space to roost at high tides, and so would suffer from the impact of the loss of habitat and disturbance from the proposed construction activities.

The impact of pile driving and also steam blowing would appear likely to cause serious disturbance to the nesting Tern populations on the Dolphins (section 14.5.2) and could cause damage to young birds or eggs. To protect them these disturbing activities should not be carried out between May and August inclusive, while for the winter migrants they should be prohibited between October and April! It is appreciated that the blowing off of the boiler would be a "once-off" occurrence, but it could still cause very significant problems if done at the wrong time. These and similar constraints naturally arise when it is proposed to carry out large-scale construction in an area that is not suitable for its reception, and again question the whole basis of process size and plant location.

The wetlands adjoining the site along the southern shore of the peninsula support wildlife populations that fall between terrestrial and estuarine, and it may be for this reason that they have not been considered under either section. This is because the Wader populations, several of which reach internationally important numbers, are classed as terrestrial, but their food supply is found among the fauna of the sediments, which is estuarine. The whole shore is a feeding ground, and any hazardous emissions towards that area would be picked up by these animals (see appendix 8.1, section 8.8.1.), which would then allow the birds to concentrate the chemicals in their fat reserves. Similar mechanisms have been observed at hazardous plants in other countries, the infamous Sellafield being one nearby example, and many more examples exist.

It is impossible to quantify the extent of this threat, but it is certainly one that should have been considered as a possible impact on the protected areas, and no licence should be even considered until this has been investigated.

There must also be concern regarding the disturbance created by light pollution. If 24-hour working is proposed this would obviously be very intense, and even after the plant were commissioned security would still demand a significant level of external lighting. The glazed areas on the building are quite extensive and these could also endanger birds in flight, though this applies more to passerines in more wooded areas. Indeed the building may be sufficiently large to pose a hazard to migrating birds, and this should have been investigated if the EIS were to be considered adequate.

In summary, the EIS appears to have missed serious potential impacts on the bird populations, and the siting of the proposed facility at the Poolbeg peninsula is clearly unsafe.

15.0 Estuarine ecology.

Once again it is noted that the survey work for the estuarine ecology only occupied two days, which seems somewhat superficial, though good results seem to have been obtained.

Almost all of the concerns for effects on the ecology of the estuary arise from the selection of water cooled condensers taking their water supply from the Liffey. It is obvious, as already stated, that this will add to the thermal and chemical load on the river, and it equally obvious that it cannot be said at this point whether this will have a significant effect on the fauna of the river or not.

It is stated, of course, that there would be ongoing monitoring of the situation once the plant were commissioned: **That assurance is worthless, as the plant, once built, is not going to be shut down because it is causing ecological destruction.** The adjoining sewage plant provides a perfect example of the complete futility of this "reassurance".

This is the whole problem of selecting an unsustainable plant and then locating it in the wrong place.

If it were absolutely essential to employ incineration as the waste disposal technology, which is not proven, then it would have offered a much more flexible, economical and sustainable solution to use several smaller plants in appropriate locations. In such a situation air-cooled condensers could have been employed even though these would have imposed a small penalty in efficiency and required careful noise abatement design.

It is unfortunately all too obvious now that the facility applied for, if allowed, would generate endless conflict with community, fishing, conservation, environmental and many other sectoral interests, so that even if trouble-free it would be mired in ongoing controversy. It should not be granted a licence to operate.

The Precautionary Principle applies here, that if something can cause damage it should not be allowed, no matter how small the likelihood of damage is.

In this light the assurance given in section 15.5.23. is but another of the pious hopes so plentifully contained in this EIS.

16.0 Archaeological and architectural heritage.

The assessments contained in this section appear fair and balanced, and are not contested, though the effects of the construction works and traffic on the Pigeon House Road and that part of the Great South Wall do not appear to have been fully evaluated.

17.0. Material assets.

In general this section also seems a fair assessment, with the following exceptions:

Section 17.3.17. is wrong. One planning permission has been granted for a mixed use development in the area. This is felt to be premature and perverse, and is presently under consideration by An Bord Pleanala following a number of appeals.

The effects of the Dublin Port Tunnel and the HGV strategy are by no means assured, as there is considerable resistance to some of the proposals, and it remains to be seen what happens when both are in use. Some scenarios suggest that they may even increase traffic problems in the hinterland of the Poolbeg Peninsula and the approaches to the East Link Bridge!

The optimistic statements in sections 17.4.7 to 17.4.9. are really just based on guesswork. The long-term effect of the facility on house prices would depend on its performance, safety record and on the perceived traffic impact on the surrounding areas, and could just as easily be extremely damaging.

Section 17.4.17. again refers to the extension of the South Bank Road, and it must again be stressed that this is only a proposal contained in a deeply flawed study that seems unlikely to be adopted. It must be stressed that any such interconnector cables must be run underground to avoid hazard to the bird populations of the SAC/SPA.

The mitigation measures in section 17.5 again appear as hopes rather than promises, as they are heavily qualified. It is hard to see how a campaign of education, envisaged in section 17.5.2., would be any more successful in overcoming local objections to the proposed plant than the propaganda campaign waged over five years by the Council which even included a local office and a special web site! This campaign has cost a huge amount of money and achieved nothing.

The implementation of district heating would depend, firstly, on what development actually takes place in the vicinity; secondly on the economics; and thirdly on the ability to convince developers of the merits of the system. None of these is assured.

18.0 Construction and decommissioning activities.

It has already been pointed out that the construction phase of the project would have a most damaging effect on the natural heritage of the area. It would also be a period of serious impact on the surrounding communities, especially given the restricted access to the site. Previous experience shows that the only local businesses likely to benefit to any great extent would be the public houses, especially on pay days.

The formulation of the construction sequence and methodology described in section 18.2.1. once again raises the question of responsibility for the project. At one stage the information meetings were told that it would be a straightforward "design, build and operate" contract, where the Council, presumably, would only deliver waste to the facility for incineration and pay a fee for the service. This clear situation has subsequently become completely blurred, to the point where it cannot now be ascertained which party is actually responsible for anything. This is a particularly unsatisfactory state of affairs for such a large, complex and hazardous project, especially if trouble should arise. The current disputes over cost overruns and responsibility for rectification of defects in the Poolbeg Sewage Works and the Northern Port Tunnel must surely illustrate the dangers and cost implications of such lack of definition. The EPA is urged not to even consider granting a licence for such a facility to operate until this dangerous confusion has been resolved.

Comment has already been made regarding the use of the area south of the site (section 18.2.3.) because of its impact on the natural heritage of the area. It is now proposed to cause more damage to the west of the site which must be added into the total harm being done. The ecology of this area has developed over a period of over 20 years and is now an essential component of the biodiversity of the peninsula; if this project were to proceed there would be precious little of it left for future generations, contrary to EU legislation and stated National Objectives, not to mention the published strategy of Dublin City Council.

The material proposed for removal to expand the cooling water channel (section 18.3.2.) would certainly be heavily contaminated and would require appropriate disposal.

The proposal to have work proceed on a 24-hour/day basis during the construction period is contrary to usual practice where residential areas are affected, and seems certain to cause objections despite the optimistic noise predictions as traffic and other disturbance would be involved. It is not stated how many days would be worked per week, which is a serious omission, as Sunday working is now normally forbidden on construction sites where there is an impact on surrounding communities. **This must be clarified!**

Section 18.10.7. is very weak, especially given the sad history of illegal dumping and other pollution on the Peninsula. In the unlikely situation of licences being granted this section should be made much more restrictive so that such incidents would not happen and the enforcement activities of the Council would be subject to effective monitoring and control.

All the management and mitigation measures set out in this section sound excellent in theory, but there is a confidence deficit in the certainty of their implementation on a remote and difficult site, especially if cost and schedule constraints become apparent. This would obviously depend to some degree on the contractual relationships (see 18.2.1.) If it were left to the Council to enforce good discipline the lack of confidence would be greater, as their previous record of enforcement in this area in the past several years has been totally deplorable.

Section 18.15.2. yet again raises the confusion over the contractual relationships. If the contract is "Design, Build and Operate" then who is "the owner" referred to? If the Council is the owner of the facility then almost all of the "information" given to the community is false. This is totally unsatisfactory and the applications should be returned to the Council for it to be resolved before granting licences is even considered.

The proposals set out under this section would not really appear to be enforceable, and are, once more, only pious hopes.

19.0. Sustainability.

The brave statement in section 19.1.1. would be more convincing if supported by actual evidence, given that the continued expansion of the Dublin region has been demonstrated to be unsustainable! Present indications are that the exponential increase in housing construction will slow sharply in the very near future and the ESRI have just warned that proposed infrastructure spending cannot be sustained by the Irish construction industry in a cost-effective manner. The growth predicted for the Dublin region now seems most uncertain, calling into question much of the justification for the incinerator.

It is again contended that the figures in sections 19.2.1. to 19.2.5. are biased, in that they do not take account of the energy expended in the production and processing of the proposed input waste stream. When these are taken in to the calculations the use of incineration is seen as a significant nett GHG contributor. It is also obvious that the full impact of transport, both of raw waste and of by-product ash, has not been factored in to the calculations, and that these would make the proposed incinerator even less sustainable as well as costly to the citizens. This omission is either dishonest or careless, and it must be rectified before these figures can have any credibility.

It must again be stressed that district heating has been discussed in the context of Dublin for over 35 years without any progress being recorded (section 19.2.10.)

Section 19.2.11. makes grandiose claims for the design and optimisation of the proposed incinerator which cannot be sustained, in that design of the plant has not yet progressed beyond the conceptual stage.

Section 19.2.15. is, at best, pious aspiration and, at worst, deliberately misleading, as it takes no account of the actual conditions applicable to the proposed site. It should be completely ignored.

Section 19.2.18. still suggests that bottom ash can be re-used in construction. This may be theoretically so, but in that case, given the huge scale of infrastructure development proposed in Ireland, why is it being exported? It is now clear that there is no interest in the use of this waste stream, which must also impact on the original economic justification for the selection of this process.

It seems fatuous to make statements like that in section 19.2.19. without any evidential corroboration. It is equally possible, given the lack of knowledge about the feedstock waste, that it may not.

Section 19.3.3. is again without real foundation and is not, in any case, related to sustainability but to community gain.

Section 19.4.1. is untrue. The community consultation was deeply flawed, as the report by Mr. Haase shows, and the input from the local communities was essentially ignored.

20.0 Cumulative impacts and interactions.

This is so generalised that no comment is needed.

21.0. Mitigation measures and residual impacts.

Section 21.1.4. supports the contention that no more than preliminary design has been done on this proposed facility. Most of the following sections just list good construction and operational practices.

The reference to "Terrestrial Ecology" on page 21.8 is overly dismissive. The loss of the trees along Shelly Banks Road will affect the passerine populations because of the general lack of tree

cover in the area and will thus impact on the ecosystem developed over many years. The loss of habitat will also reduce the biodiversity of the Nature Park and the Peninsula as a whole, contrary to the declared policy of the Council ("**To maintain and enhance biodiversity**" *Dublin – a City of Possibilities*).

The second sub-section on "Traffic" on page 21.11 admits that the traffic situation following the opening of the Port Tunnel cannot be foreseen. This means that the whole traffic plan is premature, and that even if granting of licences is considered they should be delayed for at least a year until the effects can be established. It is no use monitoring if the flawed decision has already been made, and even if a remedial plan were prepared it could well prove impossible to implement!

Under "Terrestrial Ecology" on page 21.15 a programme of tree planting is proposed. If this arises the trees should be **native** species and selected for their ability to withstand a saline marine environment.

The two sections on "Traffic" at the bottom of page 21.17 are strongly contested in the light of the comments on section 7.0 above.

The statement in the last section on page 21.18 regarding the impact on health and safety is merely an opinion and is not, in any case, quantified. It should be ignored.

The first section on page 21.19 is simply wrong and ignores the effects on the SCA/SPA and the protected populations that have already been demonstrated.

Appendix 5.1 BAT compliance.

This section makes great promises about the use of Best Available Technology that have to be treated with considerable reservation, given that it has already been established from the EIS that "political and market" factors, i.e. cost considerations, have already influenced the conceptual design. No great time will therefore be spent on this, other than to emphasise some critical points.

Sections 5.1.5. to 5.1.7. propose methods for control of the incoming waste, but it is extremely difficult to see how these could be enforced, given the volumes of input envisaged. How can one piece of prohibited waste be seen in a 20-tonne baled consignment, much less removed?

Radioactive waste is probably not a serious threat, though the extent of this is probably also not established with any degree of certainty.

Section 5.1.7.(c). states that the storage time in the bunker should not exceed ten days in normal conditions. In this time the biological material would surely be in an advanced stage of decomposition, and this would seem to present a considerable health hazard, at least to the operating staff. Has this been considered?

Subsection (e) again states that the waste will be categorised before discharge to the bunker, but it is again submitted that this is not possible in a bulk load. (But see Licence Application section later)

Section 5.1.8. again shows that a calculated risk is being taken to save costs. Every polluting component that enters the furnace increases the possibility of noxious emissions.

Section 5.1.10. sounds reassuring until the question is raised of what happens when the plant is inoperative. Are the ID fans kept running from the ESB grid? What happens when the ID fans are

undergoing maintenance? If one, at least, were not running there would be a considerable risk of release of the contaminated air from the bunker.

Section 5.1.12. states that rejected waste would be removed from the bunker, which would seem a cumbersome procedure, even assuming that it could be identified. If this occurs, where would it be taken? And by whom, given that the offending supplier would presumably no longer be on site. The whole system for the handling of waste going to the bunker and its subsequent control does not seem to have received any kind of rigorous analysis, and to be highly speculative. This appears to be an area where contamination, dust and noxious vapour accumulation and hazards to personnel would be very likely in the absence of a properly conceived and executed plan, and it would seem only right that this plan should have been available as part of a comprehensive E.I.S.

In summary, there is much to cause concern in the waste collection, marshalling and delivery system that indicates the probability of operational problems if the project were approved.

Section 5.1.22. describes the control system for the furnaces in general terms. The residence time of the gases in the system from intake to measurement point would obviously have a significant impact on the success of this strategy, as predictive control would be difficult because of the variable nature of the waste input. This was addressed several times at "information meetings" but none of the experts present were able to supply answers, and much more detail should have been included here. The performance of this system is the key factor in the incinerator performance, and it is easy to imagine conditions in which it could become unstable.

Section 5.1.23. rather undermines all the bland reassurances that have been given throughout the EIS, as it demonstrates that it is not possible to simulate the performance of the facility and that it must be "hand tuned" when operational, just like most other process plant. The very large size of the proposed facility would, of course, increase the tendency towards instability.

Section 5.1.27. confirms the validity of the arguments that have been made throughout this submission regarding the variability of the waste stream. The large furnace/boiler set would also be less responsive and more difficult to control because of the system inertia that it would possess.

Section 5.1.32. confirms the contention elsewhere in this submission that there is no immediate proposal to implement district heating, and that this is a "pie-in-the-sky" putative benefit for the communities. This is confirmed by section 5.1.35, which indicates that district heating, if ever implemented, would significantly degrade the operating efficiency of electricity generation, thus again impacting negatively on the operating economics of the facility.

Sections 5.1.42. and 5.1.43. are about as vague and non-committal as it is possible to write. Sub-section (m) of the latter again confirms the influence of market and political factors.

Section 5.1.53 also raises some concerns, particularly in the event of any malfunction in this plant that would require human intervention.

Reference has already been made to the potential hazard of re-circulating the scrubber water as described in section 5.1.58.

It is noted that no stripping is proposed for sulphides or ammonia, yet again on grounds of cost. Mercaptans, in particular, are extremely odorous substances, and it is to be hoped that the experiences of the sewage plant are not to be repeated to save money.

In section 5.1.68. it appears yet again that the best technology is being refused on cost grounds.

There is a degree of optimism in section 5.1.76 which is difficult to share, based on the sheer bulk of the material in the bunker and the difficulty of judging calorific value by appearance. **It should be noted in this respect that recent reports from Germany indicate that municipal incinerators are experiencing difficulties because the successful uptake of recycling has so reduced the calorific value of the waste stream that additional combustible material has now to be added. This underlines the unsuitability of incineration as a technology when reduction and recycling are being seriously implemented and the fallacy of the position adopted by the Council.**

Sections 5.1.81 and 5.1.82. lack conviction, and appear to have been inserted at a late stage to justify the use of sewage sludge for which no other use can now be found. This must increase the probability of biological degradation in the bunker, especially in corner pockets where grabbing is difficult. No statement exists in the EIS to explain if any method of cleaning this bunker is provided in the case of significant contamination.

“Community Gain Survey”.

It is hard to evaluate this survey, as it appears to have been carried out with a somewhat skewed sample and quite a limited spread. It was commissioned by the NRA, so that the references to the Council are something of a by-product, indeed at an information meeting on 25th November 2005 the Council representatives denied all knowledge of it! One of the survey team told the same meeting that it was hoped to get 100 responses from special interest groups, yet many of those in the community long involved with the proposed incinerator were not even approached, which must cast serious doubts on the validity of its conclusions.

Because the primary aim of the survey was to establish attitudes to an Eastern By-Pass much of the sampling was done in the area of the East Link Bridge and so is hardly relevant to the current EIS.

Thus its findings have much less relevance than those of the audit considered in the following section.

Community Gain report by Trutz Haase and Brady Shipman Martin.

This study is based on a much more detailed survey and is thus a better assessment of the situation.

However it must be pointed out that the “report” in the EIS is NOT the original report, but a heavily edited, shortened and sanitised version thereof, the reason for this being the very trenchant criticism of the Council contained in the original document that runs to 68 pages. Attention should particularly be directed to chapters 4 and 5 of the unexpurgated document which is available from the Council.

It is a fair summary of the current position to say that by far the greatest proportion of residents in the hinterland of the proposed incinerator regard any Community Gain fund as a bribe to persuade them to accept a dirty, traffic-generating and hazardous development, which is a sad commentary on the failure of the Council’s policy of replacing real consultation with arrogant dispensation of information according to its own agenda.

It also deserves notice that Mr. Haase supports the concept of several dispersed small, flexible incinerators if it is felt essential that this technology be adopted.

It does seem that this aspect of the application should receive most serious consideration, as if the development process has been flawed up to this point there can surely be no confidence in the ability of the Council to carry it further in safety.

If by chance the full copy of the report is not available to the EPA the writer would be happy to supply one, though it is assumed that one was attached to the application.

Health Effects of Municipal Incinerators.

It must be emphasised here that no Health Impact Assessment of the potential effects of the proposed incinerator has been carried out, rendering this section lacking in conviction or authority.

This is probably the most controversial and uncertain aspect of the whole proposal, and it is wrong that it has received such a low priority in the EIS. The author of this submission has no medical qualifications and so cannot offer any expertise in analysing the situation. However some facts and probabilities are worthy of comment.

Professor Schrenk, who is a noted protagonist of incineration, attended several of the information meetings on behalf of one of the contracting parties, where he defended the technology with considerable ability, though he was, perhaps, less sure on the process elements. He freely admitted that there is a considerable history of accidents and health problems directly associated with waste incinerators over the years (and here one should admit, in fairness, that municipal incineration was used in Rathmines in past times, though no relevant public health records are apparently available). Having admitted the previous history he was at great pains to point out that that these problems concerned "old" incinerators, and that there were now "new" incinerators that would be quite acceptable. When pressed he defined the changeover date in the technology as about 1990. It was not clear what significant technological advance had been made, if any, or if there was a general improvement in design, construction and operation of these facilities.

Professor Schrenk then suggested that contemporary records would show that no problems arose from these new incinerators. This claim is, however, somewhat disingenuous because of the way in which problems can arise. It is accepted that there is unlikely to be a massive release of dioxins and other pollutants from the proposed incinerator unless there were a catastrophic accident, terrorist action or gross mismanagement (all of which are, of course, possible!). The more likely way in which problems could arise lies in the cumulative effect and lipophilic characteristics of these very complex chemicals, which means that even a release at very low levels, possibly at the lower end of detectable quantities, can accumulate in fatty tissue and so lead to problems after a number of years. He also fails to take into account the recent research on micro-particulate contamination.

Professor Schrenk examines a number of recent publications and dismisses all of their findings as being inaccurate and/or biased. He is entitled to his opinion, but the authors appear to have considerable qualifications and reputation in the field, equalling his own, and must surely have some credibility.

An Internet search will also produce a very considerable body of new literature on the health effects of incinerators, some of which shows very disturbing results. There are suggestions that there may well be previously undiscovered dispersion methods whereby the dangerous compounds can bypass conventional removal mechanisms, which would render the technology proposed for the Poolbeg incinerator quite inadequate. It is not proposed to pad out this submission with copies of these reports, of which the EPA will surely be aware, but it is strongly

suggested that the sites, e.g. www.ecomed.org.uk/content/incinerator be reviewed before decisions are made.

The Greenpeace publication *"Incineration and Human Health"*, ISBN 90-73361-69-9 also contains much relevant information and a very large catalogue of reference literature, and is recommended for study.

There is also research material deriving from USA that underlines the cumulative effects of very low dioxin exposure, and suggestions that this poses a particular health risk to pubescent girls who, for the sake of their future children, should be encouraged not to drink cow's milk!

All of this suggests that the "new" incinerators may not yet have been long enough in operation for damaging effects to become manifest, and that it is by no means impossible that there is a health "time bomb" ticking away. A similar situation has arisen many times in the past, e.g. with DDT and organochlorine pesticides, all of which might mean that the Professor's very confident assertions of safety are over-stated.

He also admitted that epidemiological studies in an already polluted area would be unlikely to produce reliable results. The whole hinterland in question is just such an area, so that it could be a considerable time after commissioning that any problems became apparent, by which time it would, of course, be far too late.

The research in the EIS on air quality shows that, while the prevailing wind still comes from the south-west, there are still enough easterly winds (probably increasing due to climate change) that could disperse any hazardous discharges over the greater part of Dublin city and its hinterland. Certainly dispersion to sea cannot be guaranteed. The well-known "inversion" phenomenon would also cause problems with the dispersion mechanism.

It would appear that in this case the Precautionary Principle should override all other considerations and that the proposed incinerator, if deemed absolutely necessary (which is not conceded) should not be constructed on a site where any accident or long term effect would put at risk many hundreds of thousands of people.

WASTE LICENCE APPLICATION.

There are many discrepancies between the EIS and this document, so much so that it does appear they derive from different authors, once again reducing confidence that any real design has been expended on the incinerator proposal. In many ways it appears from this application that Dublin is being asked to accept on trust a "carbon copy" of the Odense incinerator in all its aspects without much serious consideration of the many different factors applying to the proposed site at Poolbeg!

As with the EIS this submission will attempt to identify the areas of contradiction, uncertainty and concern and will not comment on every individual statement.

It must again be noted that the application is not submitted by the organisation that will design, construct operate and manage the proposed facility, which must cast doubts regarding its standing. The EPA will, it is hoped, address and rectify this situation.

In the fourth schedule on page 4 it is stated that the facility may in future be retrofitted for the recovery of ferrous metals, other inorganic materials and "components used for pollution abatement". These have not been even mentioned until now, would require substantial and significant alteration to the process and buildings, and details should be given in the application of the provisions that would be made in the design for their subsequent addition. The fear, of course,

is that their incorporation would require significant land take which would impact to the detriment of the sensitive areas beside the facility.

Section A.1.3 on page 5 gives purported details of the waste feedstock, but is quite confusing regarding the proposed total load. For example, if it were decided to incinerate sewage sludge would this input be added to the 600,000 tonnes of household and commercial waste, or would it be an additional input? If the former it would, of course, reduce the processing capacity for the designated waste stream, again impacting on the efficiency of the system. More details should be provided of the proposed input of "industrial non-hazardous sludges" and "industrial non-hazardous solids", both of which are waste streams that have never before been mentioned by the Council, which again appears to be devising the proposed system "on the hop".

Section A.1.4. on the same page proposes the use of a bund to contain spilt ammonia solution which is totally inadequate given the corrosive effects of ammonia fumes, although this does to some extent depend on the concentration of the proposed solution. Effective double containment should be provided. It is again noted that there is a major accident potential arising from the proposed facility.

Section 1 on page 7 refers to the "inspection" of incoming waste. This is a concept not previously put forward and will be considered in detail later in this section.

Sections 12 to 16 on page 8 refer to the efficiency of the generating system without making any allowance for the reduction in generating capacity that would be incurred if the district heating option were subsequently taken up. If there is any real intention to introduce this option, which is doubtful to say the least, then there should be full calculations given so that the effect on the economics of the facility can be evaluated.

Section 25 on emissions monitoring conflicts with the schedule given in tables F.2 to F.8 annexed to the application, which are completely inadequate. It must be strongly suggested that highly hazardous emissions like dioxins should be monitored on a daily basis, and that the results should be available on-line to the EPA and to the community.

Section 26 refers to the operating and waste acceptance hours, but it must be again stated that these have not been accepted by the community.

Section A.1.6 states that compliance with emission standards will be ensured by Dublin City Council. Apart from the obvious lack of confidence in this body deriving from its many documented failures of enforcement in this area it is also not clear that the Council is not a partner in the operation, and would therefore be self-regulating. It is absolutely essential that regulation and enforcement be in the hands of a totally independent body. **At one incinerator in Sweden there is an independent engineer on shift whose sole duty is to review the operation of the system and order a shut-down if a hazardous situation should arise.** This appears to be a realistic approach to the potential problems.

Section (c) regarding BAT on page 9 is blatantly untrue, as has already been comprehensively demonstrated in the EIS analysis.

This also applies to section (cc) which perverts the thrust of the Regional Waste Policy that gave primacy to prevention. The adoption of incineration appears to have resulted from a diktat of the Department of the Environment, and accords with neither European nor Regional policy. The replacement Waste Management Plan of 2005 is an attempt to justify incineration when the opposition thereto became apparent, and lacks any credibility.

Section (d) again raises the problem of definition of responsibility and demands that the full text of any and all contracts that may have been entered into by the Council for the incinerator should be made available to all interested parties.

The third paragraph of section (f) is complete nonsense, given that the proposed facility has not yet been designed, much less "optimised".

Section (g) again raises the problem of enforcement by the Council. There must also be some doubts, as already expressed, with the acceptability of the noise that would be created.

Under "atmosphere" in Section A.1.7 reference is made to emissions from the exhaust of emergency generators. **This is the first time that this equipment has been mentioned!** No detail is given of these generators, of course, nor are they shown on the building layout which is, therefore, incorrect. The purpose of the generators is also somewhat obscure, given that in a later section of the application a figure is given for proposed import of electricity from the grid when necessary at times when the generator is not running. This, yet again, suggests confusion at very least!

It must also be noted that these generators, which appear to be large, given the large diameter of their exhausts, will be significant emitters of particulate matter of a quite damaging type, and that these have nowhere been considered in the air pollution studies.

In the same section on page 10 it is stated that "control and abatement technology measure have been designed---" This again is nonsense, as the major equipment has not yet been specified much less the detail design completed!

Again in this section it is stated that there will be no fugitive emissions from the delivery and removal of process materials and ash as all such processes will be conducted within the building. This exposes a very serious omission in the application and the EIS. **THE AUTHORS OF BOTH THESE DOCUMENTS HAVE COMPLETELY FAILED TO ADDRESS THE LOADING OF THE SHIPS WITH BOTTOM ASH! NO DETAILS ARE GIVEN OF HOW THIS LOADING WILL BE DONE, OR EVEN WHERE, ALTHOUGH THIS IS AN INTEGRAL PART OF THE PROCESS AND WILL BE DONE AT THE PROPOSED BOUNDARY OF THE SITE. GIVEN THE KNOWN POTENTIAL FOR DUST CREATION OF LOADING SHIPS WITH FINE, DRY SOLID MATERIAL, THIS OMISSION IS QUITE INCREDIBLE.**

The only explanation seems to be that the plant in Odense exports its waste off site in HGVs and so the problem does not arise there, so that nobody thought to address this very important point. Once again the confusion of approach and lack of proper engineering applied to this conceptual application is only too apparent.

It should also be emphasised that the vaunted negative pressure to be maintained in the building will only apply when the fans are running. When the plant is not operating odours and other emissions arising from the decaying waste in the bunker will be free to travel wherever the wind takes them, suggesting a possible repeat of the problems of the sewage plant.

In the next section the reference to the "rainwater storage tank" is new, this has not before appeared. However it does not appear likely to give rise to problems providing that it is adequately sized.

At the top of page 11 it is stated that construction noise will "comply with the relevant guidelines". This is discussed in detail in the relevant section of the commentary on the EIS, as are the environmental impacts set out in section A.1.8.

With reference to section A.1.9. it is again emphasised that any and all monitoring must be carried out by independent experts.

Paragraph 2 on page 12 refers to the collection and storage of flue gas residues, which is the most dangerous part of the entire process. No details are given as to how this will be done, and this appears to be a serious omission that should be rectified.

The statement is made that "no treatment of any ash or residue will take place onsite". This is contradicted by the earlier statement that the recovery of metal and other residues may take place at a future date. This confusion should be clarified.

Section A.1.11 makes fine promises regarding emergency procedures. These obviously have no standing at present, as they cannot be compiled until the equipment has been selected, but any licence should be conditional on their prior approval before any operation were to commence.

Section A.1.12 covers measures to be taken when the proposed facility reaches the end of its useful life, and sounds very reassuring, though more detail of how the hazardous areas would be secured and/or dismantled would be welcome. What is not stated is who would pay for this work? Once again the lack of access to the contract severely handicaps the consideration of the applications. Unless this is agreed at this stage it seems quite likely that this would fall as yet another charge on the long-suffering citizens of the Region!

The various drawings following page 23 do not add much to the consideration of the plant, being purely conceptual and not to scale. The arrangement of the equipment can only really be considered when the equipment has been sourced and scale drawings can be prepared. However it is notable that the office and workshop area are located in the same part of the building as the bottom ash bunker and that this would suggest that there could be considerable dust contamination when ash is being transferred. It is also obvious that the bottom ash bunker is not adequate, given the storage requirements implied by the EU licensing procedure as already discussed in the relevant section of the EIS.

On the water flow diagram 13319 it is suggested that collection of rainwater from green areas is optional. Given the susceptibility of the site to tidal flow influences and the probability of much heavier short-term precipitation episodes it would seem that collection of this water should be mandatory.

Attachment C.1. on page 42 *et seq* appears meaningless at this stage as it is purely hypothetical (unless this has been addressed in the secret contract, which appears highly improbable, given the lack of definition of time scale at present surrounding the project. It cannot be given any credence.

Attachment C.2. seems to have been copied verbatim from a standard manual, and again has little credence. The very first line confirms that no consideration has yet been given to the preparation of an environmental management system!

Section 4 on page 48 again underlines the confusion between the parties to the contract, and who, exactly, is meant by "top management"? This confusion is, of course, potentially extremely dangerous.

The same confusion arises in section 8.1 where reference is made to "the organisation".

Attachment C.3, page 53, fails to establish the hours permitted for construction. These must certainly be specified; indeed they should have been in the contract as they have an impact on the cost of construction. It is most unlikely that the surrounding communities would accept anything more than 5 ½ day working.

Attachment D.1 on page 57 states in the third paragraph *"the design of the Access Point will ensure that there is no queuing on Pigeon House Road"*. This may be the intent, but given the numbers of HGVs involved and the very considerable congestion on the proposed routes, including the M.50, it must be obvious that arrival times at the proposed facility would be entirely random, and certainly not within the control of the operator. This statement can be disregarded, and the probability of congestion on the very narrow Pigeon House Road expected to be very great.

Section D.1.c on page 58 refers to a proposed oil interceptor and silt trap. This is a potential source of pollution to the surrounding environment, and details should have been given as to how it would be monitored and maintained.

Section D.1.d gives much detail of a control system for arriving vehicles using advanced technology. Until the EIS was published it was understood that all waste would be transported in HGVs and refuse trucks under the control of the Council, but the EIS states that the facility would also be open to "private contractors". If this is the case it is not made clear how this technology would be extended to cover their operations.

Section D.1.h on page 59 introduces a completely new concept that contradicts all previous statements about waste reception. Up to this, and including the corresponding section in the EIS, it has been clearly stated that the waste vehicles would discharge directly into the waste bunker and that there would be no waste handling on the reception floor. The new concept is that there would be a quarantine area for the waste where it would be un-baled and examined before acceptance, though it is not clear whether this would apply to all the waste or only a proportion. It is also stated that metal parts would be removed from the bunker, which conflicts with the philosophy of the EIS, and appears to be a most difficult operation to achieve, given the random composition of the waste and the very great volumes that it is proposed to handle. More detail of this proposed operation should have been provided.

This concept has presumably been introduced at this late stage as a panic measure to counteract the frequently expressed objections that the previously proposed method would have had serious implications for the operation in that the composition of the waste feed would be uncontrolled until the waste were selected by the crane operators. However it now introduces a dirty and hazardous process step at a point where the building will be open to the atmosphere through the entry doors for the refuse vehicles and where it would be impossible to avoid the accumulation of fugitive waste, dust and odours. No detail is given, of course, regarding the proposed operations at this level, as they have not, presumably, yet been engineered, and this must give cause for very serious concern. Certainly the EPA should examine this aspect of the application with a most critical approach.

The picture of the waste reception hall at the Odense facility on page 60 appears to show the waste being discharged directly into the bunker, so that this new idea is not based on experience and is, therefore, all the more questionable.

The release of inert gas into the cable safe rooms, as proposed in section D.1.0 on page 61, introduces a serious hazard to maintenance staff, and a very comprehensive system of interlocks would be required to ensure personnel safety if this were to proceed.

Under "residues" on page 62 it is stated that BREF techniques would be implemented throughout the process. As the equipment has not yet been procured, the facility has not been designed, and the EIS specifically notes that BAT procedures are not being followed on grounds of cost, this statement is clearly nonsense and should be ignored.

Under "Disposal of Residues" in the next paragraph it is stated that this would be carried out in conformity with national legislation. Given that most of the residues are to be exported across national boundaries this is clearly inadequate, and it is clear that the disposal must also conform to E.U. legislation, which may, in the future, pose problems if the legislation is modified as appears likely.

Under "thermal processing" on page 67 it is stated that the input hoppers are kept full to avoid air ingestion. This would seem likely to lead to jamming of the waste stream, and it must be asked if precautions are taken to avoid this, and to take appropriate action if it should happen.

It is again emphasised that the waste reception hall would be run at negative pressure to avoid fugitive emissions. It must again be emphasised in return that this only applies when the combustion fans are running, and that at other times there would be no preventative measures in operation.

Under "Energy Recovery" on the same page reference is made to "when a district heating system comes into operation". It must be stressed at this stage that there is no certainty that such a system will ever be introduced, as much of the proposed advantage it would offer depends on the construction of significant residential developments in the vicinity. These developments have not yet received permission to proceed and, if this were forthcoming, their proximity to the proposed incinerator would operate against permission being given for the latter. This is yet another example of the confusion that surrounds this proposal.

The last paragraph on the page lauds the efficiency of the proposed water cooled condensing system for the turbine without considering the probable environmental cost, already fully considered in the EIS section, and this cost appears to make it essential that other condensation options would be adopted.

On page 68 it is noted that the control of dioxin emissions is proposed to be done by adsorption on activated carbon injected into the flue gas. While no details are available, it would appear that the residence time for this process must be quite brief, which would indicate that a very large excess of carbon must be introduced to ensure that the adsorption is complete. This would suggest that the filters would be subject to clogging, and poses the question as to the adoption of this method over others.

It should again be noted that the rainwater tank and its associated system have not previously been put forward.

The proposed storage of 10,000 tonnes of bottom ash covers one month's production, but this seems grossly inadequate. Under EU regulations for the transport of such waste the analysis of the proposed shipment must be sent to the appropriate authority who will then give a decision within one month. As it must be likely that any economic shipment must be of the order of 10,000 tonnes, this amount would have to be collected and segregated for shipment, the application sent in, and the licence would, hopefully, be given within the next month. Of course if permission to ship were not granted the offending ash would have to be treated to make it acceptable or else disposed of to landfill in Ireland, creating more traffic and other hazards.

In view of this situation it would seem that the minimum safe capacity of the proposed bunker should be of the order of 30,000 tonnes, which would require considerable alteration to the proposed facility.

In the last paragraph on this page the hazard of the fly ash residue is understated, no reference being made to the extremely dangerous and toxic materials that it would contain.

On page 76, under "incoming waste" it is again emphasised that the negative pressure regime will only operate when the fans are running.

Under "bottom ash storage and handling" it is noted that a very large quantity of wet ash is to be transferred to the bunker, where it will remain to dry out for an extended period. The characteristics of this ash are not known at present, but it would seem probable that it would have cementitious properties, and that this proposed system could lead to aggregation in the bunker. It should be ascertained if this is a possibility and, if so, what measures are proposed to overcome the problem.

The paragraph on "loading and unloading operations" on page 77 is patently untrue, given that the ship loading operation will not be within the building, as already noted. This is a major failure in the application.

On page 80, under "rainwater and sewage", it is proposed to direct much of the run-off together with the foul water arising from the facility to the adjoining sewage plant. It must be noted that this plant is already overloaded from the unsustainable development of its catchment area so that it does not yet treat all its designated load, and that its ability to process a further heavy effluent load must be, at best, very questionable.

The rainfall figures considered under "emissions to sewer" on page 83 are based on past records. This is dangerous, given the very significant increase in short-term rainstorm events now being experienced and forecast to increase in the near future. Substantial contingency provisions should be inserted here.

In the same section the proposal to measure ground water levels annually is quite inadequate, given the influence of tidal movement on these waters and the probability of significant sea level rise.

The forecast deficit of 253,500 m³ of water that would require to be made up from the municipal mains might prove an insurmountable hazard given the present shortage of this water and the future severe water shortages forecast for the Irish east coast. This provides a compelling argument against the adoption of incineration technology as already argued in the EIS section.

Section E.5 on page 85 is completely theoretical, as none of the equipment has yet even been sourced. This has the potential to produce a similar situation to that producing odour problems over a very long period at the adjoining sewage works.

On page 89 under "dust control" it is stated that chapter 10 of the EIS "describes the storage, handling and transport of dusty materials on site and details the dust control measures". It must again be emphasised that this is quite untrue, as a very significant part of the system has been completely overlooked.

On the same page, under "litter control" the originally proposed system of waste reception is described, without any reference to the examination of the waste. The applicants should really try to make up their minds what they want to do!

On page 90 there is a reference to trucks "on regular contract". What will be the position of trucks making random deliveries? This does not appear to have been properly planned yet.

A major defect of the site selection appears under "vermin control" on the same page, where vermin control measures are detailed. **This site abuts on an SAC and will be open to visitation by protected bird species, so that the use of "traps or poison" would be contrary to the conservation designation of the area. THERE IS NOW EU CASE LAW TO THE EFFECT**

THAT ANY DEVELOPMENT THAT ADJOINS A PROTECTED AREA MUST BE TREATED AS BEING WITHIN THAT AREA REGARDING ANY ACTIVITY THAT COULD HARM THE PROTECTED SPECIES THAT USE THE PROTECTED AREA. On this basis alone it should be clear that no licence can be issued for this proposed facility.

On page 94 there is a fulsome statement of compliance with various regulations for the flue gas treatment system. Apart from the already noted deviation from BAT in the design of the system it has to be pointed out that none of this equipment has yet been specified so that the assurances completely lack meaning.

On page 95, under "cooling water discharge to the estuary" it is stated that the biocide flow would be "specifically monitored". Having regard to the sensitivity of the receiving environment this would, of course, be completely inadequate. The flow would have to be monitored and controlled and the biocide concentration in the outlet stream would have to be measured, with an overriding feedback loop to shut down the facility if a safe level were exceeded. This is assuming that it were possible to establish what a safe level would be, for which refer to the EIS section.

The section on air monitoring and sampling that starts on page 98 is extremely vague and does nothing to inspire confidence, especially the paragraph on stack monitoring. It is clear that the applicants don't even know how to measure the combustion chamber temperature. The external measuring company would have to be totally independent of the Council or the operator, and should report directly to the EPA to have any credibility. The heavy metal measurements proposed in the last paragraph are also quite inadequate, especially given the lack of knowledge regarding the constituents of the feedstock waste.

The dioxin emission monitoring proposed on page 99 is not adequate, as already discussed in the EIS section. Also the monthly calibration of monitoring equipment proposed by the facility staff appears less than adequate, given the complex nature of these measurements.

The proposed interface with the plant control system is also very loosely described, and the emission data should be sent also to the EPA, as already stated.

The focus on dust measurement may require modification as new regulations appear likely to be in force before the proposed facility would be in operation. It is not stated at what intervals the ultra fine particle emission measurement would be proposed, and this should be done to see if it were adequate.

The repeated assurance about negative pressure and odour control must, once again, be challenged, as it would only be operational when the fans were running.

The attempt to define the control system, one of the most critical aspects of ensuring safe operation of the proposed incinerator, by supplying printouts of the SCADA system at Odense (page 100 et seq.) is really contemptible, and insult is added to injury by the designations being in Danish! Given the enormous sum already spent on this incinerator it would not have been too much to expect that a process flow diagram and full instrumentation schematic would have been submitted with the application, and its omission is really an insult to the EPA and to the communities involved. As this application refers to the Poolbeg incinerator and not the different Odense one, this is tantamount to there being no information supplied on the proposed control system, and the application is patently deficient in this respect and should be rejected.

Attachment F.3, page 118, refers to surface water sampling. Section 1 considers clean surface water and refers to access roads and paved areas. As these would be traversed by a large number of heavy vehicles carrying contaminated material it does not seem right to include their surface water in this category.

Section 2 omits the measurement of biocide concentration in the cooling water outflow, a vital monitoring and control parameter.

Section 3 conflicts with the proposed treatment of these waters in the EIS. Once again there is no relevant detail for the system proposed, just a reference to that at the Odense facility.

On page 119 it is proposed to measure groundwater annually, which is not adequate, as already stated.

Section F.7 on page 120 proposes daily ambient temperature measurement and continuous recording of wind speed and direction and of barometric pressure. It must be queried if these alone are enough to record the occurrence of inversion conditions, which appear to be a regime of significant danger to health. This should be addressed, as it would be necessary to ensure that the effect of these conditions on emission distribution were fully understood, and warning protocols established in case of need.

Attachment G.2 on page 123 suggests that the facility "has been designed". The previous pages of this submission must have clearly shown that this is not the case.

Paragraph 2 suggests that there was no suitable development for the application of district heating up to this. This is nonsense, as the Sandymount and Ringsend developments are long established, and proposals for the use of waste heat from the Poolbeg "A" station were formulated in the late 1960s by the "District Heating Association" and shown to be reasonably viable even then. They were not taken up due to lack of interest on the official side.

The third paragraph suggests that the suitability of the site for district heating was one of the criteria that led to its selection. This is downright dishonest, as this aspect was not even mentioned. Also two of the other sites considered would have been much more suitable from this viewpoint!

The cooling water design considered in paragraph is not the BAT solution when all the parameters are considered, as already repeatedly said. This also applies to the flue gas treatment as admitted in the EIS, and also with plume suppression as noted against that bullet point.

It must again be pointed out in table H.1.c on page 125 that industrial non-hazardous solids and sludges are waste streams that have not previously been mentioned, and also that the proposed total input is by no means clear.

The waste acceptance procedures at the bottom of page 126 refer to the "cataloguing" of waste before acceptance. This cannot be done, however, if the waste has not been sorted before loading, and it has been stated at several information meetings that it is not proposed to do this (maybe it is done at Odense?). It is quite unclear how these procedures would be operated, as the operator of the facility would not have the legal power to enforce them, and the Council is not intended to take any part in the operation of the proposed facility. Once again this shows confused thinking.

The first paragraph on page 127 refers to waste sampling, which again raises the question of where this would be done. The waste inspection area proposed in paragraph 3 is not shown on any drawing, which appears to be a serious omission given its potential impact.

It is not stated how the waste would be transported from the examination area to the bunkers, though the mention elsewhere of JCB-type machines would suggest their employment here, which would create another area of hazard and risk of collision. This should be clarified. It is also unclear how rejected waste would be re-loaded onto the delivering vehicle.

The requirement for a waste sampling record would obviously considerably increase the turnaround time of delivery vehicles and lead to further congestion.

The final paragraph on this page indicates further confusion, in that the composition of imported sludge would be sampled at the sewage works. This would obviously have an effect on the operation of the incinerator, and knowing the composition would enable adjustments to be made to the control system. However unless this information is to be transmitted in real time the delays involved imply that the imported sludge would have to be stored until the necessary alterations could be effected. Consequently there would be a requirement for another storage area that is certainly not shown on the current conceptual drawings, and which would pose a further hazard with regard to odour emissions and operator health. Yet again there is obvious confusion here and confirmation that the decision to incinerate sewage sludge was only taken at a very late stage. This confusion should be resolved before any licence is even considered.

The first sentence in attachment H.3 on page 132 immediately conflicts with the statements in previous sections. This has to be resolved. The illustration on the following page would tend to confirm that this is the real intention.

Under "waste bunker area" it is stated that the waste would be mixed by the operators of the waste cranes "to create a homogenous calorific value". This is impossible unless the calorific value of the incoming waste stream has been assessed by consignment.

Under "miscellaneous other materials" on page 137 it is stated that the contaminated fabric filters would be disposed of "off site". As the material on these is highly toxic the means and place of disposal should be declared.

Under the methodology section it is stated that the bottom ash would be transported to the bunker by belt or vibrating conveyors. These would be substantial pieces of equipment, given the quantities involved, and require careful design if they are to operate efficiently, so that it is extraordinary that they are nowhere shown on the conceptual drawings.

In the same section it is again emphasised that the proposed capacity of the bottom ash bunker is totally inadequate, and that the dust and nuisance creation potential of the ship loading operation for the bottom ash has been completely overlooked.

On page 138 it is stated that the ultimate treatment regime for boiler ash would be decided by the operator (paragraph 2); this should surely be a matter for the EPA to determine.

The last paragraph on the same page appears simplistic in the extreme and again indicates that no real decisions have been made with regard to the proposed facility. It would be assumed that far more instrumentation would be required on the very hazardous flue gas silos.

There is a clear hazard implied in the storage of filled tankers carrying the flue gas off site, arising from the inclusion of Ireland as a terrorist target as recently confirmed. If one of these vehicles were stolen and driven around the nearby city with the discharge ports open a very serious incident would result. This, as already said, has serious security implications for the storage area, and it is difficult to see why this risk is dispersed when there would appear to be enough room on the site for them to be stored pending ship loading. It must be asked if this risk has even been realised, let alone addressed.

The first paragraph on page 139 again shows that the ship loading of the bottom ash has not been properly considered by someone with experience of mechanical handling of such material.

Under "bottom ash" it is stated that the EU does not classify this as hazardous waste. However a full examination of the relevant regulation on waste from incinerators will show that its trans-national transport is already controlled, and may even be prohibited in the future.

The next paragraph refers to the testing prescribed for this ash, but neglects to note that decision on its acceptability for trans-national shipping may take up to one month.

Under "bottom ash" on page 140 it is stated that separation of included metal in this stream will be undertaken. As no provision is made for this in any of the drawings or statements it must be assumed that this will be done in the receptor country, so that none of the value of recovered metal would accrue to Ireland.

It should also be noted that if it becomes possible to dispose of the flue gas ash to landfill at some time in the future (and this does seem far in the future, as a hazardous landfill proposal would undoubtedly meet with savage and sustained opposition) increased traffic even beyond the already high load proposed would be generated.

On page 143 reference is made to the potential ecological impacts of the proposed incinerator, and to the assessments in the EIS. Several of these assessments are strongly contested, in particular that regarding terrestrial ecology, and the reasons are fully set out in the relevant EIS section of this submission.

Attachment J.1 on page 146 et seq purports to address operating procedures, but this is pure aspiration in the absence of any information about the equipment and systems proposed.

In a normal application a full set of protocols covering operation and maintenance as well as emergency situations would have been prepared, fully validated and submitted with the application for a licence. Without this essential information it is impossible to see how the EPA could grant any licence, especially bearing in mind the strong emphasis in the EIS on the overriding importance of economic and political factors!

On page 149, under "sumps and bunds" it is stated that the waste bunker and collection sumps would be tested for water-tightness. No detail is given as to the frequency of such tests or the method to be employed, which is of considerable interest given the very large size of the bunker.

Under "transport of solids" the need to load the bottom ash into ships has again been overlooked.

Under "firewater retention" it is stated that any firewater generated in an emergency situation would be contained on the site. However, given the completely unpredictable nature of a major emergency, it is very difficult to place any credence in this assurance, and at very least the calculations of the necessary capacity should have been included, assuming these exist.

On page 150 there is a comprehensive declaration that the risk of flooding is "negligible". There is now very strong evidence that this is no longer true, and that the present situation will anyhow be completely changed within the proposed life span of the facility, so that it would appear risky in the extreme to make such a large investment on the proposed site, especially given the consequences for the Dublin Region of any prolonged outage of the only disposal facility. This, in itself, makes a very strong argument for the division of the incineration capacity among several smaller installations. The OPW Section dealing with flooding should be consulted on this potential problem. It must be said that it is a sign of the complacency displayed throughout this process by the Council that the problem of flooding is dismissed in two lines without any evidence being put forward.

Attachment K on page 153 is meant to address the final decommissioning and remediation following the closure of the proposed facility. This is obviously only theoretical as most conditions would have changed considerably in 25 or 30 years – there is, incidentally, confusion over the proposed life span, which was originally set at 20 years, though it probably proved impossible to make an economic case for the project over this period so that the life has been “adjusted”. What is not stated is which of the various parties would carry the contractual responsibility for the very considerable cost involved, which would manage it and how the significant hazard of dealing with very contaminated equipment would be managed. Once again the “secret” contract prevents any real assessment of what is actually proposed.

Attachment L.1 on page 156 et seq. deals with the proposed emissions, and is, yet again, completely theoretical in that no details of the equipment or final design proposed are yet available.

The second paragraph under “liquid emissions” states that there will be “traces” of biocide in the cooling water discharge. This is, of course, a subjective description, but it is strongly contended that the amounts will be far more than traces if the biocide is to be effective, and that their potential damaging effect on the ecology of the river Liffey should prohibit this process being adopted.

ON page 157 there is an interesting caveat in paragraph 7. To this point it has been stated, despite evidence to the contrary, that BAT technology would be employed, but this is here qualified by the addition “as far as practicable” which renders the assurances meaningless. This alone should prohibit the issuance of a licence.

On the same page paragraph 9 recapitulates the waste strategy adopted for the Dublin Region and attempts to use this to justify the selection of incineration as a preferred method. It neglects to mention that incineration was the **least favoured option** of those identified, which is, of course, in accordance with E.U. direction. This is fully discussed in the relevant section of the EIS part of this submission.

On page 158 noise limits are put forward in paragraph 4, but these do not take account of the construction period. It is also obvious that they are meaningless in the absence of any factual figures for generated noise from the equipment manufacturers. No noise figures are given for the ship loading operation, and it must be assumed that these have once again been overlooked.

Paragraph 6 of the same page refers to a proposed environmental management system and completely ignores the natural heritage aspects of the proposed operation. This, yet again, underlines the ignorance and carelessness displayed in the preparation and review of the application, as this would be a key feature deriving from the completely flawed choice of site.

Section L.2 on page 159 attempts to address the “fit and proper” person to take responsibility for the proposed facility. The applicant suggests that this information is not required in that the incinerator would be operated by the Local Authority, but this is clearly completely erroneous. **The incinerator would not be operated by Dublin City Council unless all the information furnished to date has been a smokescreen!** As the contractor would clearly operate the whole site according to the information furnished the information in this section should certainly have been furnished with the application.

This is yet another example of the confusion that exists and the absolute need for the contractual situation to be clarified.

If the above is true, the application should have been submitted by the proposed operator, so that the declaration on page 160 is actually null and void.

The Standard Forms in Annex 1 are also obviously hypothetical given the lack of real information, so only the more obvious defects will be considered.

In table E.1 (ii) the maximum temperature of the stack gas is given as 150°C, the minimum and average as both 55°C. This is not mathematically possible!

Two pages later the exhaust diameter of the emergency diesel generators is given as 750mm. This implies very large engines with significant particulate and CO₂ emissions, and further underlines the omission of them from the drawings.

The text appended to table E.1 (iv) again omits the considerable dust arising from the ship loading of bottom ash.

Table E.2 (i) requires reference to the comments on chapter 12 of the EIS regarding the danger to marine life arising from the hot water and biocide emissions proposed.

Table 5.1(i) is quite meaningless given that none of the equipment has been identified and the facility has not yet been designed.

The appended text makes no acknowledgement of the problems for ecology arising to the south of the proposed facility referred to in comment on the EIS. It must also be obvious that 50 trucks arriving at the facility within one hour must cause traffic congestion and considerable disturbance, even on the basis of the turn round figures supplied by the applicant who naturally assumes a even, rather than a random, arrival sequence which is far more likely.

Table F.1 is also theoretical, and is anyway too vague to hold any real meaning. The sampling frequency for PCDD/F given on the second page of this table is grotesquely inadequate and appears to show a lack of appreciation of the hazardous potential of the proposed incinerator. The same applies to the proposed sampling of PM_{2.5} particulate matter, especially given the results of recent studies already mentioned. Indeed all the proposed sampling frequencies appear to indicate a worrying degree of complacency regarding potential hazards, which may be another attempt to minimise costs.

The electrolytic generation of chlorine proposed in code 110 of table G.1 suggests the installation of yet another piece of apparatus not shown on the drawings. This would also appear to generate a waste stream that is not considered elsewhere. Obviously the safe operation of such plant would require dedicated protocols which should be included in the licence application.

There is a whole catalogue of other chemicals whose use is proposed, some of which are also hazardous, making it obvious that a great deal of work remains to be done to really define how it is proposed to design, construct, de-bug, commission and operate this huge facility, assuming that the necessary permissions were forthcoming.

Conclusion.

This is a very long submission, unavoidably so because the great importance of the forthcoming decision and the large mass of material contained in the very comprehensive EIS and the Licence Application. It is confidently hoped that it has provided sufficient strength of argument to convince the EPA that granting licences for the incinerator to operate would sanction unacceptable risks for the community, entail serious probability of environmental damage and exacerbate already severe traffic congestion. The technology proposed is at the bottom of the European and Dublin Regional "waste pyramid" and its selection has been proved, it is believed, to have been mistaken. Even if it could be

justified, its deployment at Poolbeg is demonstrably wrong and is only being persisted with from unwillingness to acknowledge a serious mistake.

If the EPA should require further information on any of the aspect of this submission, or any other assistance, my full co-operation will, of course, be readily forthcoming.

Given the demonstrated half-truths, confusion and selective presentation of data by the Council, and repeating the Precautionary Principle that no development should be allowed until its safety and sustainability can be assured, I urge the EPA as strongly as I can to reject the licence application.

I BELIEVE THAT THE PROPOSED INCINERATOR, IF LICENCED, WOULD BE A FLAWED SOLUTION TO THE REGION'S WASTE DISPOSAL PROBLEMS IN ITSELF, AND THAT ALLOWING IT TO OPERATE ON THE PROPOSED POOLBEG SITE WOULD CREATE UNSUSTAINABLE RISKS AND OTHER PROBLEMS FOR THE CITIZENS OF THE SURROUNDING AREA AND THE ENVIRONMENT IN GENERAL.

I sincerely hope that the EPA will agree!

Yours faithfully

Maurice Bryan

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