

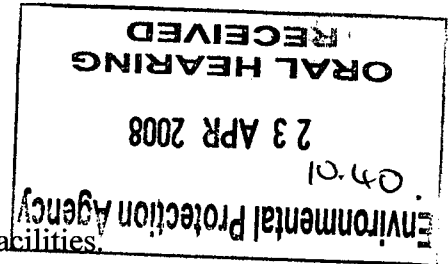
# Crai

combined residents against incineration

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Applicant Dublin City Council

Development: Proposed Mass burn incinerator and associated facilities.

Site: Pigeon House Road, Ringsend Dublin 4

Reference: W0232- 01

My name is Frances Corr, and I am representing the Combined Residents Against Incinerator and I am the secretary of the group.  
I hold a BSS first Class honours degree from UCD, and I am a fellow of the NCI.  
I am an ex Council member of the Dublin Docklands Development Authority.

On behalf of our member the people of the villages of Ringsend, Irishtown and Sandymount and surrounding areas we urge the EPA to strongly refuse a licence to this project on the following grounds.

The proposed facility is a flawed, dangerous, extravagant, and a totally unsuitable solution to the waste management of the Dublin Region and the site chosen is grossly unsuitable.

The Planning Board maintained that the proposed incinerator did not conflict with government policy on waste management, yet the Minister for the Environment has stated publicly that incineration is no longer the cornerstone of our waste management policy, that the waste hierarchy is paramount, and a real emphasis has to be placed on reduction, reuse and recycling, has also stated that incineration is not a form of recovery but a form of disposal, which is the current EU position.

Minister John Gormley in his statement of strategy for his term of office he said that under waste Management, *“while our recycling rates are rapidly approaching the best in Europe in a number of key waste streams, our economic prospects and associated consumption pattern have led to an exponential growth in waste generating. The EU Waste Strategy focuses on transforming the EU into a Recycling society and that thinking is mirrored in national waste management policy, where we are prioritising the sustainable use of natural resources to minimise negative environment impact. Comprehensive measure to reduce waste growth will be informed by a major new review of best international practice and technologies”*

( )

We maintain that no licence should be given to operate this mass burn incinerator until this review is completed and the findings are made available to the public. It would appear to us that based on the recent figures available from the Department this incinerator proposal is over sized and capable of burning the equivalent to the entire National municipal waste future predictions,.

.In September 2007 the EPA and the Department of the Environment held a conference entitled '*Towards 2020: The Environment in Ireland's Future*' The EPA Invited Dr Dominick Hogg, to address the conference on environmental policy and waste management. Dr Hogg who is one of the authors of a most recent Document on waste management in Ireland, stated the report shows that there is a need to develop an alternative to the incinerator proposals in Ireland, he said there was an over emphasis on incinerators in local and national plans and the economic of scale means that large volumes of waste were needed before incinerators become economically viable. The requirement of large volumes of waste runs the risk of crowding out recycling, in order to meet EU targets and the amount of biological waste going to land fill at present will have to reduce. The report recommended that smaller facilities which provide MBT should be examined as an alternative to incinerators, such as the Germans, Austrians and Italy are now developing. MBT removes recyclable and biological materials through mechanical and biological means with the residual waste transferred to modern landfill. This method if applied to our waste stream would make incineration uneconomical. And we are being asked to take, in our community the largest incinerator plant in Europe.

## Waste

EU waste pyramid conflicts with the proposal to build a mass burn incinerator. The development of a thermal treatment plant of the proposed capacity is not consistent with EU principles of waste management and the waste hierarchy as outlined in the Dublin Waste Management Plan. The hierarchy in descending order of priority favours waste prevention and minimisation. reduce, reuse and recycle. Mass burn incineration without prior segregation of waste flies in the face of proper waste management.

The rate of recycling has improved over the past years, but it is still frustrating for most households that there is a strict limit to the type and quantity of recycling available to the household, this is aggravated by the lack of facilities for certain waste, such as certain plastics, and pressurised containers, much used in households today. Certain packaging, such as polystyrene, is impossible to recycle and organic waste is still going directly to the black or grey bin. There is a huge variation in the types of materials which can be placed in recycling bins in different areas of Dublin and the surrounding counties. The Local Authority who are applying for this licence do not have facilities within their own flat complexes in our area to allow people recycle, this would appear to be the situation through the city, which is a absolute shame considering that DCC is the largest landlord in the state. This conflicts directly with the waste pyramid.

It is the intention of DCC to direct all waste collected in the grey bin collection directly to the incinerator from the inner city area, and to bale waste from other areas and send it un-segregated to the incinerator. This was evident during the planning process as the traffic movement went from households directly to the incinerator, and

there was no facility within the compound of the site to allow the separation of recyclable, organic, or hazardous goods for removal from the waste stream, this is left up to the households and business community. This does not guarantee residual waste will only be burned in the incinerator. There is no facility for MBT or other similar treatment on the site planning application. If this form of recycling was to take place would the council require a 600,000 cubic ton waste burning facility in Ringsend? If there was a serious commitment to reduce, reuse and recycle, followed by MBT treatment, would there be sufficient quantity of residual waste in the four local authorities catchments area to be in a position to guarantee Coventa that it will supply 320,000 metric tons of waste for disposal annually for up to 25 years and to enter into a contract to build a 600,000 metric ton incinerator?. This decision which directly affects the waste stream management for the future should not be made until the EPA is satisfied that the Local Authority has put in place every possible procedure to minimise residual waste.

### **Traffic**

Traffic congestion is already unendurable in our community. There is serious traffic congestion in the area at present and the existing roads just can not deal with any further increase in traffic. One of the main reasons for choosing this site was that the Eastern By - Pass would be in place to deal with the 800 plus lorries per day which will be required to feed this plant. There are no plans or funding available to build this by pass at present and it is not included in Transport 21.

A much smaller incinerator in this area was refused permission over ten year ago on the grounds of lack of suitable infrastructure. There is no new road network proposed for the area, the port tunnel which is situated about 3 km. from the site and the route to the site crossing the East link Bridge is still the same road network that existed in 1995. The area has undergone massive change since then with thousands of new mixed use development in the Dublin Docklands Development area.

Included in this plan on the North side of the East Link bridge between the bridge and the entrance to the Port Tunnel is a massive development which is taking place at present to increase the capacity for the Point Theatre, and also a mixed use development at the new Point Village which will have as its anchor tenant a Dunne's stores shopping complex, a 100 metre tower called the Watchtower and a five storey underground car park.

On the south side of the East Link bridge on the Poolbeg, the Docklands has received under statutory instrument No 297 which took effect from the 11<sup>th</sup> of June 2007, permission for the Docklands Authority to prepare a Planning Scheme for the area of Poolbeg Peninsula, this scheme will take in over 100 acres on the Poolbeg.

At present the fumes from traffic which is at almost a stand still for most of the day, is causing severe air and noise pollution. I am aware that traffic is an issue for the Planning Process, but the effect of the increase in traffic slow moving or at a stand still is having a detrimental effect on our air quality and our environment. We can produce exact numbers of vehicles which crossed the East Link Bridge in 2007, all this traffic has to pass the roundabout on the Sean Moore road, the figures show an increase of 15%. Air quality on this road is already exceeding the EU legislations in this area.

On the 12<sup>th</sup> of March 2008, Mr Michael Aherne of the Dublin Transport Office stated while addressing the Oireachtas Transport Committee stated that "*Traffic in Dublin*

*City Centre was on a knife edge and it did not take an awful lot to trip up the city".*  
We are very aware of this, we are also very aware of the problems in the Port Tunnel which has caused chaos to traffic since it was built due to system failures and vehicle accidents among other causes, there is scarcely a day that passes without a report on the radio advising motorists of traffic problems in the tunnel. On the 28<sup>th</sup> of February 2008 RTE news reported the Port Tunnel was closed for 9 hours resulting in bringing the entire city and the M 50 practically to a halt.

The ban on five axle trucks in the city did little to alleviate existing traffic problems in our area as those trucks which have a need to operate on the North and South Port area are exempt. Those that do not meet the requirement for exemption travel along the roads through out the night and up to 7am each day and the vast majority of transport in the area are private cars, vans, taxis and trucks of 4 axle and under examples of these are bin trucks, oil tankers, rigid trucks, cement trucks, they may take up slightly less space on the road but they contribute to the deterioration of our quality of life, destroy our environment, and our health. The space vacated by the larger trucks in the day time hours are replaced by greater number than the pre 5 axle ban.

### **Port Tunnel**

All deliveries of waste from outside the M50 road are supposed to travel up the Port Tunnel. There is serious doubts as to whether un-segregated waste which is classified as hazardous or dangerous goods, can be transported through the tunnel as it is a possible fire hazard. The NRA has not commented on this, as the classification of waste going to and from the Incinerator has not been completed, if this waste has to be escorted through the tunnel as in oil tankers, it will add to cost. It may also be forced on to our streets and will have a huge bearing on the environment.

### **Lack of Consultation**

Article 12 of Directive 2000/76/EC on the incineration of waste and article 15 of Directive 1996/61/EC concerning integrated pollution and control mandates certain requirements regarding access to information and public participation in pollution control and incineration process.

The lack of meaningful community involvement, real consultation, or relevant information was clearly displayed when *The Community Gain study* was commissioned by Dublin City Council; they hired Mr Trutz Hasse to conduct the research. He stated at the planning process that "that information is no replacement for consultation and negotiation" as a description of the process undertaken by DCC over the years.

After 10 years we have only engaged twice in any form of discussion on waste matters at ABP oral hearing and this hearing.

### **Health Concerns.**

We have huge issues of concerns about community health issues and indeed for the entire population of the Dublin area. These issues have not been addressed and we have asked Prof. Montanairi, Prof. Vyvyan Howard, Dr Anthony Staines and Mr Joe Mc McCarthy to discuss this topic on behalf of our community.

On the 20<sup>th</sup> of February 2003 the Health Research Board issued a report which concluded that more resources are needed to conduct adequate waste management risk assessments, and that monitoring systems for a major report on the effects of various forms of waste disposal has concluded that Ireland has insufficient resources to carryout adequate risk assessment for proposed waste management facilities. The report, '*Health and Environmental Effects of Land filling and Incineration of waste – A Literature review*', was conducted by an inter disciplinary scientific team from University College Dublin, University College Cork and Dublin Institute of Technology, Cathal Brugha Street Dublin. It was commissioned by the health Research Board at the request of the Department of the Environment and Local Government.

Dr Dominique Crowley, who coordinated the study team, pointed out that it was not within the scope of the report to make recommendations on waste management policy. The purpose of the report was to inform policy makers and the public of the technical aspects of both landfill and incineration practices in Ireland and the effects that these practices may have on the environment and human health. Dr Crowley said the report reviewed national and international literature as well as current practice and recent development in landfill and incinerator technologies.

He said that at present Ireland has insufficient resources to carry out adequate risk assessment for proposed waste management facilities. Although the necessary skills are available, neither the personnel nor the dedicated resources have been made available for the purpose. In addition there is a serious data gaps in relation to the environment effects of these technologies. These problems should be rectified urgently. **Irish health information systems cannot support routine monitoring of health of people living near waste facilities sites.** Dr Crowley said there is an urgent need to develop the skills and resources required to undertake health and environmental risk assessment in Ireland. This should be considered as an important development to build capacity in Ireland to protect health in relation to potential environmental hazards. In relation to the detection and monitoring of the environmental impact of waste facilities, the report concluded that there is a serious deficiency of base line environmental information on Ireland.

This lack of base line information makes it very hard to interpret the results of local studies, Dr Crowley said a strategically designed monitoring programme needs to be initiated that can correct deficiencies in current ambient environment monitoring. In addition, capacity needs to be built in environmental analysis. In particular, Irish facilities for measuring dioxins are required and should be developed; the report also concluded that there is some evidence that incinerator emissions may be associated with respiratory symptoms

No health assessment was conducted on any section of our community?

During the Planning hearing Dr Andrew Buroni who was giving evidence on behalf of DCC, whose background was in the area health and environment assessment, referred to concerns expressed in relation to health effects and the argument that these had not been adequately considered and that a health impact assessment is required he stated that he was a technical specialist employed in the EIS process to assess potential environmental affects against national and international guidelines set to protect health. As we have already stated that according to the report commissioned by DOE there is no base line studies in Ireland and procedures are not in place to offer

assurance to the community on the safety of living and working beside a mass burn incinerator.

Dr Buroni also submitted that health impact assessment is an emerging field and that the preparation of a health impact assessment is not a statutory requirement and community concerns has been recorded and applied to guide the assessment and develop more effective environmental and health mitigation and improvement methods during construction and operation, referred to the community gain fund, he stated that the community profile contained in the EIS indicated social- economic health improvements followed local regeneration, yet there is not documented evidence to prove this.

He also stated that there were pockets of economic deprivation and subsequent health inequality, yet he supplied no evidence for this assumption. He noted that existing evident of poor health within such geographic areas are not necessary a symptom of poor quality environment, but relative socio – economic status or lifestyle, he went on to state that that direct and indirect employment opportunities and significant improvements in social capital and other incentives through community gain fund and the cumulative effects were factored into the assessment carried out for the purpose of the EIS.

Dr Buroni submitted that although controversial, the community gain fund represented the most significant effect from the proposed facility, and the fund could be used by DCC in addressing existing social and health issues. Statistical analysis which showed that the area had suffered like many areas in the inner city from early school leaving and the uptake of work in the traditional port related industries and manufacturing industries in the area, when these types of work ceased they became unemployed and some unemployable and so the social economics of the area suffered. The health issues in the area in part due to the types of industry which prevailed in the area up to the 1980's Coal boats unloading on the quay wall, glass manufacturing, coal burning power stations and other heavy industry, people suffering from lung and heart problems are unlikely to seek work in the incinerator or waste industry. There appears to be a high incidence of cancers in the area, this cannot be quantified as there are no base line studies and the health effects of been reared, attending school, playing on the beaches and parks beside a municipal dump has never been investigated. What appears to be totally ignored is that the land that constitutes the Poolbeg Peninsula is in fact for the most part developed by the dumping of un- segregated waste by the Council for over 30 years, which took place up to the 1980,s. The community has taken enough of the city's dirty industries and should not be expected to take the largest incinerator in Europe.

### **Health and Safety**

We are continuously being told those modern incinerators are safe, recent examples of problems in modern incinerators include the following:

September 2<sup>nd</sup> 2006 the Kirklees incinerator in Huddersfield, Great Britain suffered an explosion at the 135,000 tonne capacity plant, mechanical failure caused the boiler walls to over heat, buckling the walls of the boiler

April 1<sup>st</sup> 2007 a fire broke out in Semass Resource recovery facility, a massive cloud of thick black smoke rose from the plant and drifted across Cranberry Highway, it took over 4 hours to douse. The explosion set a panel of the building flying 100 feet

into the air, the smoke was so bad it is reported that it blocked the sky; people living down stream from the incinerator had to tape up their windows. In 2002 another explosion occurred at the same plant, this plant is owned by Covanta This does not inspire confidence in our community. This does nothing to convince us that our health and safety will be properly served by this proposal to allow a Mass Burn incinerator in our community. Coupled with the number of reported breaches of EPA emission standards in other countries we feel that Covanta who will design, build and operate this facility but who has not applied for the licence has a very poor track record.

### Air Quality

There was reference to air quality in the EIS and in a discussion between Mr Joe Mc McCarthy and Dr, Shrenk on the issue of ultra fine particles and their health effects and the monitoring of same, Dr Shrenk on behalf of DCC stated that the issue of particulate matter was addressed in the EIS and the issue of ultra fine particles was commented on. Prof. Montanari has addressed you on this issue on behalf of CRAI; we feel that the comment of Dr Shrenk was extremely dismissive of this huge issue of concern to our community.

We know the health effects of particular matter and that certain pollutants such as the nano particles which are produced by incineration, cannot be trapped by the filters and this particulate is not intended to be monitored by the proposed licence applicant.

### Non-identification and Confusion of Responsibilities

We are concerned over who will have overall responsibility for the plant given the waste application is from DCC and Covanta are to design, build and operate the plant or so we were led to believe. **The agents or contractors have changed 3 times in the past 12 months!**

Who will be responsible should the licence be breached? If the plant was to close down what are the implications for the waste management of the greater Dublin area and even more important, who is answerable to the community.

Before and during the oral hearing repeated requests were made for the Council to produce the supposed contract which was said to have been signed in 2005. It then transpired that no contract was actually in place, but again in the period since the hearing it has again been stated that one has been signed. The Council stubbornly refuses to expose this highly crucial document, so that the contractual responsibilities of the various parties remain shrouded in mystery.

At the ABP hearing the Council gave the very strong impression that waste would be delivered on their behalf to the door of the plant and all subsequent treatment would be the responsibility of the contractor. We as a community have, for over 5 years, lived daily with the foul odour from the largest municipal sewage plant in Europe which we are aware is operating at over 117% of its capacity. Our experience confirms that Dublin City Council is quite incapable of operating any process plant within stipulated limits, and that their communication with the communities in such regard has been quite inadequate and gives rise to deep suspicion. No intervention has taken place by any Authority to investigate the conditions of this plant and its effects on the community or the environment.

We are concerned about enforcement, based on bad experience, the Dublin Waste Water Treatment Plant which we were given a guarantee prior to its construction would be odour free, and the EIS stated that there would be no foul odour outside its perimeters and this is breached on a daily basis and there appears to be no method of enforcement.

In fact DCC has at present a planning application with ABP under SID to increase the capacity of this plant from its present capacity which is claimed in its application to be capable to serve 1.9 million, and to serve 2.2 million plus. The original application for this plant and subsequent information stated the plants capacity is 1.7 million, this displays to us that we were fed misinformation or it has reached full capacity before it was commissioned. DCC admits in its pre- application to the planning board that it will have a greater visual impact on the area and odour was likely to be a contentious issue. This nuisance to our community has not been factored into the effects on our environment, and it is going to get worse with the increase capacity and the burning of sludge. Bin trucks also smell nasty, and a further 300 to 400 hundred of these trucks on our roads is going to affect the air quality severely.

### **Natural Heritage**

We are concerned for natural heritage and unique local amenity. During the construction phase of the Sewerage Plant which is directly adjacent to the proposed incineration plant 2.5 hectares were allocated to and laid out to facilitate the Brent Geese and other migratory wild life. This was a condition of the granting of planning permission as their habitat was eroded by the development. This land is now part of the Nature Park. This incinerator will directly infringe on the habitat and the enjoyment of the Nature Park by the people of Dublin.

Dublin Bay is an area of high conservation importance and is legally protected under both the EU Habitats Directive and the EU Birds Directive also special sites of conservation importance include the river Liffey and Tolka Estuaries and Sandymount Strand, all of which are immediately adjacent to the proposed development, this is acknowledged by DCC but is not included in the EIS, which focuses on the selected site only.

The community has serious concerns that the EIS did not address the effects on the environment of the proposed development; it is born out by the request by An Bord Pleanala to Mr Matt Twomey, Engineering Department DCC for further information as the plans are not to scale. Which would make it very difficult for a community based organisation to make relevant comment on the possible effect of this development on our community and the environment.

### **BAT Avoidance**

Mr Maurice Bryan will argue this point on our behalf, as a community again we refer to our previous experience with DCC when they promised BAT in the EIS for the Dublin Bay Project the Sewerage Plant, while the Project Manager was speaking of the success of the project he stated that ' Our object was to provide a world class water treatment plant for Dublin at a reasonable cost' Cost was the major factor, not BAT and we have to live with the results, this was DCC first PPP project and we have suffered the consequences of '*reasonable cost*' and have no faith in DCC competence to provide best available technology. Who will over see the 16 other contractors



involved in this project? Mr Joe Mc McCarthy has already questioned the vast difference between the cost of building a similar incinerator in Europe. The EIS gives various different comments on best available technology, it is very clear from reading the EIS that this will depend on cost and the political will to pursue the best available technology regardless of price. This is not satisfactory from our community point of view, nor for the environment and does little to instil confidence in our community for our health and well being.

### **Ash, bottom and fly**

We are very concerned over vague proposals for incoming and outgoing waste especially ship loading and storage if this is the preferred method of disposal of the bottom and fly ash, this area is all too vague we request the EPA to seek clarification on this issue, it appears that there is a overall plan that is been fed to us over 10 years in piecemeal fashion so that the accumulative effects of the incinerator on our environment will not be taken into consideration. This is a serious issue and is not adequately addressed in the EIS. We are seriously concerned by the lack of real information available to us about the storage of the toxic and fly ash in our community and the transport of this ash off site. Should a shipment be rejected, and returned to source where will this dangerous product be stored and how will it be dealt with? Who will receive it? Who is responsible for the handling of this product after it leaves the gate?

### **Licensed Activities:**

Class 12 in the Third Schedule of the Waste Management Act covers the repackaging of waste prior to submission of any action associated with incineration. No proposal has ever been submitted for any such activity at the proposed Poolbeg site, and its inclusion in the licence is obscure and should be justified if it is indeed necessary. All waste collected within the M50 motorway catchment area, will be taken directly to the incinerator for **Mass burning**.

### **Operating Hours**

Proper planning and control of proposed construction, which appears to be 24 hours per day, seven days per week for in excess of 3 years during the construction stage would cause an intolerable situation on the people and our environments. Proposed delivery hours of waste to the plant are very confusing and again would impinge on the health and enjoyment of the people of our area and indeed the people of Dublin who enjoy the amenities of the area. It would lead to possible health problems and cause damage to the environment, and the natural habitat.

### **Licensed Waste Recovery Activities:**

In the table of permitted activities under the Fourth Schedule classes 3, 4 and 8 give very wide scope for expansion of activities at the site to include many which are currently not sought and which would be most objectionable to our communities. This requires clarification and much improved definition before any licence is granted.

### **Infrastructure and Operation:**

Why is there a need for this condition no. 3? The whole siting and operation of the proposed facility is postulated on the assumption that no hazardous emissions would be discharged from the stacks. The requirement for a windsock to be erected clearly shows that the Agency is not convinced, and it will be important to know the direction of the wind in the case of an accident or excursion. This being so and considering the sensitive location of the proposed facility no operating licence should be issued. **If the facility is really essential in its present format, which is not accepted, it should be relocated to a safe site.**

The experience of the local communities is that requests for enforcement of existing legislation by the Council are met with total inaction, especially if commercial interests are involved, and that the only way in which the Council can be forced to undertake its statutory duties is to refer the matter to a higher authority. It is thus clear that this section demonstrates the lack of experience of the Agency of the real situation on the Poolbeg Peninsula. No licence should be granted until proper enforcement mechanisms are available. This is especially important given that the offender in the case in point would be the licensee who would also be responsible for enforcement, self-regulation of the most dangerous kind.

That the transport and ship loading of waste ash is an integral part of the operation of the facility the proposed CCTV system should include the quay side where loading is proposed to take place, as this will be the location of possible serious hazard and pollution creation. No EIS was conducted on the Port lands adjacent to the River Liffey where it is proposed to load the bottom ash onto a ship by crane grabs similar to that which was used by the coal importer in the time when I grew up in the area for export.

It should also be emphasised again that the ship loading operations for bottom ash are proposed for an open quayside so that a completely separate dust control system will have to be implemented there. It is quite unacceptable that the Agency has not addressed this point despite having been made aware of it some time ago. ABP also chose to ignore it in their findings.

It should also be pointed out that this method of waste disposal will not be available for the full planned life of the facility, as it is proposed to move the port to another location and to use the vacated land for housing (See report "A Vision for Dublin Bay" issued by the Dublin City Council in October 2007), and DDDA Master Plan Section 25 for development of 100 acres on Poolbeg. Dublin City Council has recently commissioned a report into the future of Dublin Port. This calls into question the whole viability of the proposed facility, and should be thoroughly investigated and the future use of the Bay should be decided before any licence is confirmed.

Indeed it would appear that the current planning confusion for the area would demand that no licence be issued until the situation has been resolved and a coherent approach defined.

## **Condition 12. Financial Charges and Provisions.**

This whole section is founded on the assumption that financial compensation is an adequate remedy for loss of life, amenity, health, or damage to property or other interest. It is most strongly contended that the duty of the Agency is to prevent hazards to the health of humans, wildlife and the environment and that any significant risk that cannot be removed at the design stage should prevent the commissioning of the facility until it has been overcome

### **Air Quality for the Dublin Waste-to-Energy Project**

#### **Summary**

A wide range of issues were raised during the An Bord Pleanála oral hearing about air quality and emissions modelling, which are summarised in a report produced by Dr Broderick for An Bord Pleanála and by other experts. These include:

- That 24-hour PM<sub>10</sub> concentrations exceed the 50µg/m<sup>3</sup> limit value more frequently than is permitted under EU legislation (no more than 35 in one year).
- The background concentration used to predict 24-hour PM<sub>10</sub> concentrations by 2012 underestimates the number of 24-hour PM<sub>10</sub> exceedances and therefore underestimates the predicted emissions concentration with the facility in operation.
- The method of assessing background NO<sub>x</sub> concentrations in sensitive areas (e.g. NHAs) does not appear to adequately address local impacts
- Assessing the impact of the facility and related traffic emissions on ambient air quality finds that during abnormal emissions periods the impact on NO<sub>2</sub> levels can be considered moderately adverse
- The use of the Necten Background calendar to discount future PM<sub>10</sub> and NO<sub>x</sub> emissions may not be justified as monitoring data does not uniformly support decreasing emissions. Further, assumptions about traffic impacts may not be locally suitable.

As An Bord Pleanála sought the expertise of the EPA to decide on air pollution matters, these issues should be fully addressed before any licence is issued.

#### **Responsibility for Air Quality**

The An Bord Pleanála Inspector concluded that the EPA is the national body with specific responsibility for the control of pollution and that such considerations are essentially a matter for the EPA in its licensing. The inspector called for more refined modelling be done, if considered necessary, by the EPA in the process of considering the licence application.

***The air quality issues raised during the ABP oral hearing have been largely left to the EPA to assess as the experts in this area. It is therefore imperative that the EPA consider all information presented at the planning hearing in assessing the licence application.***

## **PM<sub>10</sub>**

During baseline emissions monitoring from 2003 to 2007, the short-term PM<sub>10</sub> air quality standards were exceeded a total of 66 out of 467 times.

Dr Broderick's report confirms that it is unusual for air quality monitoring to reveal an exceedance of a limit value established under an EU Directive. He noted that short-term PM<sub>10</sub> concentrations monitored in the city centre have not exceeded the limits since 1999.

***The local baseline concentration of PM<sub>10</sub> is unusually high, and exceeds EU short-term PM<sub>10</sub> limits.***

The exceedance of EU 24-hour PM<sub>10</sub> limits was not discussed further in the Non-Technical Summary or elsewhere in the EIS.

***The issue of short-term PM<sub>10</sub> concentrations exceeding EU limits was not made clear throughout the EIS. Further work should be conducted to determine whether the background PM<sub>10</sub> concentration in the Poolbeg area would lead to exceedances of the short-term PM<sub>10</sub> concentration in 2012.***

In order to predict future PM<sub>10</sub> emissions concentrations (taking into account traffic, cumulative emissions and the Dublin waste-to-energy plant emissions), the mean measured concentration of PM<sub>10</sub> was used. This was evaluated in Table 1.12 and 1.13 of the Baseline Air Monitoring report in Appendix 1 of the EIS.

However, as Dr Broderick points out, using the mean measured PM<sub>10</sub> concentration for background concentrations underestimates the effect of 24-hour exceedances. He points out this has led to the erroneous prediction that fewer exceedances of the 24-hour limit value would occur when the WtE facility is in operation than could be expected from the baseline survey. Dr Broderick notes that this leads to an incorrect conclusion that the 24-hour limit value will not be exceeded in 2012 when traffic, cumulative and Poolbeg facility emissions are taken into account. He notes that the WtE facility is likely to contribute to future exceedances. It appears that this same method was used in the evidence given by Dr Porter at this hearing.

It is worth noting that in order to calculate 1-hour peak concentrations in the EIS, the background concentration was taken to be twice the annual mean background concentration. Applying the same method to 24-hour PM<sub>10</sub> concentrations would see the EU limit of 50µg/m<sup>3</sup> exceeded by 20%. However, this method was not applied to 24-hour values and no further explanation was given. This should be expanded upon.

***The method used to predict future 24-hour PM<sub>10</sub> concentrations underestimated concentrations and predicted fewer exceedances than may be expected. This has led to an underestimate of predicted emissions concentrations with the facility in operation. In reality, limit values are currently exceeded and the WtE facility emissions would contribute to further these exceedances. This has not been sufficiently addressed.***

## **NO<sub>2</sub>**

Dr Broderick's report suggests that the background concentrations used in the assessment of total NO<sub>x</sub> concentrations at the NHAs were not all appropriate. For example, he states that the background concentration used for Sandymount strand should be based on observations from the nearby Irishtown nature reserve (M2) and Sean Moore Park (M3) sites rather than an average of M2, M3 and Bull Island (M6),

as Bull Island NO<sub>2</sub> concentrations were significantly lower than those at other stations. Dr Broderick noted that applying more realistic values is likely to find the NO<sub>x</sub> limit value is exceeded e.g. at the northern end of Sandymount strand.

However, Dr Porter has indicated that sampling points to determine impacts on vegetation or the protection of ecosystems should be sited to represent air quality over at least 1,000 km<sup>2</sup> and that this should justify the averaging of process emissions and background emissions over the SAC, SPA and NHA.

***It has been asserted that the selection of background concentrations for NO<sub>x</sub> may result in NO<sub>x</sub> concentrations in NHAs near the facility being underestimated. It is difficult to understand how averaging concentrations over a much wider area can accurately represent local impacts on NHAs. It is hoped that due consideration will be given to this issue by the EPA during its deliberations.***

The significance of the impact of a facility on ambient air quality can be measured according to guidance<sup>1</sup> published by the National Society of Clean Air. According to this guidance, for a 1 to 5% change in annual mean concentration for each pollutant, the magnitude of change is considered "very small", for 5-10% it is "small", for 10-15% it is "medium" and for 15-25% it is considered "large".

The direct process contribution from the Dublin waste-to-energy facility of NO<sub>2</sub> (1 µg/m<sup>3</sup>) equates to a 4% increase in concentration over and above the background concentration at the nearest residential receptor which is considered a "very small" change. However, traffic emissions caused directly by the presence of the facility will also have a significant impact on NO<sub>2</sub> emissions. When traffic emissions from the facility are included, the background concentration (less traffic emissions) becomes 24.1 µg/m<sup>3</sup> and total emissions of NO<sub>2</sub> from the facility amount to 3.5 µg/m<sup>3</sup>. This equates to an increase in concentration over and above the background concentration (less traffic) of 14.5%, which is considered to be at the upper bound of a "medium" change. As the predicted environmental concentration is 28.6 µg/m<sup>3</sup>, which is less than 75% of the EU emissions limit value, the incremental increase from the plant is considered to be "slight adverse".

When abnormal emission conditions are considered in the same manner (i.e. including traffic impacts), total emissions due to the facility are estimated at 5.9 µg/m<sup>3</sup>. This equates to an increase in NO<sub>2</sub> concentration over and above the background concentration (less traffic) of 23.5%, which is considered to be a "large" change. As the predicted environmental concentration is 31 µg/m<sup>3</sup>, which is more than 75% of the EU emissions limit value, the incremental increase from the plant is considered to be "moderate adverse".

***When considering the full impact of the facility i.e. the process and traffic emissions together, the significance of the impact of the facility becomes classified as slight to moderate adverse. This should be factored into the decision-making process, in line with the National Society of Clean Air guidance document.***

## 2. Necten Background Calendar

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The mean measured baseline PM<sub>10</sub> concentration was calculated at 34µg/m<sup>3</sup>. At this concentration, the number of exceedences of daily concentrations of 50 µg/m<sup>3</sup> would be greater than 35<sup>2</sup>, the EU limit.

However, using the Necten background adjustment calculator, the EIS predicted that the background concentration would only be 30 µg/m<sup>3</sup> by 2012. At this background level, only 28 exceedences could be expected, which is below the EU limit. The Necten background calendar also had the effect of reducing the total predicted NO<sub>2</sub> levels (including process, traffic and cumulative emissions) from 92% of the EU limit value to 77% of the EU limit value.

The Necten background calculator was devised for local authorities in the UK and assumes that air quality will be improved in line with improved vehicle and industrial emissions. However Dr Broderick found that it is probable the high PM<sub>10</sub> concentrations in the Poolbeg area are not likely to be due to traffic but to other natural and anthropogenic sources. Therefore, the traffic assumptions included in the Necten model should be questioned. No information was given on the assumptions used when applying this model even though it has a significant impact on results.

Furthermore, as highlighted by Dr Broderick's report, background pollutant concentrations are not falling in a uniform manner. For example, NO<sub>2</sub> concentrations monitored at Winetavern St. in Dublin did not display a reducing trend in the period 2000-2005. Further, mean NO<sub>2</sub> concentrations measured between February 2006 and February 2007 are nearly identical to those observed between July 2003 and August 2005 suggesting that no decrease in background concentrations occurred over a three year period. This highlights the uncertainty around predicting future background pollutant concentrations. Dr Broderick recommended that the application of the Necten background calendar be fully justified.

***Monitoring data does not fully support a reduction in 2012 background concentrations from 2005 values. Therefore, the use of the Necten background adjustment calculator, particularly where traffic emissions may not be of a significant influence in the area, may not be appropriate. More information should be provided on how the Necten calculator was applied.***

### 3. Site Selection

The poor air quality and limited carrying capacity for additional emissions in Poolbeg indicate that it is not suitable for the development of further industrial activity unless significant improvements are made elsewhere. Furthermore, when the site was initially selected, it is implied in the EIS that the air quality was worse. This should have meant that the site was eliminated as inappropriate during the site selection process.

***As the air quality in Poolbeg is poor and has limited carrying capacity for further pollution, the site is not appropriate for further industrial activity. Since the site was selected prior to measured improvements in air quality, the site selection process must have been flawed***

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<sup>2</sup> According to a method for predicting the relationship between the annual average and 90<sup>th</sup> percentile of daily concentrations adopted in the UK

**We request the EPA to add 3 more conditions if they intend to licence the facility.**

**First we wish the EPA to request that a full health assessment be carried out, among the residents in our communities and a baseline should be established of existing health issues prior to the issuing of a licence. This health assessment should cover an area of at least 5 km from the site.**

**Second we would ask the EPA to request the operator set aside a sum of money in the region of at least 25 million Euro which would be held in trust for the community. This trust would be established to deal with the identification of illness or deaths in our community after the start up of the incinerator. It would allow us to seek a pathology tests to identify the source of their illness. This test can be undertaken on members of the community that die of natural causes, this would be at the request of the families concerned.**

**The third condition is that funds should be available to enable those who lives have been affected by the incinerator either through illness or loss of life, to enable them or their families to seek redress.**

**If there is no danger of our people becoming ill by the incinerator then there should be no reason for our community to use the trust and an arrangement could be made to have the sum plus the interest gained over the life of the incinerator returned to the operator.**

### **Conclusion:**

The background air quality in the Poolbeg area is poor, particularly for PM<sub>10</sub> and NO<sub>x</sub>. The additional emissions resulting from the WtE facility may exacerbate this already poor air quality and result in pollutant concentrations exceeding EU limits for short-term PM<sub>10</sub> in Poolbeg and for NO<sub>x</sub> in sensitive areas such as Sandymount Strand. Although these issues were raised during the planning oral hearing, they have not been adequately addressed in the new information presented during the EPA oral hearing. As the Bord determined that the EPA was better positioned to assess air quality and pollution issues, it is imperative that either further work is conducted to address these issues or that a licence for facility is refused.

The proposed licence has been examined by us and we believe it to have serious defects. Many of these arise from discrepancies between the findings of ABP and the proposals of the Agency, but it is submitted that they pose significant risks if the facility were to be built as the documents stand. The conditions appear to relate to what is a proposed incinerator but not the type of plant or operation system portrayed to us at the oral hearing held by ABP.

In particular the confusion and conflict that obtains in the planning process for the Poolbeg area and the modifications that may have to be made to accommodate all the different "master plans", "visions" and "frameworks" in the near future, whether produced by development pressures or external factors like climate change, traffic management, restriction on port tunnel traffic of certain goods, must surely suggest that the licensing process for this large, intrusive and dangerous facility should be halted until a proper plan has been agreed. If this is not done then it would appear very likely that the serious, ongoing problems that beset the sewage plant which we have to endure would be repeated on an even larger and more dangerous scale. We urge the EPA to adopt the precautionary principle and refuse this application.

Frances Corr

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