

ZERO WASTE ALLIANCE IRELAND

Towards Sustainable Resource Management

Túr na Gaoithe
Philipstown HBX
Castleblaney Road
Dundalk
County Louth

05 January 2015

Environmental Licensing Programme,
Environmental Protection Agency,
PO Box 3000,
Johnstown Castle Estate,
County Wexford.

Dear Sir,

Objection by Zero Waste Alliance Ireland to the Environmental Protection Agency's Proposed Decision to Grant an Amended Industrial Emissions Licence for the Carranstown Waste-to-Energy Facility, Duleek, County Meath
EPA Licence Reg. No. W0167-03

On behalf of Zero Waste Alliance Ireland (ZWA), I am attaching an electronic copy of our objection to the proposed decision.

While ZWA understands the reasoning behind the Agency's decision to issue a proposed determination, we remain concerned that:

- i) burning additional quantities of waste will lead to an increase in emissions to the atmosphere;
- ii) these emissions are likely to exacerbate the existing air quality problems in and around the town of Drogheda, located almost directly downwind from the Carranstown Waste-to-Energy facility;
- iii) neither the Agency nor the applicant appears to have taken fully into account the cumulative impacts of emissions to the atmosphere from the Carranstown Waste-to-Energy facility, the adjacent cement production plant, the Premier Periclase plant at Drogheda, and other non-point sources of atmospheric contamination;
- iv) neither the Agency nor the applicant appears to have taken fully into account the adverse health effects of these emissions, and particularly the

- effect of PM₁₀ particulates emitted by the Carranstown Waste-to-Energy facility;
- v) the proposed determination by the Agency does not make any reference to the lack of recent air quality monitoring in and around the town of Drogheda; which, if carried out, we believe would show a decline in air quality;
 - vi) the Agency's proposed determination fails to address the concerns of ZWAI and others that more frequent and intensive air quality monitoring around the town of Drogheda (and in the vicinity of the cluster of industrial plants in the Carranstown-Drogheda region) is urgently needed, and has been identified by Drogheda Borough Council as a requirement to enable the Council to prepare an Air Quality Management Plan in accordance with the Council's decision made on 03 March 2014;
 - vii) neither the Agency nor the applicant appears to have applied the Precautionary Principle when considering these potential adverse health effects on the local population; and the Agency has not taken the Precautionary Principle into account when making its decision to issue the proposed determination;
 - viii) the applicant has failed to justify the need for the burning of additional quantities of waste, including the proposed additional hazardous waste streams; and it appears to ZWAI that the primary purpose of the review application was to increase the annual tonnage of wastes incinerated, for purely commercial reasons, so as to increase the economic viability and profitability of the plant; and these are not appropriate grounds on which the Agency should grant an amended Industrial Emissions Licence which would allow an increase in the tonnage and types of waste to be accepted and burned;
 - ix) given that the existing waste intake and the proposed additional waste intake contain significant quantities of organic substances which could be more appropriately dealt with by composting or anaerobic digestion, it is our submission that the application by Indaver, and the Agency's proposed decision, would result in a significant quantity of wastes being dealt with by a process which is lower down in the European Waste Hierarchy;
 - x) having considered the categories of waste to be incinerated, it is our submission that a substantial proportion of these wastes could easily be treated to produce Refuse Derived Fuel (RDF), additional quantities of which could be burned as an auxiliary fuel in one or more of several cement production plants, thereby displacing fossil fuels by a sustainable source of heat, and contributing to a reduction in Ireland's greenhouse gas emissions;
 - xi) having further considered the categories of waste to be incinerated, and the quantities of energy to be generated per tonne of waste accepted, there is no doubt that the proposed additional quantities of waste would result in a downgrading of the facility from "recovery" (i.e., a designated waste-to-energy plant) to "disposal" (i.e., no more than an incinerator for the partial

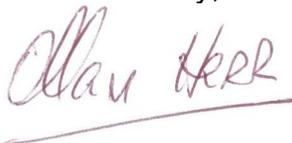
destruction of waste); and we submit that this would be a retrograde step in Ireland's overall waste management policy, and should therefore be neither permitted nor condoned by the Agency; and,

- xii) incineration of additional quantities of waste must necessarily result in Ireland's failure to comply with the requirements of the Stockholm Convention, a point which we made in our earlier submission to the Agency, and which was examined by the Agency's inspector in his report, but which we still consider to be an important issue to be resolved.

Please consider the above brief points in this covering letter as part of our overall objection to the Agency's proposed determination. We trust that you will find our submission relevant, and we look forward your response.

An electronic payment of the relevant statutory fee of € 126.00 for making an objection will be made at the time when the objection is being submitted.

Yours sincerely,

A handwritten signature in red ink that reads "Ollan Herr". The signature is written in a cursive style and is underlined with a single red line.

Ollan Herr

On behalf of Zero Waste Alliance Ireland.

ZERO WASTE ALLIANCE IRELAND

Towards Sustainable Resource Management

Objection by Zero Waste Alliance Ireland to the Agency's Proposed Decision to Grant an Amended Industrial Emissions Licence for the Carranstown Waste-to-Energy Facility, Duleek, County Meath

EPA Licence Reg. No. W0167-03

1. INTRODUCTION

On 23 April 2012, Indaver Ireland Limited applied to the Environmental Protection Agency for a review of the Industrial Emissions Licence W0167-02 for the company's Waste-to-Energy Plant at Carranstown, Duleek, Co. Meath. This licence was originally granted as a Waste Licence on 16 February 2011, and was changed to an Industrial Emissions Licence on 31 December 2013.

The key changes requested by the applicant were:

- (i) An increase of 35,000 tonnes (equivalent to a 17.5% increase) in the annual waste throughput, to a maximum waste incineration capacity of 235,000 tonnes per annum (up to 31 December 2019, reducing to 220,000 tpa thereafter); and,
- (ii) Inclusion of additional hazardous and non-hazardous waste types in the list of wastes to be accepted for incineration.

The reasons given by the applicant for the above changes were:

- a) to realise the full potential of the Waste-to-Energy Plant which was designed based on thermal capacity rather than tonnage throughput; and therefore more waste needs to be processed to meet the thermal capacity of the boiler; and,
- b) to permit the acceptance of additional waste streams, including hazardous waste, which would increase the overall calorific value of the waste.

The above are purely commercial reasons, and do not contribute in any way to the effectiveness of the facility as a piece of infrastructure which would contribute to the better management of waste in Ireland. In fact, we believe the

opposite to be true, that the proposed amendments to the licence would be a retrograde step.

2. REASONS FOR OBJECTING TO THE AGENCY'S PROPOSED DETERMINATION

2.1 Failure by the Applicant to Justify the Proposed Increase in Waste Acceptance

The applicant has failed to justify the need for the burning of additional quantities of waste, including the proposed additional hazardous waste streams; and it appears to ZWAI that the primary purpose of the review application was to increase the annual tonnage of wastes incinerated, for purely commercial reasons, so as to increase the economic viability and profitability of the plant.

These are not appropriate grounds on which the Agency should grant an amended Industrial Emissions Licence which would allow an increase in the tonnage and types of waste to be accepted and burned.

2.2 Inadequate Air Quality Monitoring in Drogheda

Ambient air monitoring in Drogheda is inadequate, and about 13 years ago between Feb 2002 and Jan 2003 ambient air pollution was measured in Drogheda. The status of air quality in Drogheda for this period of measurements was rated as being very poor.

Drogheda is in Zone C, one of the four air quality zones in Ireland. Zone C is comprised of 15 specified urban areas with populations greater than 15,000. The implications of this assessment are that within Zone C.

- Levels of PM₁₀ must be monitored continuously
- Levels of nitrogen dioxide, benzene and lead may be assessed using modelling or objective estimation.

The Air Quality Framework Directive states that modelling or objective estimation techniques may be used to assess ambient air quality if levels of the pollutant in question in that zone are below the lower assessment threshold. Continuous monitoring is required if levels exceed the upper assessment threshold. If levels are between the two thresholds then a combination of measurements and modelling techniques may be used

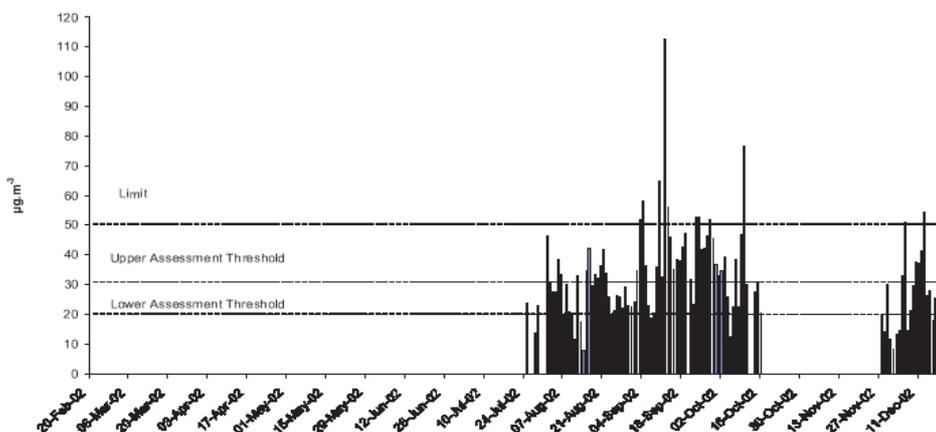
Given the unusual concentration of potential pollution sources:

- Car traffic and home heating in the town,
- The town's location along a deep river valley,

- The large Platten Cement factory,
- Its licence to burn waste,
- The emissions from Premier Periclase,
- The new Indaver Municipal Waste Incinerator,
- Its recent new licence to burn hazardous waste,

ZWAI consider that it is essential to have much improved air quality monitoring in and around Drogheda. If the levels of air pollution have the potential to increase in Duleek and Drogheda as a result of increases in the incineration of waste in the Duleek Caranstown Drogheda areas then surely one should “continuously measure” these ambient air pollutants?

Fig. 8 PM₁₀ Daily Values
Trailer 1 in Drogheda 19/2/02-3/1/03



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The 2002 to 2003 EPA measurements of the PM₁₀ in Drogheda are shown above. It seems to us that pollution from traffic is unlikely to contribute significantly because there is no congestion in the streets of Dundalk and Drogheda in July and August when schools are shut. Those enormous peaks above the limit line are very unlikely to be from a steady pattern of urban traffic. Likewise we can't claim that there was much coal burning happening in August or September. We just don't believe that the high PM₁₀ figures are as a result of traffic as was claimed in the Air Quality in Drogheda Plan of 2011 to 2017. Our view is that figures are likely to be from peak events from the existing industrial sources in Drogheda in 2002.

Our concern is that we are likely to see higher levels of pollution in Drogheda and Duleek today because of the additional pollution resulting from the EPA licences to burn waste that was given to Indaver.

According to the EPA website, the Agency manages the national ambient air quality monitoring network. The daily limit for PM₁₀ is 50 ug/m³. The limit is deemed breached if more than 35 exceedances occur during the year. The EPA summary for PM₁₀ monitoring throughout the country November 2014 shows the number of exceedances at stations in Ireland based on available data to 30 November 2014. However, there seems to be no monitoring in Drogheda or Duleek.

2.3 Increased Emissions to the Atmosphere, and Adverse Impacts on Local Air Quality

Firstly, burning additional quantities of waste will lead to an increase in emissions to the atmosphere.

These emissions are likely to exacerbate the existing air quality problems in and around the town of Drogheda, located almost directly downwind from the Carranstown Waste-to-Energy facility.

Neither the Agency nor the applicant appears to have taken fully into account the cumulative impacts of emissions to the atmosphere from the Carranstown Waste-to-Energy facility, the adjacent cement production plant, the Premier Periclase plant at Drogheda, and other non-point sources of atmospheric contamination.

The proposed determination by the Agency does not make any reference to the lack of recent air quality monitoring in and around the town of Drogheda; which, if carried out, we believe would show a decline in air quality.

It is our view is that no adequate answers or information on the above matters are being made available from the EPA.

Recommendations:

- A. That no licence be issued that permits for any additional increase in waste burning by the EPA to Indaver or to the Platin cement factory until Drogheda consistently, reliably and transparently achieves clean air as set out in the most recent EU Directive for Air Quality Standards
- B. In contrast to the first oral hearings for the Carranstown incinerator that any future decisions to issue licences for the incineration of waste be made only after full disclosure and consideration of the most recent EPA ambient air monitoring among the downwind resident population.
- C. That the Finances Charges and Provisions fee of €45,000 in the review licence application be increased very substantially to cover the additional EPA costs for the permanent continuous multiple location ambient air monitoring stations in the Drogheda and Duleek areas.
- D. That wind direction is monitored at the same time and frequency as the sampling of the Ambient Air in Drogheda and Duleek so that the origin of a PM 2.5 or PM10 plume can established.
- E. That the EPA Licence attaching to Indaver, Platin and Premier Periclase will be each amended over the coming years to be consistent with the

pollution indicators and the frequency of monitoring and reporting as detailed in the latest EU DIRECTIVE 2008/50/EC for Ambient Air Monitoring .

- F. We ask that the Indaver Stack Monitoring for PM₁₀, PM_{2.5} and the other pollutants listed in EU Directive 2008/50/EC be continuously measured every 8 hours and the results made available to the public on line.
- G. We ask that the industry that is producing the pollution which causes exceedances above the limits in the Directive be required to suspend its activities in accordance with Article 24 – 2 of EU DIRECTIVE 2008/50/EC
- H. That the EPA and Louth Local Authorities publish a detailed Air Quality Plan aimed at quickly reducing air pollution in accordance with Article 26 – d. To do so in accordance with- ANNEX XV - Information to be included in the local, regional or national air quality plans for improvement in ambient air quality
- I. That the EPA and Louth Local Authorities publish its Short Term Action Plan to protect children in accordance with Article 24- 4
- J. That the EPA will be responsive to requests to set up permanent monitoring stations in the Drogheda and Duleek areas on foot of the adoption of a motion by Councillors to do so. This will be in accordance with the Air Pollution Act 1987 where local authorities are obliged to take whatever measures they consider necessary to prevent or limit air pollution in their area

2.4 Adverse Impacts on Public Health, and Concerns raised by Drogheda Borough Council

Two of the questions that concern people living in the shadow of large industrial sources of pollution such as incinerators are:

- Is the pollution level increasing in my community and is it harming my long term health?
- Will the various sources of the pollution be effectively identified?
- Will an effective action plan be put in place to reduce all the sources of Drogheda’s Ambient Air Pollution?
- Will anybody be held to account if people become sick?

ZWAI and others have made various submissions over the years on the long-term health concerns with regard to the incineration of waste and still have serious concerns in this regard. We submitted “The Health Effects of Waste Incinerators” -- 4th Report of the British Society for Ecological Medicine.

We asked Vyvyan Howard Professor of Bioimaging, Centre for Molecular Biosciences, University of Ulster to also make a presentation on the health effects of micro particle pollutants from incinerators at one of the oral hearings in Drogheda.

Neither the Agency nor the applicant appears to have taken fully into account the adverse health effects of these emissions, and particularly the effect of PM₁₀ and PM_{2.5} particulates emitted by the Carranstown Waste-to-Energy facility.

Directive 2008/50/EC on Ambient air quality and cleaner air for Europe states as follows

Fine particulate matter (PM_{2,5}) is responsible for significant negative impacts on human health. Further, there is as yet no identifiable threshold below which PM_{2,5} would not pose a risk. As such, this pollutant should not be regulated in the same way as other air pollutants. The approach should aim at a general reduction of concentrations in the urban background to ensure that large sections of the population benefit from improved air quality.

There can be therefore no doubt that there is potential for long term health problems arising from the emissions when burning a wide variety of household and hazardous waste; because of the very wide toxic chemical cocktail that will attach to micro fine particle such as PM 2.5 and PM 1 from a waste burning incinerator stack.

The Agency's proposed determination fails to address the concerns of ZWAI and others that more frequent and intensive air quality monitoring around the town of Drogheda (and in the vicinity of the cluster of industrial plants in the Carranstown-Drogheda region) is urgently needed, and has been identified by Drogheda Borough Council as a requirement to enable the Council to prepare an Air Quality Management Plan in accordance with the Council's decision made on 03 March 2014.

Neither the Agency nor the applicant appears to have applied the Precautionary Principle when considering these potential adverse health effects on the local population; and the Agency has not taken the Precautionary Principle into account when making its decision to issue the proposed determination.

We therefore ask that the Indaver stack monitoring for PM₁₀ and PM 2.5 should be continuous over the full year and be carried out and reported to the public in 8 hour intervals.

Under Article 26 of DIRECTIVE 2008/50/EC it states "*Member States should lay down rules on penalties applicable to infringements of the provisions of this Directive and ensure that they are implemented. The penalties should be effective, proportionate and dissuasive.*" Will the EPA licence requirements for stack monitoring and reporting under the proposed new licence provide enough evidence to support legal proceedings for environmental pollution?

Under Article 19 of DIRECTIVE 2008/50/EC it states: "*Action plans should be drawn up indicating the measures to be taken in the short term where there is a risk of exceedances of one or more alert thresholds in order to reduce that risk and to limit its duration. When the risk applies to one or more limit values or target values, Member States may, where appropriate, draw up such short-term action plans*".....What Action Plan will be recommended in the likely scenario that the measurements of PM₁₀ and PM 2.5 in Drogheda are breaching the limits?

2.5 Failure to Consider the European Waste Hierarchy and the Use of Portion of the Wastes to be Incinerated as a Refuse Derived Fuel

Given that the existing waste intake and the proposed additional waste intake contain significant quantities of organic substances which could be more appropriately dealt with by composting or anaerobic digestion, it is our submission that the application by Indaver, and the Agency's proposed decision, would result in a significant quantity of wastes being dealt with by a process which is lower down in the European Waste Hierarchy.

Having considered the categories of waste to be incinerated, it is our submission that a substantial proportion of these wastes could easily be treated to produce Refuse Derived Fuel (RDF), additional quantities of which could be burned as an auxiliary fuel in one or more of several cement production plants, thereby displacing fossil fuels by a sustainable source of heat, and contributing to a reduction in Ireland's greenhouse gas emissions.

Having further considered the categories of waste to be incinerated, and the quantities of energy to be generated per tonne of waste accepted, there is no doubt that the proposed additional quantities of waste would result in a downgrading of the facility from "recovery" (i.e., a designated waste-to-energy plant) to "disposal" (i.e., no more than an incinerator for the partial destruction of waste); and we submit that this would be a retrograde step in Ireland's overall waste management policy, and should therefore be neither permitted nor condoned by the Agency.

2.6 Requirements of the Stockholm Convention

Incineration of additional quantities of waste must necessarily result in Ireland's failure to comply with the requirements of the Stockholm Convention, a point which we made in our earlier submission to the Agency, and which was examined by the Agency's inspector in his report, but which we still consider to be an important issue to be resolved.

2.7 Unreasonably short Consultation Period that also clashed with Christmas

ZWAI considers that it was unreasonable of the EPA to ask that people would work over the Christmas holiday period in order to submit an objection to the above proposed determination.

To receive a letter of notice on the first days of December and to ask for objections to be submitted by 05 January is unreasonable and contrary to any effort to involve effective public consultation. We suggest that it would have been possible for the Agency to delay the start of the consultation process until early February 2015, in order to comply with the consultation period set out in the present legislation.

Yours sincerely,

Ollan Herr

Ollan Herr

On behalf of Zero Waste Alliance Ireland.