



## OFFICE OF LICENSING & GUIDANCE

### INSPECTORS REPORT ON A LICENCE APPLICATION

<b>TO:</b>	Directors	
<b>FROM:</b>	Dr Jonathan Derham	<b>- Licensing Unit</b>
<b>DATE:</b>	26/05/04	
<b>RE:</b>	Application for a Waste Licence from Greenstar Recycling Holdings Limited, Register No. 157-1	

Application Details	
Type of facility:	Non-Hazardous Landfill
Class(es) of Activity ( <b>P</b> = principal activity):	3 <sup>rd</sup> Schedule: 1, 4, 5(P), 6 and 13 4 <sup>th</sup> Schedule: 4, 9, 11 and 13
Quantity of waste managed per annum:	145,000 t
Classes of Waste:	Non-hazardous municipal (including commercial) and industrial solid wastes, including sludges for disposal and the recovery of inert waste to be used for intermediate landfill cover
Location of facility:	Ballyguyroe North, County Cork
Licence application received:	29/06/01
Third Party submissions:	19 by 09/04/04
Planning Permission Status	Refused by Cork County Council by order dated 03/12/03. Appealed to An Bord Pleanála 08/01/04 (file no. 03/5373).
EIS Required:	Yes
Article 14 Notices sent:	26/09/01
Article 14 reminder sent	14/06/02
Article 14 reminder sent	11/07/02
Article 14 compliance date:	16/07/02
Article 16 Notices sent:	20/11/01
Article 16 Compliance date:	04/12/03
Meetings between Agency and applicant	25/04/02 06/06/02
Site Inspection:	Site notice checked by TO'M on 11/07/01 Site visited by MMch and NO'D on 06/02/04

## **Assessment of Application**

This report includes observations by Ms Maeve McHugh (Inspector) who took over from Dr Tadhg O'Mahoney (Inspector) as the officer responsible for assessment of the application documentation.

### **1. Facility**

#### Introduction to the Proposed Development

The application from Celtic Waste Limited (now Greenstar Recycling Holdings Ltd.) is for the development of a non-hazardous landfill facility on a green-field site adjacent to an existing Cork County Council landfill now undergoing restoration works at Ballyguyroe North, County Cork. The proposed site lies down gradient of the existing landfill and it is proposed by the applicant that it will service counties Cork, Limerick, Tipperary, Kerry and Waterford for an operational lifetime of ten years.

Planning permission for the proposed development was refused by Cork County Council by order dated 03/12/03 and was appealed to An Bórd Pleanála on 08/01/04.

The proposed location of the facility is on the south facing hills just to the south of the Ballyhoura Mountain range, located approximately 5km north west of Kildorrery village. The site is bounded along its eastern flank by the River Farahy and along the south and west by surface water drains which discharge to the Farahy.

#### *Historical Issues*

The site of the proposed landfill lies down gradient of and immediately adjacent to an existing Local Authority landfill, which is licensed by the Agency (register No. 2-2). The Local Authority facility (comprising seven cells) is no longer accepting waste and currently undergoing restoration works. A High Court Agreement (between local community & Local Authority) stated that waste acceptance should cease once the filling of cell 7 was complete and that extension of the landfill into further lands was prohibited. These further lands referred to are the subject of the current waste licence application but the High Court agreement does not relate in any way to the current applicant.

### **2. Operational Description**

#### 2.1 Hours of Operation

The proposed hours of operation are Monday – Saturday from 08.00 to 18.00 hours.

#### 2.2 Liner System

The lining systems (landfill & leachate lagoons) proposed by the applicant are generally in compliance with Agency guidance (e.g. the Agency's Landfill Site Design manual) but with some differences such as the fact that for some layers permeability values were unspecified and for the mineral layer a thinner layer is proposed to give equivalent protection to that specified in Agency guidance. Equivalent protection would however have to be proven to the Agency. Final design specifications are required (in the Proposed Decision) to be agreed in advance of construction.

#### 2.3 Leachate Management

The applicant proposes a system of lined waste cells where leachate will be allowed to accumulate before being pumped to a lined leachate storage lagoon and ultimately tankered offsite for treatment. It is proposed to install a SCADA system for the remote monitoring of the depth of leachate within cells and to activate automatic

leachate pumps and to ensure that leachate is pumped only when there is sufficient capacity in the leachate lagoon.

In the post closure phase the applicant proposes to recirculate leachate under the final cap and proposes the possible use of reed beds for leachate treatment but no design or operation details are provided in relation to the reed beds are provided at this time. The Proposed Decision specifies that these details are required to be submitted and agreed prior to implementation. The applicant does not propose, at this time, any on-site leachate treatment for the operational phase.

#### 2.4 Capping System

The application refers to a proposed capping system, which is as per Agency guidance, but with some details, such as soil permeabilities unspecified at this time. The Proposed Decision specifies that these details are required to be submitted and agreed prior to construction.

#### 2.5 Landfill Gas Control

The lining and capping systems as described above would have an important part to play in the prevention of off-site migration of landfill gas. In addition the applicant proposes to have a system of passive gas venting (with gas vents spaced at 40m intervals) to minimise the build-up of gas pressure within the landfill. It is estimated in the application that within approximately twelve months of waste acceptance at the proposed facility that degradation of some of the waste will have entered the methanogenic phase. It is proposed that gas monitoring at the passive vents will take place on a weekly basis to determine when the concentrations of methane are sufficient to support gas flaring. The active gas control system is proposed to be installed concurrently with the final cap.

The flare stack location is shown on Drawing No. 2001-144-01-Rev D in Appendix I of this report but the location of any landfill gas utilisation (heat/power) infrastructure is not specified at this time. The application states that in general it is proposed to, if viable, utilise the gas and that a number of options would be considered including:

- exporting the gas directly to consumers in the local area;
- utilising the gas in an engine to generate electricity; or
- combustion of the gas to provide heating to buildings on or in the vicinity of the site.

### **3. Emissions**

#### 3.1 Leachate Management

The EIS states that annual quantities of leachate predicted for the site from water balance calculations range from 15,038 m<sup>3</sup> in year 1 up to a maximum of 31,325 m<sup>3</sup> in year 9 with a total of approximately 253,198m<sup>3</sup> over the proposed ten-year operational lifetime of the facility.

The applicant does not propose any on-site leachate treatment. Nonetheless the applicant states in Section 3.1.4.14 of the EIS that the need for on-site leachate conditioning i.e. methane stripping may arise depending on the agreement made with the operators of the off-site treatment plant to which leachate will be discharged.

The applicant proposes that leachate would be tankered offsite to the Charleville Waste Water Treatment Plant for treatment, subject to agreement with Cork County Council. On 12<sup>th</sup> November 2003 the Agency received confirmation from Cork County Council which stated that based on the available capacity of the treatment plant at Charleville there is no available capacity there to deal with leachate from the

proposed development. The Proposed Decision requires that an agreement for off-site disposal of the leachate must be in place prior to the commencement of waste disposal activities.

During the application process the applicant changed both the location of the proposed leachate lagoon (to allow for an increased distance from the leachate lagoon to surface water) and its design (to allow for increased storage capacity). The calculations upon which the leachate storage requirements are based assume that the maximum leachate storage requirement will arise when cells 1-6 are permanently capped, cell 7 is temporarily capped and cell 8 is receiving waste. The calculations assume that in the temporarily capped cell 7 only 20% of rainfall will infiltrate the waste body. In the Agency's landfill licences to date the definition of intermediate cover refers to placement of material (minimum 300mm if soil is used) for a period of time prior to restoration or prior to further disposal of waste. This definition is not prescriptive and does not refer to permeability requirements of the soil used. It is therefore inappropriate to assume that only 20% of rainfall will infiltrate the temporary/intermediate cover. The Agency's Landfill site Design Manual (section 7.2) recommends that in areas that have been temporarily capped/restored an infiltration rate of 25-30% of rainfall should be used. The calculations are also based on a 5-day leachate storage capacity and do not take account of possible leachate storage requirements beyond this timeframe. Nor do they allow for any potential delays with the final capping of any of cells 1-6 which, according to the calculations gave a total area of 76,860m<sup>2</sup> over which only 2% rainfall infiltration is assumed. The Agency's Landfill site Design Manual (section 7.2) notes that in areas that have been capped/restored, rainfall infiltration would be in the order of 2-10%.

Situations may also arise whereby greater than five days leachate storage may be required (e.g. after bank holidays or prolonged heavy rain). According to the water balance calculations given in the application, and the proposal that leachate will be transported using 22m<sup>3</sup> road tankers during maximum leachate production an average of approximately 20 tanker-loads of leachate would have to be transported offsite in any 5-day period.

It is recognised that there are many assumptions included in these calculations. The Proposed Decision requires the provision of a meteorological station on site to provide real-time data on precipitation and also that the licensee should carry out an annual review of waste balance at the site to demonstrate adequacy of leachate (& surface water) storage capacity. The maximum predicted volumes of leachate are not expected until Cell 8 is receiving waste. This is some way off and will permit collection of real-time data for the purposes of accurately predicting the necessary leachate storage. In exceptional circumstances recirculation of leachate (into the waste pile) is permitted by agreement in the Proposed Decision (fresh municipal waste has a large absorptive capacity).

### 3.2 Emissions to Sewer

It is not proposed to have any discharges to sewer from this facility. Sewage would arise in the administration building and it proposed to be discharged to the leachate lagoon via a small on-site wastewater treatment plant.

### 3.3 Emissions to Surface Waters:

Currently drainage from the site of the proposed Greenstar landfill to the River Farahy is via a series of land drains located at the edge of each existing field. As a result of the low permeability nature of the glacial till at the site, infiltration of rainfall to ground is restricted and run-off into these drains is quite rapid. Many of the drains are dry except for a period following each rainfall event (EIS Section 2.5.1). This

means that while the low permeability clay protects groundwater, the surface water is particularly vulnerable.

Section 3.1.1.10 of the EIS states that surface water runoff will arise from the following sources: Roads, hardstanding areas, roofs, developed but unused landfill cells, runoff from undeveloped areas, runoff from capped areas, and runoff during construction. According to the application the 95 percentile flow in the River Farahy is estimated at 0.019 m<sup>3</sup>/sec (or 1641.6 m<sup>3</sup>/day), and the average rainfall is 1.09m per year.

The nature of the clay at the proposed site is such that, when it combines with water, e.g. rainwater it forms colloidal clay particles with poor settlement characteristics. The applicant proposes that surface water will discharge to a lagoon via an oil interceptor and that settlement of the larger clay particles will take place in the lagoon. The outflow from the lagoon would be fitted with an actuated penstock and instrumentation to detect pH, dissolved oxygen and level. The purpose of the penstock is to control flow and to contain the contents of the lagoon in case of a contamination event.

#### *Treatment*

Because of the colloidal nature of the clay in the area it is proposed to install a treatment system downstream of the surface water lagoon. It is proposed that this system will remove excessive suspended solids, if any, prior to discharging to the River Farahy. The method proposed is flocculation and sedimentation through electro coagulation using aluminium hydroxide. A turbidity meter would monitor the outflow. The outlet from the treatment plant would include instrumentation to detect the turbidity of the water. All storm water will discharge to the river via two small streams to the south of the site. The Proposed Decision sets an ELV for suspended solids at 35mg/l, and for Aluminium at 1mg/l which a well operated plant should be able to achieve and which following discharge to the river will ensure compliance with the EPA WQS guidance (0.2mg/l Al).

#### *Impact*

During the development and operation of the site, a total of approximately 550,000m<sup>3</sup> of in-situ low permeability clay would have to be excavated and moved. In its natural state the clay will not meet the permeability requirements ( $K = 1 \times 10^{-9}$  m/s) for lining of non-hazardous waste landfills. The clay will therefore have to be reworked in order to meet the permeability requirements and then stockpiled and used for construction of the landfill cells. This is additional to materials that would have to be brought on-site for other site development and construction works.

*The applicant stated in the application that 'generally topsoil and subsoil storage will be minimised by coordinating new cell construction and capping activities concurrently. Where it becomes necessary to store subsoil it will be stored on areas of the landfill which have not yet been developed, and during the last phases, on previously filled cells. Runoff from subsoil stockpiles will be directed to the surface water pond and hence through the treatment works. If necessary these stockpiles will be covered with a water proof sheet or mulch to prevent excessive clay particles entering the surface water system. Stockpile heights will not exceed 10m above adjacent ground levels'.*

The applicant states that soil stockpiles will be placed on previously undeveloped areas.

### 3.4 Emissions to Ground/Groundwater:

The Regional Geology of the proposed site consists of rock of Devonian age, commonly referred to as the 'Old Red Sandstone'. With regard to emissions to groundwater the information provided by the applicant in the waste licence application (including the EIS) concentrated on the fact that there is a thick layer (varying between 10 – 30m across the proposed site) of low permeability subsoils underlying the proposed site, which has two main advantages.

(1) Firstly it provides protection for the underlying groundwater resources because the subsoils available at the site can be engineered to a permeability of approximately  $1 \times 10^{-10}$  m/sec and according to the (GSI, DoE, EPA) publication 'Groundwater Protection Schemes', (1999) based on the type and thickness of the subsoils the site has a 'low' groundwater vulnerability rating. The application also states that although the bedrock aquifer has not officially been classified at the site, corresponding rocks in County Limerick, just north of the site, have been classified by the Geological Survey of Ireland as LI – locally important, moderately productive only in local zones. Combining the inferred aquifer category and the vulnerability as described above the applicant states that the 'Groundwater Protection Schemes', (1999) response matrix for landfill the resultant groundwater response category is R1, which is considered the most favourable rating for landfill site selection.

(2) Secondly it provides a source of a large quantity of clay, which the applicant proposes will be used for essential engineering works at the site. The materials balance section of the EIS refers to the fact that the excavation of cells will generate approximately 550,000 m<sup>3</sup> of low permeability clay, which will be used as basal clay liner, for construction of the perimeter embankment and for final capping. The applicant proposes to strip approximately 550,000 m<sup>3</sup> of clay for these purposes.

### 3.5 Air Odour

The application discusses the potential odours that could be generated from waste, landfill gas and leachate and discusses the results of odour monitoring (for VOCs and sulphur containing compounds) at boundary locations and 50 and 100 m distances from the boundary of Arthurstown Landfill, Co. Kildare. The results were compared with 24hr occupational exposure limits (OEL) and the conclusion was that as the levels detected were lower than the OELs there were no health risks, although with some samples a mild odour was detected.

The nearest residential property to the proposed development is 400m northeast of the boundary. A wind rose from Cork airport data shows that the strongest and most frequent winds at Cork airport are from the northwest, west, southwest and south while measurements at the existing landfill indicate prevailing winds from the southwest.

Odour is not considered to be one of the principal issues of concern regarding the proposed development (mainly because of the distance to residential properties and centres of populations) however it is possible that odours may occasionally be present outside the facility boundary and, depending on wind direction, at residential properties, but not at levels or at a frequency likely to result in nuisance.

### Landfill Gas

With regard to emissions of landfill gas and the proposals for landfill gas management it is considered that a total proposed waste intake of 1,450,000 tonnes over the operational life of the landfill should be more than sufficient to support gas

utilisation. The Agency's manual on 'Landfill Site Design' states that it *'is widely accepted that the minimum amount of landfilled biodegradable waste required to sustain a commercially viable landfill gas electricity scheme is about 200,000 tonnes.* The Proposed Decision requires proposals for gas utilisation feasibility, and for details of any plant to be agreed in advance of installation.

### 3.7 Noise:

Ambient noise measurements described in the application include audible noise from the existing landfill site. The EIS identifies that in relation to three off-site noise sensitive receptors there would be a slight increase (in the order of one decibel) in levels due to on-site plant and machinery but that in the case of one of these receptors, which is the closest residence to the access road to the facility the effect of traffic associated with the landfill will result in an increase of 3 to 4 dB(A) in L(A)eq noise levels (resulting in an L(A) eq of approximately 56 to 57 dB(A)).

## **4. Other Significant Environmental Impacts**

### 4.1 Buffer Zone/ Space requirements

#### *Buffer*

In an Article 14 notice issued by the Agency the applicant was asked to describe the criteria, which had been applied to determine the extent of the buffer zone required to protect adjoining environmental resources and land use practices within and in the vicinity of the facility. The applicant's response was that *'a distance of 50m will be maintained between the landfill footprint and the northern site boundary and 100m between the footprint and the site boundaries in other areas. The main reason for providing these distances between the landfill footprint and the site boundary is to allow the provision of site infrastructure, monitoring facilities and screen planting. The reserved area will include activities such as leachate storage, surface water treatment, waste inspection, waste quarantine, wheel washing, vehicle weighing, administration, etc. The potential impacts from each of these activities on the local environment have all been fully addressed in the EIS. No additional reserved areas are considered necessary to further protect the environment'*.

The draft BAT Guidance notes for landfill activities state that in assessing the suitability of a site's location, the applicant should consider whether a buffer zone should be included to minimise or prevent adverse impact on local sensitive receptors. The need for a buffer zone and the extent of that buffer zone must be considered on a site-specific basis giving regard to available guidance on relevant site issues and risks. The provision of a 50m buffer is required in the Proposed Decision, and along the perimeter next to the River Farahy the 50m runs from the steep break in slope above the river to the landfill footprint.

## **5. Cultural Heritage, Habitats & Protected Species**

The River Farahy adjoining the proposed landfill site is intended by Dúchas to be designated as a SPA. Issues regarding the protection of surface water are discussed elsewhere in this report.

According to the EIS there are no sites designated under the habitats Directive within 3km of the proposed development. There are three Proposed Natural Heritage Areas (NHAs) within 5kms of the site these are Ballyhoura Mountains (Site Code 002036)

check, Ballintlea Woods (Site Code 002086) and Castleoliver Woods (Site Code 00209) and one Special Area of Conservation (Site Code 2037).

The proposed site lies on the southern foothills of the Ballyhoura Mountains. Seven breeding pairs of hen harriers (the species is of high conservation importance as it is listed in Annex I of the EU birds Directive) were recorded in the Ballyhoura Mountains with breeding occurring within 5kms of the proposed site. The EIS does not identify any likely significant effects on hen harriers as a result of the proposed development.

Section 4.7.2.4 of the EIS states that '*given the successful operation of the landfill site and ancillary operations, without pollution incidents, and with suitable mitigation and remedial measures incorporated the overall impact of the development may be considered as of minor impact on fauna and habitats*'.

## **6. Waste Management, Air Quality and Water Quality Management Plans**

### 6.1 Waste Management Plan

Section 40(2)(b)(i) of the Waste Management Act, 1996 requires that the Agency in considering an application for a waste licence shall have regard to any Waste Management Plan. The applicants have stated the proposed facility is intended as a regional landfill servicing Cork, Limerick, Kerry, Tipperary and Waterford. Therefore to assess its place against the Cork Waste Management Plan alone is not sufficient as there should be a regional focus to the provision of waste infrastructure facilities. Movement to regional facilities is part of Government policy. In any case Cork Co Co recently published a revised draft of their waste plan (March 2004). There is nothing in this plan that would prevent the development of a private regional landfill facility. From the Cork plan it is clear that they have very limited authorised landfill capacity left (one year based on 2002 waste production and 5 years based on 2003 statistics); and they have no other new facility currently authorised.

### 6.2 Air/ Water Quality Management Plans

There is no air Quality Management Plan for County Cork.

The River Farahy rises in the Ballyhoura Mountains and downstream meets the River Funchion, which has a confluence with the River Blackwater just south of Kilworth County Cork. The Blackwater meets the sea at Youghal Bay. A draft Water Quality Management Plan exists for the River Blackwater. It predates both the Cork County Development Plan and the Cork Waste Management Plan as it was published in 1989.

It is not envisaged that the proposed development would have an appreciable impact on the River Blackwater.

## **7. Fit & Proper Person Assessment**

The application is in accordance with article 12 of the Waste Management (Licensing) Regulations and has been assessed as such.



## **8. Landfill Directive**

The facility if managed and operated in accordance with the attached proposed decision will comply with the requirements of the Landfill Directive (1999/31/EC).

## **9. Environmental Impact Statement**

An EIS for the development was submitted with the application. It was assessed against Article 25 of the EIS Regulations. Following submission of further information, the EIS was found to be in compliance.

## **10. Submissions**

There were 19 submissions made in relation to this application. All submissions were taken into consideration in the making of this recommendation and the drafting of Conditions in the Proposed Decision. The submissions are detailed in Appendix 2 of this report.

One recurring issue which should get specific mention is the concern for health impact from living close to a landfill. In a major study recently published by the UK Government<sup>1</sup> it was concluded that:

*'We examined the observation that certain birth defects occur at slightly higher rates in people living close to landfills. The available information does not allow us to say whether the landfills cause or contribute to this apparent clustering of birth defects.'*

*'... we found no consistent evidence that people living close to landfill sites accepting MSW suffered worse health than people living further away from such sites. In particular, we found that the weight of evidence is against any increased incidence of cancers in people living near to landfill sites.'*

The Proposed Decision as drafted includes numerous conditions to limit and manage the emissions and operations at the facility such that in accordance with the principles of BAT, human health and the environment is protected.

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<sup>1</sup> Review of Environmental and Health Effects of Waste Management: Municipal Solid Waste and Similar Wastes. Department for Environment, Food and Rural Affairs, London. 2004.

## **11. Community Support and Development**

The local community in the area of the landfill will be discommoded as a result of the operation of the landfill. A major study published by the UK Government<sup>2</sup> concluded that landfills do result in a certain disamenity during the life of a landfill that can impact on property value. It is consider appropriate that a proportion of the landfill gate fees be put to the benefit of the local community while the landfill is accepting waste. Condition 12.4 refers. The condition specifies that this fund be independently managed and used to support projects of physical or social environmental benefit for the community. In this way the amenity value of the area can be enhanced for current and future benefit of the local community, the benefits of which should hopefully prevail long after the landfill has closed.

## **12. Recommendation**

All the documentation submitted in relation to this application has been considered. I am satisfied that the conditions set out in the Proposed Decision will adequately address all emissions from the facility and will ensure that the carrying on of the activities in accordance with the conditions will not cause environmental pollution. I recommend that the Proposed Decision be issued subject to the conditions and for the reasons as drafted.

Signed

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Dr J M Derham  
Senior Inspector  
Licensing Unit

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<sup>2</sup> A study to estimate the disamenity costs of landfill in Great Britain. Department for Environment, Food and Rural Affairs, London. 2003.

## **APPENDIX 2: Submissions**

### **1. Margaret Geary**

*A general enquiry relating to dates for the licensing process.*

### **2 & 3. Liam Connery**

*The submitter lives within 300m of the proposed development. Traffic is a problem with roads too narrow and dangerous. They have experienced nuisances from the operation of the existing facility including leachate spillage onto roads, flies, rats and birds (including dead vermin around their home). The air is permanently foul smelling. They have no confidence in their water supply and are concerned about the health of their family and unborn child and made reference to the Article on the health effects of landfills published in the British Medical Journal. They have lost their desire to live in their family home.*

### **4&5 Mary Jo Downes Connery and Family and Liam Connery**

*Identical to 2&3 above.*

### **6. Gerard O'Connell**

*Note that this submission is addressed to the planning authority.*

*The submitter notes concerns in relation to the following:*

- *concentration of Munster's waste in a scenic rural setting.*
- *disruption of peace and quiet which the submitter regards as a tangible asset.*
- *Because of the low intensity agriculture status of the area it borders on criminal to jeopardise the aquifer of regional importance.*
- *European law seeks to encourage the reduction of waste generation and the implementation of recycling policies to safeguard natural resources. A private landfill can only be profitable for its shareholders by processing the greatest possible amount of waste and as such would have no commercial or moral incentive to ensure the implementation of the EU Directive of 1999.*
- *The Planning Permission application procedure adopted by Celtic Waste Limited is slipshod and deceitful for the following reasons: (1) the application notice did not appear in any locally circulating daily paper, (2) The applicant added a smoke screen to the process by using the incorrect address of Ballyguyroe North, Mallow, Co. Cork to apply for Planning Permission when they should have used the correct address i.e. Ballyguyroe North, Kildorrery, Co. Cork. (3) The applicant did not seek the views of local residents prior to the application for planning permission. Some but not all of the local residents received literature which was no more than propaganda and not an interactive initiative.*
- *The submitter states that the Farahy River has been a water source for domestic, agricultural and recreational use for greater than 3 centuries of his family. He questions the right of any public limited company to derive profit by locating a landfill bordering the Farahy River and in doing so place enormous environmental risks to such a pristine river.*

### **7. Richard Hanley, Glenanaar Valley Community**

*The Glenanaar Valley Community, with a population of 29 object to the proposed development.*

- *The existing landfill at Ballyguyroe has given them more than enough time to observe and experience for themselves the negative impact such a development has on the community.*
- *If the EPA grants a licence to Celtic Waste Limited (CWL) to operate a new landfill at Ballyguyroe it will be handing down a slow and painful death sentence to the community.*
- *The British Medical Journal reports that communities living within a 2km radius of a superdump have an increased risk of experiencing serious health problems and birth defects in their children. The Glenanaar Valley Community lives within 2km of the proposed development and some are as close as 300m. This is an unacceptable health risk.*
- *We know the existing landfill, which was set up before the EPA ever emerged pollutes our water above and below ground. This dump consists of 7 cells and only one of them is lined. We also know that poisonous gases pollute our air and the emission from the existing dump are not controlled by flaring. We have also noted a significant increase in flies and vermin. The old landfill will continue to pollute and the new landfill will further pollute our environment.*
- *Increased traffic volumes on steep hills and narrow dangerous roads will have a detrimental effect.*
- *Business/tourism development potential will be damaged.*
- *The community's ability to sustain itself will be seriously impeded. The dairy and meat produce will be affected by contamination and associated health effects.*
- *Glenanaar Valley is important as a beauty spot. Canon Sheehan wrote a book about Glenanaar, which is of great historical interest. The proposed landfill would overshadow the natural beauty of the area and smother its heritage. The Glenanaar Valley has many Natural Heritage Areas.*
- *Illegal Dumping: The existing dump attracts people who leave their rubbish behind along our hedgerows. The proposed new development will make this problem worse.*
- *The waterways above and below ground will become worse.*
- *Value of Property: The entire locality, farmland and homes would be downgraded and devalued due to such a development.*
- *We hope that our objections will be taken seriously. A large affluent company such as CWL has no empathy with a small community in the Glenanaar Valley. They choose to exploit the fact that we are small and vulnerable. CWL already tries to trivialise the enormous negative effect its proposed super dump will have on our community with its sterile descriptions of our locality. We are a living, thriving, creative community with a future... we do not want Celtic Waste.*

### **8. Mrs Mary Young**

*The submitter opposes the new landfill being opened just as the old landfill is about to close. During the lifetime of the old landfill she has had to control flies, rats, mice and put up with dangerous driving of skips and large vehicles on roads which are very unsuitable for the purpose. She has fears of water contamination of the domestic and farm supply.*

*Since the Court Case in Dublin Cork County Council knew they were ordered to leave the site by Sept '01 so why is another, much bigger dump proposed at Ballyguyroe. The submitter is living on a farm, which has been improved and expanded over the years, and she is concerned for the health of people, animals and the environment in general.*

### **9 & 10. Richard Young and Mary Young**

*The objectors live within 1km of the proposed development and wish to object to it on health grounds. They state that they have lived for 11 years with the smell of gas etc. They are concerned that if a facility seven times bigger than the existing facility were to open there would be seven times the problems with flies, smells, rats, traffic etc and they could not see themselves being able to continue living there but they fear they could not sell their property as it would be worth nothing. The article in the British Medical Journal also causes them concern with regard to the potential for birth defects in babies.*

#### **11. Dúchas**

*The submitter states that Dúchas have no objections to the application but note that they intend to designate the Rivers Farahy and Funchion as Special Areas of Conservation for salmon. The River Farahy is considered by the Southern Regional Fisheries Board to be a 'significant salmonid spawning and nursery habitat'.*

#### **12. Southern Regional Fisheries Board (SRFB)**

*The submission outlines SRFB's statutory duty to ensure that any development within its area does not cause water pollution. Fisheries Board policy is aimed at maintaining a sustainable fisheries resource through preserving the productive capacity of fish habitat by avoiding loss or mitigating harmful alteration to habitat.*

##### *Potential for Silt Discharge to Waters*

*Site development and operation will inevitably require the large-scale movement of soil within the site. It is essential that the EPA be satisfied as to the adequacy of silt control measures to prevent discharges to the Farahy River. Suspended solids such as silt from the landfill can affect the life of the river in a number of ways. The solids may 'smother' the streambed, preventing water from passing through the gravel in which trout and salmon lay their eggs (thus destroying salmonid spawning grounds) or may change the character of the riverbed so that it becomes a less favourable habitat for many kinds of aquatic life. Solids can also precipitate riverbank erosion downstream that can lead to a loss or degradation of valuable habitat. The turbid water can cut off or reduce the light necessary for plant growth, thus affecting the productivity of the water. It can also inhibit the feeding of fish or fry as the food items are no longer visible in turbid waters. The silt can in extreme cases suffocate fish by clogging their gills. In less extreme cases solids can cause sub-lethal effects, which can result in reduced tolerance to further stress. The storage of clay and topsoil for us in capping, revegetation and restoration of the site has the potential to cause significant discharges to the Farahy River. While the EIS proposed the treatment of surface water runoff to remove colloidal clay particles it is unclear as to the type of treatment proposed and if so, what are the specific proposals.*

##### *Sewage and Surface Water*

*Section 3.1.1.10 of the EIS states that sewage will arise from the administration building only and will be treated to the standards indicated. It is the Board's opinion that the standards indicated are not adequate. The effluent treatment facility should be certified by the manufacturers as being capable of providing a final effluent quality as follows:*

*pH 6-9, BOD < 20mg/l, suspended solids < 30mg/l, total ammonia <5mg/l as N, total phosphorus <2mg/l as P, orthophosphate <1 mg/l as P and fats, oils and grease 10 mg/l or better.*

*There should be positioned on the outfall from the treatment plant a sampling/monitoring chamber so as to allow the Council, the EPA and this board to check from time to time the operational efficiency of the plant.*

#### *Decommissioning and Aftercare*

*There is a paucity of information regarding proposals for decommissioning and post closure aftercare. Fully costed plans should be included in the EIS and these should be reviewed regularly. The applicant should also provide details of the financial provisions/ security to underwrite the aftercare plan.*

*Also attached with this submission is a letter from SRFB to K. T. Cullen & Co. regarding the proposed landfill. It refers to the fact that leachate should not in any circumstances be permitted to discharge to waters and that the Board would comment further when the proposals for leachate handling, storage and treatment are detailed in the EIS.*

#### *Buffer Zone*

*The letter also refers to the requirement for a buffer zone with natural vegetation intact between any silt traps and the watercourse to assist in silt interception. Should the crossing of watercourses be required during site development work they should be bridged prior to commencement? The crossing of watercourses at fords is unacceptable because of the amount of uncontrolled sedimentation that can be generated by their use. Measures must be put in place to prevent silt run-off during road construction.*

#### *Use of Concrete*

*Uncured concrete can kill fish by altering the pH of the water. Pre-cast concrete should be used whenever possible. When cast-in-situ concrete is required all work should be done in dry conditions and should be isolated from any water that may enter watercourses for a period sufficient to cure the concrete.*

*Increased volumes of surface water runoff from hardcore areas must not impact on the stream habitat by giving rise to erosion.*

*All fuel storage should be adequately bunded and oil interceptor placed on any runoff from these areas.*

*If any alterations to watercourses are proposed no works should be permitted without prior consultation to the SRFB.*

### **13. Mrs Mary Young**

*During the 11½ years while Cork County Council were running the existing landfill the submitter states that she has had to put up with flies, rats etc. Flies were a particular problem filling rooms as soon as she opened her windows and when the sun shone. She still has to control flies.*

*She states that her well has had very high levels of manganese above the drinking water levels as stated by the EU. The well water was used to cool milk but now that they no longer milk cows the well will not be used as much and therefore no flushed out. When she boils water for tea a scum forms on the tea as soon as it cools a little. She is concerned because Cork County Council used the water for drinking for 11 ½ years but has stopped.*

### **14. No submission 14 – error in system.**

### **15. An Taisce, the national trust for Ireland**

*The application is legally deficient for the following reasons:*

*The European Commission ruled that the separation under Irish planning and environmental law administration of applications involving EIAs into their decision by two separate authorities, namely Local Authorities/An Bord Pleanála and the EPA, is in breach of Art 226 of the Treaty Establishing the European Communities.*

*The applicants are seeking to present major additions and clarifications to an application involving an EIS by means of submissions of Art 13 compliance information regarding a waste licence application. We would submit that the procedure for Art 13 compliance information is invalid in cases involving an EIS and the appropriate procedure is the lodging of a revised EIS. An Taisce made this submission in response to a letter, dated 26/11/01 from the EPA in the form of a notice in accordance with Article 14(2)(b)(ii) of the Waste Management (Licensing) Regulations. The letter was signed by the relevant Agency Inspector and stated that 'having examined the documentation submitted, I am to advise that the Agency is of the view that the documentation does not comply with Article 12 and Article of the Waste Management (Licensing) Regulations. The submitter states 'we would submit that this letter did not take regard to or address the fact that the EIS was, in addition to this, deficient with regard to the EIA Directive 97/11/EC of 3<sup>rd</sup> March, 1997'... and that the proper course of action for the EPA in this case was to have requested a revised EIS, rather than a request for compliance with Arts 12 and 13 of the Waste Management (Licensing) Regulations. The submitter also feels that the documents submitted by the applicant in response to the Art 14 notice did not address the inadequacy of the original EIS.*

#### **Cumulative Impacts**

*The article 14 request required the applicant to 'provide an assessment of the cumulative impacts of the proposed development and the existing adjoining landfill in accordance with Art 25 of the EIA amendment Regulations (S.I. 92 of 1999)'. This shows that the Article 14 request made by the EPA should have been, in fact, a request for a revised EIS. We consider that the location of this development is fundamentally problematic because of its location on the River Farahy. The application site adjoins an existing landfill to the north.*

*There has been insufficient appraisal of the Environmental Impact and emissions on this existing Cork County Council landfill and we consider that this application is defective in not addressing the mitigation of the existing site, before putting forward the current proposal for consideration. Page 6 of this statement states that 'the existing County Council landfill has recently closed. Potential operational nuisances, such as litter, odour, vermin and birds are not expected between the aftercare period and cumulative impacts of this nature are not predicted'. Both the immediate and long-term impact of the existing landfill on groundwater has not been addressed. The original EIS was deficient in this respect. The reference in the applicant's submission on page 12, to the effect that 'an ecological assessment of freshwater fauna and salmonid habitats of the River Farahy, both upstream and downstream of the proposed landfill was conducted on the 6<sup>th</sup> November, 2001'. We would submit that the only effective means of determining water quality impact on a salmonid habitat is by means of a full year water quality study with regular samples obtained. It is also noted that 'according to the Southern Regional Fisheries Board, trout and salmon are known to occur in large numbers further downstream to the sampling locations and*

*they do use the river as a proposed site, for feeding purposes'. We would submit that the applicant has not addressed this issue.*

## **Recommendations**

*The Article 13 compliance information submission from Celtic Waste, does not address the deficient EIS lodged with this application. Furthermore, the documentation does not even meet the terms of the EPA's own request letter of the 26<sup>th</sup> September, 2001. In particular it is deficient in the following respects:*

### **Article 12 Compliance Requirements**

#### **A1. Non-Technical Summary**

*The requested non-technical summary of the hydrological nature of the facility is not provided.*

#### **C.1 Air**

*Information on dust emissions is not provided.*

#### **C6/H6. Soils, Geology and Hydrogeology**

*Required information on ground water is not provided.*

#### **C9 Surface Water Management**

*The required information on surface water management is not provided.*

#### **D.4. Leachate Management**

*The required information on leachate management is not provided.*

#### **D5. Landfill Gas Management**

*The requested information is not provided.*

#### **J. Environmental Monitoring**

*No adequate information is provided. Section 3 contains the statement that 'the weigh bridge operator will be trained to identify suitable for use on the site'. This is an entirely insufficient provision for the control of landfill and content on the site.*

#### **K. Contingency Arrangement**

*The requested information is not provided.*

#### **L3. Financial Provision**

*The requested information is not provided.*

### **Article 13 Compliance Requirements**

*Site Selection: The applicants have not provided the requested information alternatives.*

#### **Description of the Proposed Development**

*The description information is inadequate. There is no information as to what is meant by 'residual waste'.*

#### **Site Restoration**

*There is no response to this section*

#### **Cumulative Impacts**

*The issues with regard to cumulative impacts have already been stated.*



#### *Construction Impacts*

*The information contained on page 7 of the applicant's submission is inadequate.*

#### *Existing Environment*

*This section requests 'a report on the appropriate interpretation of all additional investigation and monitoring referred to in Section 113 of the EIS'. Resolution of this requires a revised EIS.*

#### *Health Impact*

*Insufficiently addressed.*

#### *Ecology*

*Pages 8-10 provide an ecological assessment on flora and fauna. However, the section under fauna states that while it is not possible to conduct thorough field surveys in lands adjacent to the proposed site for the EIS, due to Foot and Mouth precautions in place at the time, nevertheless a comprehensive assessment of species likely to be present in the adjacent habitats was included. This indicates that the original EIS was inadequate with regard to fauna. Furthermore as foot and mouth restrictions re no longer in place, this does not prevent the lodgement of an appropriately revised EIS to comply with the requirements with regard to flora and fauna.*

#### *Land Use Practice*

*It is states on page 15 of the applicant's submission that 'the various land use practices in the area are silviculture, agriculture and waste disposal'. However, as the adjoining was disposal site has been closed and, as there is not longer any valid planning permission or was licence regulated use of adjoining site, it is no longer appropriate to claim that 'waste disposal' constitutes a land use practice.*

#### *Ground Water*

*Queries with regard to groundwater have already been raised above.*

#### **16. Dúchas, the heritage service**

*The submission simply states that the comments of the organisation still stand, as per their letter of the 9<sup>th</sup> October 2001 (i.e. submission 11).*

#### **17. Mr Liam Connery and family.**

*The submitter states that he has made numerous complaints and objections over the last years to Cork County Council about the operation of the existing landfill. He lists concerns and problems relating to:*

- Health Risks, both physical and mental (they also refer to the Article published in the British Medical Journal) ;*
- Water Pollution, particularly in relation to drinking water;*
- Gas and other odours;*
- Vermin and flies;*

*They are very concerned about the dangers posed to the family and young children on account of living so close to a landfill. They state that theirs is the nearest residential family home (less than 500m) to the proposed new Celtic Waste landfill. They state that according to the EPA Site Selection Manual, there should be no residential property within 500m of a landfill.*

*The family believes that is highly dangerous to live so close to the existing Cork County Council landfill which was never lined and the gas was never flared and they feel that allowing the development by Celtic Waste of the proposed landfill would be*

*ignoring their human rights and their freedom to live and raise their children in a safe environment, unless a provision was made to re-house or relocate them.*

### **18 Liam Connery, Mary Downes Connery and family**

*The submitter outlines the background to their submission, as per submission 17 and continue with the following specific reasons for objection to the proposed development:*

- 1. Distance of residential property to a landfill*
- 2. Health risks posed by living too near landfills as outlined by the British Medical Journal re: living within 2km of a landfill.*
- 3. Flies, birds, rats and other types of vermin would cause serious risk to the family.*
- 4. Lorries and traffic dangers to children and motorists, also noise would be torture to endure.*
- 5. Serious concerns about leachate to add to drinking water problems, leakage and treatment of leachate properly on or off-site.*
- 6. Air pollution by dangerous gases caused by flaring and incineration.*
- 7. The proposal doesn't address the problems arising from the existing landfill owned and operated by Cork County Council.*
- 8. The Policy Statement on Waste Management, Changing Our Ways, published by the Department of the Environment and Local Government in September 1998, which recommends a reduction in reliance on landfill in the medium to long term.*
- 9. The County Cork Waste Management Plan 1999 which has as an objective the provision of a single landfill site, the proposed development would therefore, be contrary to the proper planning and development of the area.*

*The submitter encloses with the submission a map showing that the family residence referred to is within 500m of the boundary of the proposed landfill.*

### **19 Liam Connery, Mary Downes Connery and family**

*The submitter discussed the fact that they have been objecting to the older Cork County Council landfill for some years because of water quality, vermin and other health and nuisance issues. They feel that if planning permission were to be granted for the new proposed facility they would surely have to move away from their home and they would expect that An Bórd Pleanála would make it a condition of the planning permission that the submitter would be compensated and re-housed.*

*They list reasons for objecting to the proposed development including: distance to residential property; health risks; vermin and flies; lorries and traffic danger; water pollution; air pollution; unsuitable location and various issues relating to planning permission.*