

*THE OPERATION OF A WASTE BALING
FACILITY BY
OXIGEN ENVIRONMENTAL LTD.
AT
ROBINHOOD ROAD, DUBLIN 22*

ENVIRONMENTAL PROTECTION
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INITIALS.....

- An Environmental Impact Statement -

NON-TECHNICAL SUMMARY

Date: September 2004

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A Submission by Bord na Móna Environmental Limited on behalf of
Oxigen Environmental Ltd.



TABLE OF CONTENTS

- 1 INTRODUCTION
- 2 PROJECT DESCRIPTION
 - 2.1 Site Description
 - 2.2 Project Description
- 3 ENVIRONMENTAL IMPACT ASSESSMENT
 - 3.1 Human Beings
 - 3.2 Flora and Fauna
 - 3.3 Soil and Geology
 - 3.4 Hydrology
 - 3.5 Hydrogeology
 - 3.6 Air
 - 3.7 Noise
 - 3.8 Traffic
 - 3.9 Climate
 - 3.10 Landscape and Visual Impacts
 - 3.11 Cultural Heritage
 - 3.12 Material Assets
- 4 CONCLUSIONS

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1 INTRODUCTION

This Non-Technical Summary is a concise summation of the primary environmental aspects as outlined in the main Environmental Impact Statement.

Bord na Móna Technical Services was commissioned by Oxigen Environmental Ltd. to complete an Environmental Impact Statement to accompany an application for a review of an existing Waste Licence concerning a waste baling facility at Robinhood Road, Dublin 22.

2 PROJECT DESCRIPTION

Oxigen Environmental Ltd. propose to operate a waste baling station at their premises at Robinhood Industrial Estate, Robinhood Road, Clondalkin, Dublin 22. The site is located within Robinhood Industrial Estate and is approximately 0.5km west of the M50 Motorway, close to the Red Cow Roundabout.

Oxigen Environmental Ltd. are applying to the Environmental Protection Agency to review the existing waste licence, to change the use of the facility from a multi treatment waste facility (i.e. waste sorting, recycling and baling) to a single treatment waste baling facility, and to an increase the volume of waste accepted at the facility from twenty four thousand and six hundred tonnes of industrial, commercial, household and construction and demolition waste to one hundred and sixty thousand tonnes of household and commercial waste.

It is intended to upgrade the existing waste facility to a single treatment (i.e. baling of waste) waste facility at Robinhood Road, which will allow Oxigen Environmental Ltd. to provide the necessary service to its other waste facilities, as well as to Local Authorities and suitably permitted/licensed private waste contractors. Planning permission for the operation of a waste facility (SD01A/0226) and for the provision of the necessary site infrastructure (SD02A/0382) has been granted by South Dublin County in June 2001 and November 2002 respectively.

2.1 Site Description

The site was previously owned by South Dublin County Council, and was operated as a cleansing depot for County Council waste vehicles. The site was purchased by Oxigen Environmental Ltd. in 1999, and it was site was operated as a waste facility under a waste permit granted by South Dublin County Council. In 2001 Oxigen Environmental Ltd. applied to the Environmental Protection Agency for a waste licence to operate a waste transfer facility at the site. A waste licence (Register No. 152-1) was granted in December 2001, which permits the acceptance of commercial, industrial, household and construction and demolition waste, to a maximum volume of 24,600 tonnes per annum.

The site is located in the administrative area of South Dublin County Council and is zoned "E – To provide for industrial and related uses" under the existing County Development Plan, 1998, and is zoned "E – to provide for enterprise, employment and related uses" under the draft County Development Plan 2004 - 2010. Under these zoning codes the 'Refuse Transfer Station' are classed as being 'permitted in principle'.

The site is located within the sub-catchment River Camac which is a tributary of the River Liffey. Surface water from the facility currently discharges into the South Dublin County Council surface water sewer, which serves the Robinhood Industrial Estate, via an oil interceptor and silt trap. This sewer discharges into the Ballymount Stream, which in turn discharges into the Camac River.

The site is covered by an impervious hardstand cover and there is no exposed soil/green area on site. The site is adjoining an area of historic quarrying and the site itself may have had been subject to quarry activities in the past. The site is located where the old pumping station for Walkinstown is located, this would have required the backfilling of the adjacent quarry to allow for the foundations of the pumping station. As a result of this, the subsoil beneath the site may have been altered.

2.2 Project Description

Oxigen Environmental Ltd waste baling facility will accept waste between 06:00 to 20:00 Monday to Saturday. Entry onto the site will be restricted to employees of Oxigen Environmental Ltd. and permitted/licenced waste contractors at all times during the operation of the facility. Outside the hours of traffic movements to the site (i.e. between 06:00 and 20:00), the gate will be closed and access is only permitted by the key personnel (i.e. site manager, waste processing building staff etc).

The waste that will be accepted at the site will be restricted to household and commercial waste. All wastes accepted on site will be inspected, with non-conforming, or dangerous (i.e. gas cylinders etc.) wastes removed prior to transferring the wastes to the baler. Any waste not deemed suitable for the baler shall be removed to the waste quarantine area. The wastes, that are deemed to be in non-compliance with the relevant waste licence, upon inspection, are returned to source (if determinable) or stored within the banded quarantine area prior to authorised disposal off-site.

A weighbridge currently exists at the entrance of the facility, which is linked to an automated software system, that records all data regarding incoming waste. It is proposed to install an additional site entrance at the facility (subject to planning permission), which will permit one way traffic movements within the site. The existing entrance (to the north west) will be used

for entrance only to the facility, with the proposed entrance to be used as an exit only. A planning application has been submitted to South Dublin County Council (SD04A/488), with a decision on this application expected in November 2004.

The site is currently licenced (Waste Licence Reg. No. 152-1) to accept twenty four thousand and six hundred thousand tonnes of waste at the facility. It is proposed through this review to increase the volume of waste acceptable at the facility to one hundred and sixty thousand tonnes. It is emphasised that these quantities of waste do not represent the overall capacity of the waste baling plant.

Oxigen Environmental Ltd. have developed an Environmental Management System for the facility in accordance with the requirements of the existing waste licence (Reg. No. 152-1). Waste is delivered to the facility by Oxigen Environmental Ltd employees, County Council employees or by suitably permitted/licenced waste contractors.

Waste containers are visually inspected prior to its acceptance by the vehicle operator to ensure that the waste type is allowed to be accepted under the requirements of the waste licence. Prior to gaining access to the site the vehicle operator is required to provide the necessary information, such as the waste type, source of the waste, vehicle type, vehicle operators name, and any other relevant information deemed necessary by the weighbridge operator. The load will be required to be verified by the computer system prior to the barrier being raised.

The vehicle operator will be directed to the appropriate waste tipping area using a traffic light system. The vehicle operator will reverse into the required waste tipping area, where its load is deposited. If on initial inspection the load contains non conforming waste streams, the vehicle operator will be required to remove the entire load from the facility, prior to exiting the site. Once the waste has been tipped on the floor it is visually inspected prior to being transported to the on-site baler. This is to ensure that all non-conforming, or dangerous (i.e. gaseous cylinders), are removed from the waste load, and is immediately removed to the waste quarantine area. The waste is stored in the quarantine area pending its removal off site by the waste producer. In the event of the producer refusing to remove the waste, or the source of the waste is unknown, Oxigen Environmental Ltd will ensure that it is removed off site and disposed of at an appropriate facility as soon as possible. Oxigen Environmental Ltd. will maintain records of the waste type, quantity, and ultimate disposal/treatment facility.

Outside waste acceptance hours the security gate is closed and access is only permitted by the key personnel (i.e. site manager, baling staff etc).

Raw materials used on-site for plant equipment and for vehicles are stored in either the bunded tank on site, or are located on portable bunds within the maintenance shed. All

bunded units have their integrity tested every three years in accordance with the existing waste licence, to ensure compliance with industrial standards. (BS8007:1987).

The relevant waste disposal and waste recovery activities, as per the Third and Fourth Schedules of the Waste Management Act 1996, to which this application relates are:

Third Schedule - Waste Disposal Activities: Activities that occur onsite relevant to the Third Schedule are – ‘Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule’, ‘Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule’, and, ‘Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced’.

There are no activities within the Fourth Schedule of the Waste Management Act, 1996, that are applicable to this application.

3 ENVIRONMENTAL IMPACT STATEMENT

The environmental impacts of the waste transfer facility are described within the Environmental Impact Statement under the following categories:

Human Beings	Flora and Fauna
Soil & Geology	Hydrology
Hydrogeology	Air
Noise	Traffic
Climatic Factors	Landscape
Cultural Heritage	Material Assets

Interactions of the above

In order to predict the likely impacts of the waste transfer operations on the site and its environs it was necessary to establish the existing baseline conditions in the area. To this end, a series of field investigations and desk based studies were initiated by technical staff by Bord na Móna Technical Services from July to September 2004. These studies enabled an assessment of the environmental impacts, if any, that activities may have on the receiving water, soil and air environments.

3.0 IMPACTS OF THE WASTE BALING FACILITY

3.1 Human Beings

3.1.1 Noise

Noise is an identified form of air pollution and uncontrolled it can cause nuisance or a deterioration of amenities and the quality of human life. The potential impact of the waste baling facility on noise levels within the area is associated with the noise generated through on-site activities. It is concluded however that the proposed change in site operations will not significantly increase the existing ambient noise levels and specifically, noise levels at the nearest sensitive location (occupied residential premises) will not significantly deviate above existing daytime noise levels.

3.1.2 Traffic

The traffic impact study assessed the potential impacts of additional traffic movements generated during the operation of the waste baling facility and the local road networks.

This assessment concluded that the proposed development will not have a significant adverse impact on the road network. In particular, proposed road improvements on the Robinhood Road by the County Council will ensure that the existing and proposed road network can accommodate the likely levels of future year's traffic.

3.1.3 Human Health

A number of air pollutants have known or suspected harmful effects on human health and the environment. In many areas these pollutants are principally the products of combustion from space heating, power generation or from motor vehicle traffic. The air pollutants derived from the proposed extraction activities can be separated into traffic derived emissions and extraction derived dust emissions. Traffic derived primary pollutants include the following species; sulphur dioxide (SO₂), particulate matter, lead, oxides of nitrogen (NO_x), carbon monoxide (CO) and volatile organic compounds (VOCs).

While the levels of traffic derived pollutants may increase as a result of a general increase in traffic along the existing road network, however due to the minimal increase in traffic volumes, and the existing large volumes of traffic within the busy industrial estate it is anticipated that the impact of the traffic will be negligible.

Dust emissions from the operations of the facility will be minimised by careful on site management. This will ensure that potential problems with fugitive dust emissions from the site will be negligible.

3.1.4 Site Structure / Land Use

Any potential impacts of the facility on the existing structural and land usage of the area are considered insignificant. Land usage in the vicinity of the facility consists of large and medium size industrial units. The site is located in the administrative area of South Dublin County Council and is zoned "E – To provide for industrial and related uses" under the existing County Development Plan, 1998, and is zoned "E – to provide for enterprise, employment and related uses" under the draft County Development Plan 2004 - 2010. Under these zoning codes the 'Refuse Transfer Station' are classed as being 'permitted in principle'.

3.1.5 Socio-Economic

The waste baling facility at Robinhood Road will have minimal social and economic impacts as summarised below:

1. It is considered likely that the operation of the facility will have minimal impacts on the existing population structure of the area. The job creation benefits are secondary to the development, as it is the service provided that will benefit the local and regional waste collection and disposal infrastructure.
2. Service required (electricity, water Supply, etc.) of the facility will be obtained through existing service lines. The demand/usage of these supplies during normal working conditions will be low and should not place the current network under stress.

3.2 Flora & Fauna

The site is currently covered in hardstand, and as such there are no habitats located within the site boundary. The site is not designated as a Natural Heritage Area or a Special Protection Area under the Birds Directive (79/409/EEC) or as a Special Area of Conservation in accordance with the habitats Directive (92/43/EEC) nor is it designated under any of the other nature conservation designations currently used. The site is not considered important for any mammal or avian species.

3.3 Soil & Geology

Desk-based information relating to the substrata underlying the site of the proposed development was obtained through the Geological Survey of Ireland (GSI), Environmental Protection Agency (EPA) and from information held on file within Bord na Móna Technical Services.

The site is located within an industrial business park area, and has been used for waste activities since 1999. Prior to this the lands were occupied by the County Council, which

utilised the site as a washing area and a pumping station. Historic quarrying activities have occurred on the lands adjoining the site, prior to the 1940's. The extent of this quarrying is unknown and the lands were subsequently back filled. As a result of this, the subsoil beneath the site may have been alternated.

Historic geological maps of the area, identify the natural Quaternary sediments underlying the site as glacial tills which vary from loose aggregate to the firm sandy gravelly clays (Dublin Till).

Published Geological data of the study area identify the bedrock geology as the Calp Limestones of Lower Carboniferous period.

Mitigation Measures

All wastes and fuels will be stored in fully bunded areas in accordance with relevant environmental guidelines and recognised standards. All bunds will be tested in accordance with the waste licence conditions. In addition, oil absorbent materials will be kept on site in close proximity to any fuel storage tanks or bowsers during site development works. The refuelling of vehicles will be undertaken in a designated area, which will be fully contained to prevent spillage into the surface water network.

All wastes being delivered to or removed from site will be loaded/unloaded in fully bunded areas.

3.4 Hydrology

The study area is located within the EPA Hydrometric Area No. 9, namely the River Liffey catchment. Within the Liffey catchment the site lies in the sub-catchment of the River Camac. There are no existing surface water bodies on-site. All surface water run-off from the site discharges to a surface water sewer serving the Robinhood Industrial Estate which ultimately discharges to the River Camac.

The site currently drains to a surface water sewer which is located beneath the site and travels along the Robinhood Road. This surface water sewer also takes surface waters from numerous other premises within the industrial estate. The surface water sewer discharges to the Robinhood Stream, which discharges into the Camac River, which is a tributary of the River Liffey.

Potential Impacts of the Proposed development

1. Surface water from hardstanding areas will pass through an oil interceptor prior to discharge to the surface water sewer and subsequently to the Robinhood Stream.

Given that all waste loading/unloading take place within bunded areas the potential for spillages to impact on surface water quality is considered to be low.

2. Leachate and process wastewater will be discharged directly to the foul sewer, and will not enter the surface water drainage network.

Mitigation Measures

An oil interceptor with a manual shut-off valve has been placed on the surface water drainage system which minimises the potential for hydrocarbon emissions to surface water. All loading/unloading will take place in bunded areas which will reduce the potential for spillages to occur.

Separate surface water and foul sewage drainage systems have been installed in accordance with building standards. This eliminates the potential for any interaction between surface water and foul sewage. All below ground drainage will be designed, detailed and constructed in accordance with good practice in hydraulics and in compliance with relevant British and Irish Standards and Local Authority requirements.

All newly constructed and existing drains within or near to the development site are to be cleared on completion of works by power jetting and all drains to be CCTV surveyed to ensure removal of construction spill and sediment.

3.5 Hydrogeology

Desk-based and site specific information on the underlying hydrogeological characteristics of the site was obtained through the following:

- Research review of data held within the Geological Survey of Ireland;
- Research review of data held within the Environmental Protection Agency

The site is underlain by Lower Carboniferous rock consisting of the Calp Limestones (CD). These have been provisionally classified by the GSI as a *Bedrock Aquifer which is moderately productive only in local zones (L1)*. Groundwater vulnerability classification are currently being produced by the GSI for County Dublin. As part of this study, guidelines published by the GSI for mapping vulnerability were used to define and classify the site. Using GSI criteria for groundwater vulnerability the site has a high - moderate vulnerability rating.

There are no groundwater monitoring boreholes on the site and there were no intrusive investigations carried out as part of this assessment. Groundwater is reportedly flowing in a southeast to northwest direction towards nearby surface waters.

The site and its immediate surrounds have been historically used for quarrying activities, which have been subsequently restored (backfilled). The nature and extent of the quarrying activities are unknown at this time and as such there is the potential for previous contamination of the subsurface.

Potential Impacts of the Proposed Development

There will be no direct discharges to groundwater or any groundwater abstractions as part of the proposed development.

Currently the development is constructed with a hardstand cover over the entire site. There will be no direct discharges to the groundwater as part of this development and it is therefore considered that there will be no impacts to the underlying groundwaters.

Mitigation Measures

There will be no emissions to groundwater from the proposed development. All wastes and other consumables will be stored in bunded areas.

Potential leachate from the handling of wastes within the building will be collected within a dedicated drainage system and discharged to foul sewer. This will minimise the potential for indirect emissions i.e. leaks to impact on groundwater quality.

3.6 Air

To determine the baseline air quality and subsequently assess the potential impact of the operation of the facility the following approach was taken:

- identification of the potential pollutants
- monitoring of pollutants to assess the current baseline air quality levels
- discussion of the potential impact to air quality during the operation
- predictive modelling of the impact of traffic derived pollutants on air quality
- mitigation measures to minimise these potential impacts.

The following components were identified as potential pollutants and were therefore, included in the assessment: sulphur dioxide (SO₂), oxides of nitrogen (NO_x), volatile organic compounds (BTEX) and particulate matter.

The baseline monitoring survey carried out during May 2004 shown that pollutant concentrations (NO₂, SO₂, BTEX and particulate matter) obtained are well below their respective limits or guidelines and are indicative of a rural environment.

Potential Impact of the Proposed development

1. Generation of dust; Dust is likely to be generated due to the movement of traffic and general on-site operations.

2. Traffic pollutants; The movement of construction vehicles and the use of generators at the site during the construction phase of the development will generate exhaust fumes and subsequently contribute to potential emissions of SO₂, NO_x, CO, particulate matter and VOC's including BTEX.

Mitigation Measures

1. Generation of dust: Dust will be minimised due to good site management practises, such as restricting the tipping of all waste within the waste processing building etc.
2. Traffic pollutants; The use of on-site vehicles and movement of waste truck will be operated using good site practices such as all vehicles will be switched off when not in use to eliminate any unnecessary emissions.

3.7 Noise

As part of the existing waste licence (Register No. 152-1), Oxygen Environmental Ltd. have undertaken annual noise monitoring. These results were used to determine the impact of the existing waste activities on the noise levels within the vicinity of the facility. It was determined from this assessment that the main contributor to the noise levels within this area is the traffic volumes on the Robinhood Road, and the contribution from the waste activities on site would be less significant. The noise sensitive locations recorded noise levels typical of a busy industrialised areas with the dominant source being traffic.

Potential Impacts of the proposed development

Use of machinery; it is anticipated that there will be an increase in traffic volumes on the site, including the operation of a number of on-site vehicles for the operation of the facility.

Mitigation Measures

Use of machinery; During the operational phase several measures will be enforced to reduce the potential noise impact. These include: proper training of on site personnel in the minimising of noise generation, correct maintenance of on site plant machinery and monitoring of noise levels to comply with these control measures.

3.8 Traffic

The site is located approximately 0.5 km east of the M50 motorway, southeast of the Red Cow Roundabout. The site is bordered to the north by Robinhood Road, and is located on a brownfield site that was previously operated as County Council cleansing depot. The proposed review of on site operations will use the existing entrance to the site, however it is proposed to construct an additional entrance to the east of the facility. Oxygen Environmental Ltd. have submitted to South Dublin County Council a planning application (SD04A/0488) for this entrance. The site is bordered on all three remaining sides by industrial units.

It is estimated that a maximum of 130 total (i.e. 65 inbound and 65 outbound) traffic movements a day will be generated from the proposed review of on-site activities.

Potential Impacts of the proposed review of on-site operations

1. Generation of traffic; It is anticipated that there will be 130 traffic movements a day at the site, which will have a minimal effect on the existing traffic network.
2. Atmospheric Emissions; Atmospheric emissions will be generated by the traffic entering and exiting the site (as detailed in the air section above).
3. Generation of nuisance; Mud may be accumulated on the road due to the movement of trucks

Mitigation Measures

1. Traffic entering and exiting the site will not be permitted to park on the public roadway or to impede the free flow of traffic on the adjoining road network. The entrance weighbridge is located 24m from the edge of Robinhood Road which allows sufficient space for two waste delivery trucks to park at the entrance without backing up onto the public road while a third truck is being weighed on the weighbridge.
2. A daily inspection of the industrial estate roads adjacent to the site will be undertaken and in the event of significant quantities of mud on the road, the road shall be swept accordingly.
3. Cognisance has been taken of the intended road widening on Robinhood Road. The intended road widening by SDCC will also help in the free flow of traffic on Robinhood Road.

3.9 Climatic Factors

The climate of the proposed development site is characterised as follows:

- prevailing wind is predominantly south-westerly;
- wind conditions do not vary greatly over the entire year (3 m/s);
- long term monthly mean precipitation ranging from 53 mm to 84 mm;
- Ambient air temperatures ranging from 4.6 °C to 14.9 °C.

It is not considered that the development will have any impact on the climate in this area.

3.10 Landscape and Visual Impacts

The site is located within a predominantly flat landscape, and is bordered on three sides by industrial units. The significance of the impact is rated as Imperceptible i.e. "An impact

capable of measurement but without noticeable consequences" (EPA Guidelines on Information to be contained in EIS).

Potential Impact of the proposed development

It is deemed that as the proposed change in use and increase in the volume of waste throughput will occur on the existing site, with the only change attributed to an additional entrance, the landscape and visual impact are negligible.

Mitigation Measures

It is deemed that no mitigation measures in terms of landscape and visual impacts are required for the proposed development at this time.

3.11 Cultural Heritage

A Cultural Heritage Assessment that was carried out on the area identified that the nearest historical site is located over 250 m from the facility. There were no features or events of historical interest revealed during research into the local history of the townland.

During any proposed groundworks operations at the site an qualified archaeologist will be required to be on site to oversee operations. It is not, therefore, considered that the development will have any impact on the cultural heritage in this area.

3.12 MATERIAL ASSETS

It is contended that the material asset values of the surrounding area will not be significantly affected by the waste baling facility as the environmental impacts (air, noise and water pollution, visual intrusion, traffic impacts) of the proposed activity are shown to be minimal.

4.0 CONCLUSIONS

In summary, it is contended that the negative impacts of the waste baling facility can be minimised or eliminated by adherence to the mitigation measures. The Environmental Impact Statement, therefore, shows that no significant adverse effect on the environment should occur as a result of the operation of the facility