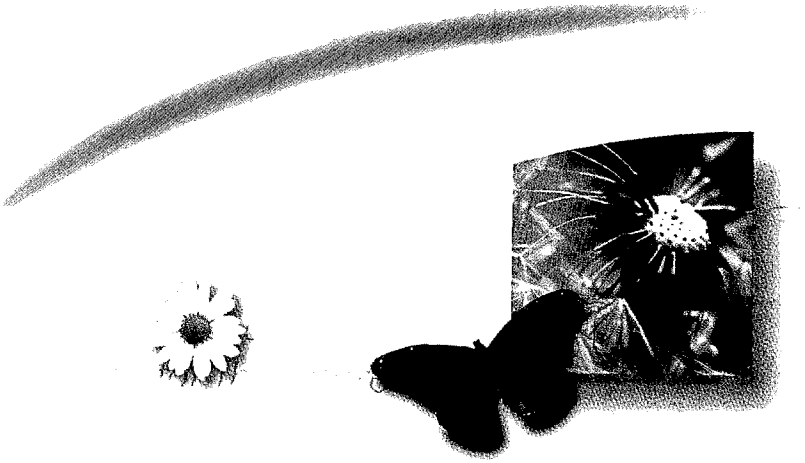



*Caring for the future*

INDAVER IRELAND



Indaver Ireland proposes to build a waste management facility at Carranstown, County Meath.



***The facility will include:***

- A community recycling park
- A recycling plant for non-hazardous industrial material
- A waste-to-energy plant for non-hazardous waste

***The four principles of operation will be:***

- Local consultation
- Public safety
- Environmental awareness
- Quality standards

# We'd like to hear your views

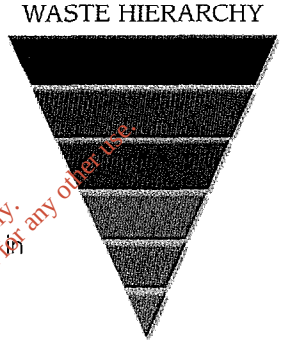
L to R: Ronny Ansoms, Indaver Belgium,
Desmond Green, Indaver Ireland,
Laura Burke, Operations Manager, Indaver Ireland,
John Ahern, General Manager, Indaver Ireland,
Paul De Bruycker, Indaver Belgium,
Eoin O'Sullivan, Indaver Ireland.

***We propose building a waste management facility at Carranstown, County Meath, promoting:***

- The recycling of the local community's waste
- The recycling of non-hazardous industrial waste
- The recovery of energy from non-hazardous waste by incineration

Indaver believe in integrated waste management. We are convinced of the necessity to first prevent waste, then recycle waste and only then recover energy by incineration.

WASTE HIERARCHY



*PREVENTION*

*MINIMISATION*

*RE-USE*

*RECYCLING*

*ENERGY RECOVERY*

*DISPOSAL*

Our integrated facility is part of the infrastructure required by Ireland to tackle its waste problem. The facility will serve communities and industries in county Meath and surrounding counties.



Because an incinerator is part of our facility, we feel that people may be worried about the perceived health risk from emissions, particularly dioxins. We have a track record of safely running incinerators in other locations which operate well below the very strict European Regulations and are not harmful to people living nearby nor to the environment. There is no comparison between our modern plants and old style incinerators built and operated many years ago.

We estimate that the proposed facility will be operational in 2004. We want to build and operate this facility with the co-operation of the local community. For that reason, we would welcome your views at the planning and construction stages as well as when the new facility is operational.

We would be grateful if you would read through this brochure and contact us if you have any queries, concerns or suggestions - FreeFone 1800 200 646

John Ahern
General Manager
Indaver Ireland

Indaver control room,
Waste to Energy plant

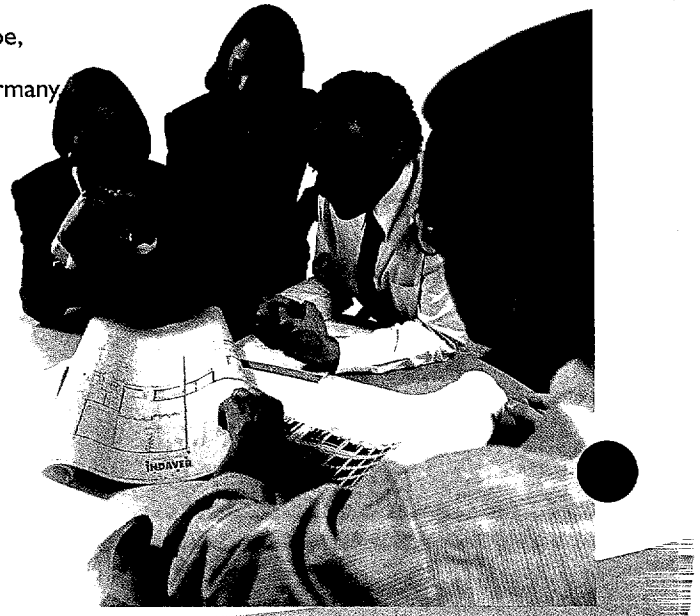
# Why is this facility needed?

Waste management is Ireland's biggest environmental issue. While other European countries regard waste management as just another part of life, in Ireland we are not doing what we should, both for ourselves and the environment.

- We don't do enough to prevent the production of waste.
- We don't recycle as much waste as our European neighbours.
- We depend too much on dumping waste to landfill. Landfilling waste is the least favoured option for the disposal of waste. This cannot go on - both European Union legislation and Irish Government policy call for a dramatic reduction in what we simply dump.
- We do not use non recyclable waste to generate energy, unlike most European Union countries. There are over 500 waste-to-energy plants in Europe, including plants in Germany, Denmark, The Netherlands, Sweden, Norway, France, Belgium and Switzerland.
- At present the region produces in excess of 500,000 tonnes of waste per year - and it is growing. The proposed Waste to Energy plant with a capacity of 150,000 tonnes per year is deliberately undersized in relation to the volume of waste produced in the area to ensure pressure remains to increase recycling and encourage waste minimisation.



Electricity generation at Waste to Energy plant



# How will the facility be regulated and managed?

*This state-of-the-art facility will be run:*

- by experienced management. Indaver is a European leader in waste management with 15 years of experience in recycling, treating and incinerating waste from industries and households in a socially and environmentally responsible manner.

- under licence from the Environmental Protection Agency - giving independent assurance on all environmental and safety matters including air, water, waste, odour and noise. In addition, the Environmental Protection Agency will regulate all operational procedures such as monitoring, maintenance, operational and safety rules, and the qualifications, duties and responsibilities of the site personnel.

- only when Meath County Council is satisfied on all siting, zoning, traffic, appearance and water supply issues. An application for planning permission and an Environmental Impact Statement (EIS) will be submitted to Meath County Council.

- with a policy of openness to the public. Members of the public will be able to visit the plant, see it in operation and ask questions. An annual report will be published giving details of the environmental and safety performance of the facility. This report will be distributed to the local community.



Indaver Waste to Energy plant, Beveren Belgium

# What are we proposing to build?

We are proposing to build an integrated waste management facility costing £60 million which will employ 40 people. It will include:

### *A Community Recycling Park*

Located at the entrance to the facility, the recycling park will be freely accessible to the local community. The park will accept a large range of waste for recycling, including: cardboard, newspaper, glass bottles, aluminium drink cans, textiles and footwear. The items deposited there will be sent to recycling facilities elsewhere.

### *A Recycling Plant for Industrial Material*

This recycling plant will be for non-hazardous waste from small to medium-sized companies. A sorting system will separate out items such as wood, cardboard and metal from these companies' waste. Indaver will then send these items to suitable recycling facilities elsewhere. Energy will be recovered, from any material that cannot be recycled, in the waste-to-energy plant.

### *A Waste-to-Energy Plant*

Waste-to-energy or incineration with energy recovery simply means burning waste at a high temperature, in a controlled environment, using the heat to generate electricity. This reduces the waste to an ash approximately one tenth of the original volume of waste, or around one quarter of its original weight.

The proposed plant at Carranstown will treat 150,000 tonnes of non-hazardous waste each year from shops, factories, hotels, restaurants and households.



### Reception

As waste trucks arrive, they will be driven into an enclosed Waste Acceptance Area where the waste will be tipped into one of a series of bunkers. There will be no open-air tipping of waste and no littering or unsightliness in the area. As the waste storage area is enclosed there will be no unpleasant odours from the plant.

### Combustion

From the bunker the waste will go directly to the furnace, which will operate at a minimum temperature of 850°C. At this temperature virtually all harmful toxins, including most of the dioxins, are destroyed.

### Energy creation

The heat produced by the combustion process will be recovered and should generate enough electricity to power around sixteen thousand homes annually. The generation of this power will contribute to the EU target of producing over twelve percent of electricity from renewable energy sources by 2005.

Paper sorting at Indaver prior to recovery

## Cleaning

The gases produced will be cleaned through a five-stage process involving evaporation, cooling, dust removal, neutralisation and heavy metal removal. The cleaned emissions will then leave the incinerator through the stack. All emissions will be continuously sampled and monitored.

## Dioxin & Furan Removal

Dioxins and furans are harmful substances produced from natural, domestic and industrial sources. Uncontrolled sources of dioxins include wood burning (including forest fires), domestic fires, straw burning, home composting, motor vehicles, metal industries, oil and solid fuel central heating and cigarette smoking.

Incineration of waste also produces dioxins but in a controlled environment. The proposed incinerator incorporates a two stage dioxin removal system using activated carbon. This ensures that dioxins not destroyed by combustion are removed to a level well below the levels required by the European Union. Continuous sampling and monitoring provides a record of all emissions.

## Residues

The plant will produce about 37,000 tonnes of ash annually from which the potential exists to recover and recycle a substantial proportion for use in the construction industry. Any metals within the residues can also be recycled. Residues from the flue gas cleaning process will be solidified and landfilled at a separate location.

## Hours of Opening

The facility will operate 24 hours per day. The facility will accept waste deliveries six days a week; Monday to Friday between 8.00am and 6.30pm and on Saturdays between 8.00am and 2.00pm.



Green and organic composting at Indaver

# Who is Indaver?

**Indaver, the parent company of Indaver Ireland, is a waste management company that specialises in integrated waste management for industries and households. Indaver was founded 15 years ago as a joint venture between industry and local government in Flanders, Belgium, and is now a leader in sustainable waste management in Europe. The company employs more than 800 people and operates in 11 European countries.**

In 1999, Indaver managed 800,000 tonnes of waste of which over 300,000 tonnes went for waste to energy, 400,000 was recovered and 100,000 went for treatment or disposal.

*What does Indaver do?*

- Composting of organic waste
- Sorting of packaging waste for recycling
- Paper and glass recovery
- Electrical appliance recovery
- Fluorescent tube recycling
- Recycling of waste tyres
- Waste-to-energy (incineration)
- Solvent recycling
- Landfill

*Indaver in Ireland*

Indaver owns 60% of MinChem Environmental Services Limited. MinChem is an Irish hazardous waste management company with offices in Dun Laoghaire, Dublin Port and Cork.

MinChem has been operating in Ireland since 1977 and currently employs 30 people.

MinChem exports hazardous waste for recovery and disposal from Ireland to other European countries and operates an EPA licensed Transfer Station in Dublin Port. MinChem is accredited to ISO 14001 and ISO 9002, the internationally recognised Environmental and Quality Standards.

The proposed facility at Carranstown is for non-hazardous waste only and will not be used as part of MinChem's hazardous waste operations.

Electrical appliances and glass recycling at Indaver

## Indaver approach

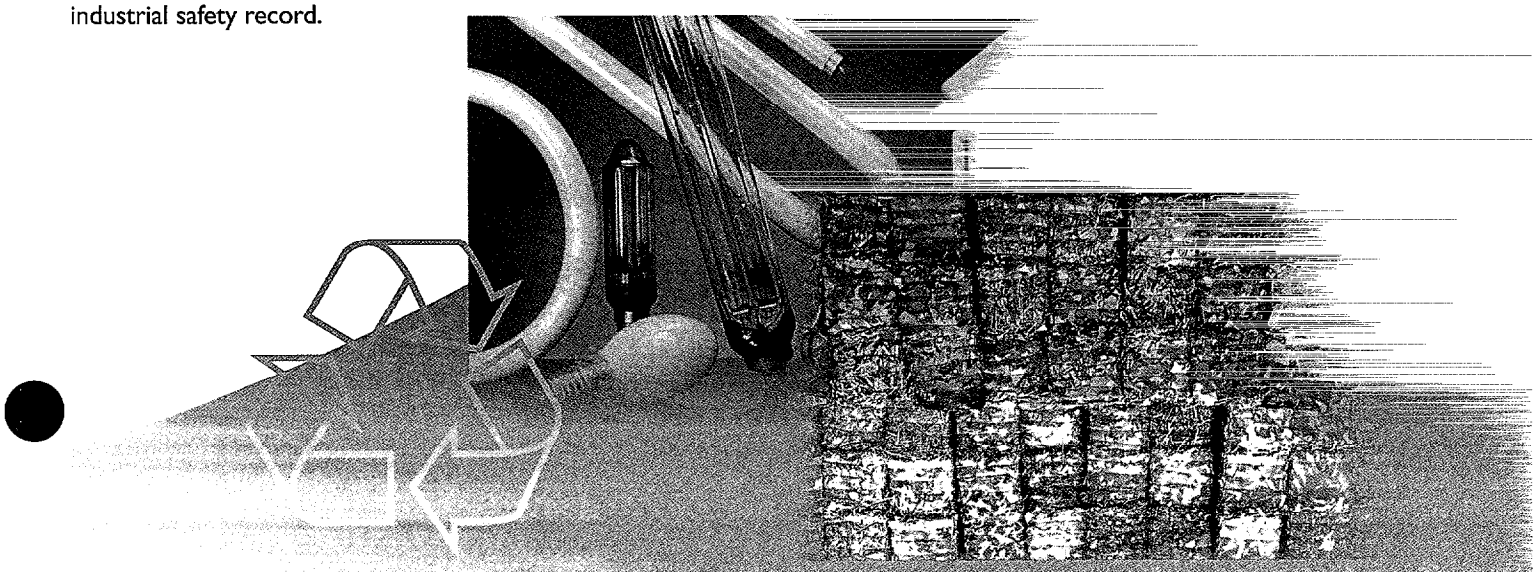
**Local Consultation:** Indaver is committed to a permanent and open dialogue with communities, industry, governments and employees. The company encourages visitors to its sites to view its activities, and publishes an annual report on each facility that gives details of its environmental and safety performance.

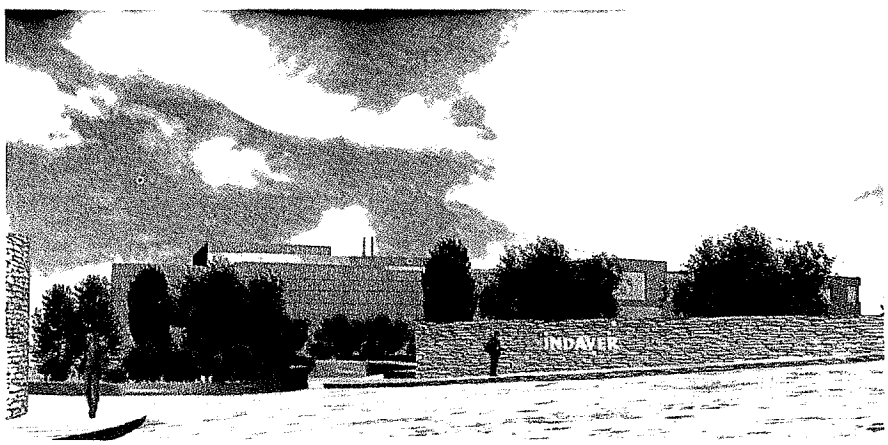
**Safety:** The safety of staff, visitors, contractors and local community is a priority for Indaver. Both management and staff are committed to operating in accordance with safe practice and the company's Safety Statement. The company is proud of its exemplary industrial safety record.

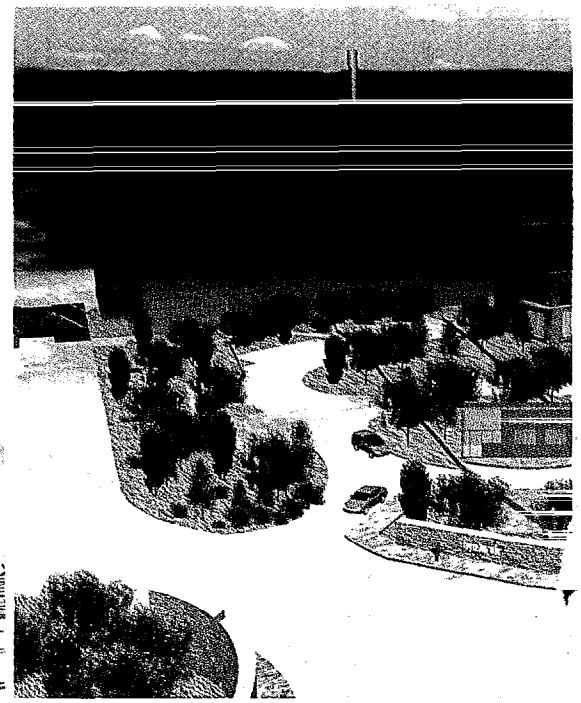
**Environmental Awareness:** Indaver invests heavily in sophisticated technologies that help to maximise recycling and energy recovery and to minimise residual waste. All its facilities are accredited to the Environmental Management System ISO 14001.

**Quality Standards:** Indaver facilities were first accredited to ISO 9002 in 1991. All site activities are controlled by comprehensive operating procedures, which are continually audited both internally and externally. Emphasis is placed on the training and development of staff to ensure that a quality ethos is maintained within the company.







Architect's impression of proposed facility

# What will it look like?

An enclosed twenty five-acre site has been chosen for the facility. It will be designed and built to harmonise with the local landscape. Location, design and colour of the individual structures and buildings will all be carefully planned to minimise the visual impact.

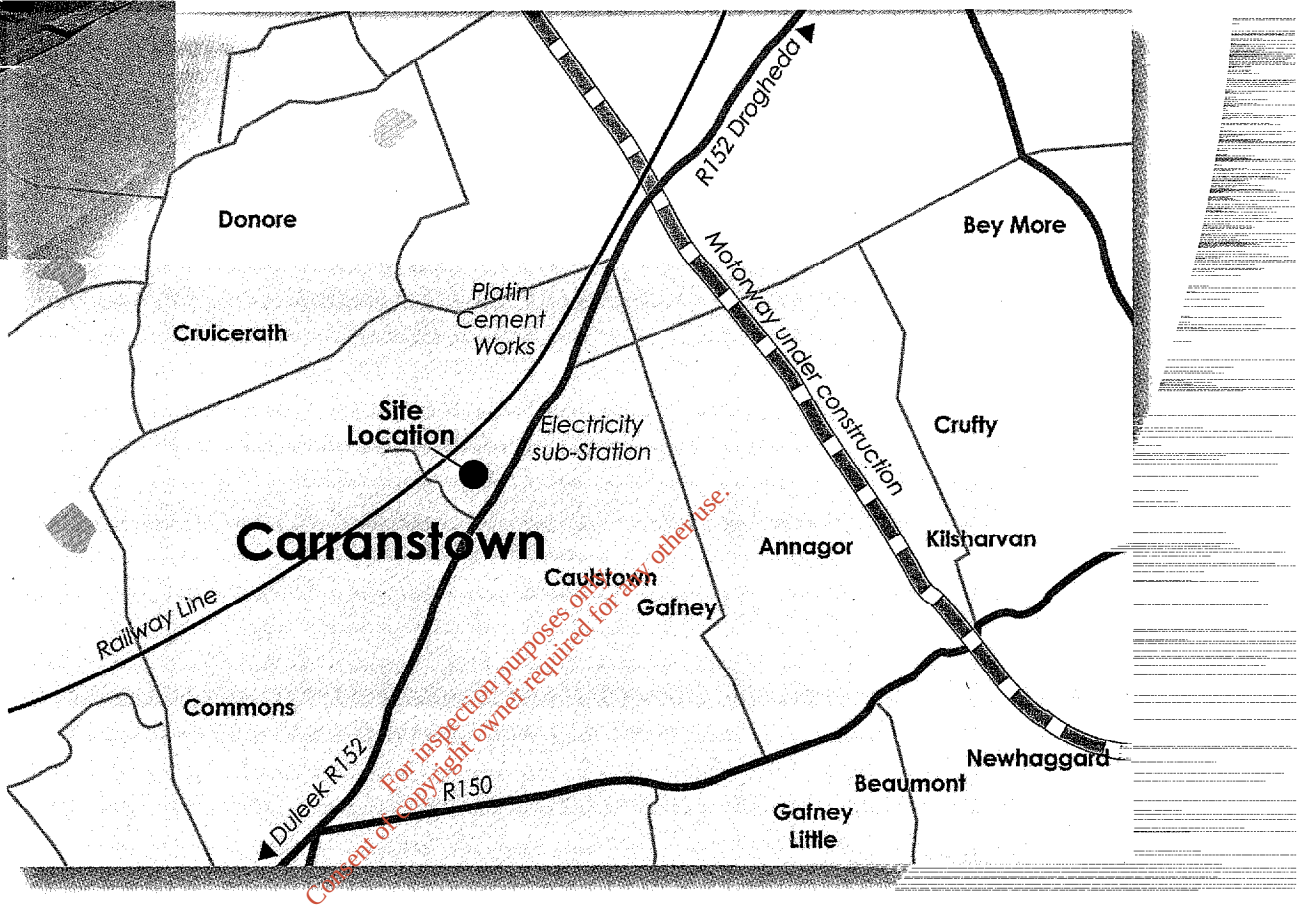
Taking advantage of the fact that the site slopes away from the main road, the taller buildings will be located in the lower area to minimise the impact on the skyline - the highest point, a stack of forty metres, is lower than existing buildings and structures in the area. The site will be extensively landscaped, with mature trees planted on the perimeter.

A scale model of the facility will be on view locally as part of our consultation process with the community.

### *Why at Carranstown?*

Carranstown was chosen after a comprehensive eighteen month search. Carranstown is suitable because:

- It is centrally located so minimising the distance that waste has to be transported.
- Good access exists through a comprehensive road network of regional and national routes and the site is less than 2km away from the new North-South motorway
- The site is close to a number of ESB sub-stations, making it more efficient to export the electricity generated
- Groundwater drilling and pumping tests on the site have confirmed that there is a plentiful supply of ground water for use within the plant.
- There is already an industrial complex beside the site that includes quarrying activity. As this has larger structures than the proposed new plant, the visual impact will be minimal.



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