



The Nature and Extent of Unauthorised Waste Activity in Ireland



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ENVIRONMENTAL PROTECTION AGENCY
An Ghníomhaireacht um Chaomhnú Comhshaoil
PO Box 3000, Johnstown Castle Estate, Co Wexford, Ireland

Telephone: +353-53-60600; Fax: +353-53-60699
E-mail: info@epa.ie Website: www.epa.ie

Lo Call: 1890 335599

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The personnel involved in the production and preparation of this report were Ms. Bernie Guinan (Fehily Timoney & Co. Ltd.), Dr. Duncan Laurence (Laurence Environmental), Mr. Declan O'Sullivan (Fehily Timoney & Co. Ltd.), Mr. Jim Moriarty (EPA), Dr. Matt Crowe (EPA), Ms. Dolores Flood (EPA) and Mr. Dara Lynott (EPA).

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Members of the Technical Steering Group were (in alphabetical order):

Dr. Matt Crowe, OEE, EPA
Mr. Paul Daly (part-time), Waterford County Council
Mr. Pat Fenton, Assistant Principal Officer, Environment Division, DEHLG
Ms. Bernie Guinan, Project Manager, Fehily Timoney & Company Ltd.
Mr. Jim Moriarty, OEE, EPA
Mr. Ray O'Dwyer (part-time), Waterford County Council
Mr. Declan O'Sullivan, Project Director, Fehily Timoney & Company Ltd.

Other members of the project team were Dr. Duncan Laurence, Duncan Laurence Environmental and Ms. Caroline Conroy, La Touche Bond Solon Training.

LIST OF ABBREVIATIONS

C&D	Construction and Demolition
C&I	Commercial and Industrial
DEHLG	Department of the Environment, Heritage and Local Government
EHSNI	Environment and Heritage Service, Northern Ireland
EPA	Environmental Protection Agency
EU	European Union
IWMA	Irish Waste Management Association
OEE	Office of Environmental Enforcement
TFS	Transfrontier Shipment of Waste
WCP	Waste Collection Permit
WL	Waste Licence
WMA	Waste Management Acts 1996 – 2003
WP	Waste Permit

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EXECUTIVE SUMMARY

INTRODUCTION

The purpose of this report is to set out the relevant findings of a nationwide investigation by the EPA's Office of Environmental Enforcement (OEE) on the nature and extent of unauthorised waste management activities in Ireland from the period 1996 onward. For the purposes of this report an "unauthorised waste activity" embodies both waste related activities that are conducted without any due authorisation or in significant breach of their authorisation.

The information gathered during the course of this investigation has been used by the OEE to prepare an action plan to deal with unauthorised waste activity in Ireland. The details of this action plan are contained in this report and implementation of the plan is now being coordinated by the OEE through the National Enforcement Network¹.

All local authorities were interviewed during the course of this investigation and representatives of the private waste industry and the Environment and Heritage Service in Northern Ireland (EHSNI) were also consulted. Information available to the OEE through its own investigations was also drawn on during the course of the study. While the extent and quality of information received varied significantly, it is the view of the OEE that the information gathered during the course of the study forms a solid foundation on which to build. The OEE is, however, continuing to seek information about unauthorised waste activity, both past and present and a confidential national information line is being established to facilitate any individuals or organisations that wish to provide information to the OEE about unauthorised waste activity.

CONTEXT

The waste management situation in Ireland has radically changed in the past ten years or so since the introduction of the Waste Management Act (WMA) in 1996. A simple system involving almost complete reliance on landfill as the sole waste management option with local authorities the main service providers has been replaced by a sophisticated and intricate waste management network involving both the public and private sector. This network typically involves the significant intermediate processing of virtually all types of wastes with the resultant separated fractions passing to a variety of recycling or final disposal options. Major structural change has affected waste service providers, be they local authorities or private-sector organisations, over the period of time covered by this report. These changes have happened in parallel with unprecedented economic growth in Ireland, which has resulted in significant increases in waste quantities being produced.

The overall effect of these changes has been a dramatic increase in the cost of landfill gate charges from less than €10 per tonne in 1996 to a maximum of €240 in 2004

¹ The National Enforcement Network was established in 2004 by the OEE to foster co-operation between the various public bodies and State Agencies involved in the enforcement of environmental protection legislation.

inclusive of landfill tax. The development of modern landfill infrastructure represented major progress in furthering European Union (EU) and national environmental policy goals and also provided a financial incentive for the development of more desirable waste recovery alternatives. However, the increased cost of waste management, driven largely by increases in landfill gate fees, also contributed to unauthorised practices such as ad-hoc fly-tipping, backyard burning or more organised and larger scale illegal dumping.

It is also clear that the overly cheap nature of waste management practices in the past has left a significant financial burden to this day: many local authorities are now paying to rectify problems associated with older infrastructure. This includes pollution control measures, but also covers costly site capping and restoration works. Effectively, the widespread failure to address these issues at the time when many older sites were receiving waste has meant that the site users were being subsidised, either by present-day taxpayers or by current users who have to pay the current high levels of landfill gate fees.

KEY FINDINGS

The main conclusion of this study is that the large-scale illegal dumping of the type that occurred in Co. Wicklow during the period 1997 to 2002 is no longer taking place. The illegal dumping that took place in County Wicklow has been the subject of intensive investigations involving the National Bureau of Criminal Investigation, the EPA and Wicklow County Council and cases on indictment are now making their way through the Courts. Those responsible are also being forced to pay the full costs of clean up at these sites. It is imperative that the enforcement authorities now ensure that anyone responsible for illegal dumping, past or present, are held to account for their actions and that they are made responsible for the full costs of clean up.

There is evidence of significant illegal movement of waste to Northern Ireland, mainly during the period 2002 to 2004. Increased enforcement effort on both sides of the Border has made it more difficult to move waste illegally across the Border; however, the OEE is aware that such illegal movement of waste is still taking place, albeit on a reduced scale. The OEE, relevant local authorities and the National Bureau of Criminal Investigation are now targeting those responsible for past and present illegal movement of waste to Northern Ireland and this effort will continue until those responsible for such illegal movement are held to account for their actions.

While there is evidence of a reduction in large-scale organised illegal waste activity, there is also evidence of increases in fly-tipping and backyard burning of waste. There is also evidence of widespread illegal collection of waste from both households and commercial enterprises.

The waste stream that has resulted in the greatest level of illegal activity has been construction and demolition (C&D) waste, which is a major component of the larger illegal landfills discovered since the introduction of the WMA in 1996, particularly those discovered in the greater Dublin area. There is also evidence of significant mismanagement of commercial and industrial (C&I) waste, particularly in the period between 1997 and 2002.

TEN KEY FINDINGS

1. Other than Cork, Monaghan, Wicklow and Meath County Councils, no local authority reported any knowledge or evidence of illegal landfilling of household waste. Eight illegal landfills containing household waste were reported – three in both Counties Monaghan and Wicklow and one in both County Cork and County Meath. An integral part of the action plan currently being implemented by the OEE is gathering additional information to determine the existence of any additional unauthorised landfills of significant scale.
2. There is no evidence of significant mismanagement of hazardous waste by waste service providers over the period 1996 to 2004.
3. There is significant evidence that C&D waste has been mismanaged. During the interview process, the number of incidents of reported unauthorised activity relating to the collection and management of C&D type materials far exceeded the cumulative reported incidents of unauthorised waste activities for the other waste streams. The C&D industry is one of the largest sectoral producers of waste in Ireland, yet an unacceptable situation exists whereby there is a lack of reliable information due to poor record keeping and a general lack of understanding within the sector that some C&D type materials handled are 'wastes'. For example, in 2001 an estimated 500,000 tonnes of soil was accepted at unauthorised facilities.
4. The unauthorised landfilling of C&I waste peaked in the years 1997-2002 and is now occurring on a much-reduced scale.
5. A number of fly-tipping "hot-spots" have been identified. Much of this fly-tipping is occurring adjacent to urban centres.
6. Evidence suggests that unregulated, small scale, "Man in the Van", tipper truck owners offering waste collection services are responsible for much of the fly-tipping of C&I waste.
7. Approximately 80% of all local authorities identified backyard burning as being a significant issue. Backyard burning is more prevalent in rural counties as opposed to city areas. The evidence that, particularly in rural areas, participation in waste collection services is low supports the high number of reported incidents of backyard burning. Nationally, on average 21% of households (287,000 tonnes from 265,624 households) are either not provided with or not availing of a waste collection service. The assumption is then made that many of these households are managing their waste arisings by backyard burning.
8. Illegal waste shipped to Northern Ireland has been estimated as "tens of thousands" of tonnes. However, due to increased regulatory vigilance on both sides of the Border, this practice has become more sporadic.
9. A number of waste transfer stations and waste processing facilities were identified during the course of the study as not having the required WMA authorisations from either the relevant local authority or the EPA. Of major concern to the OEE is the fact that some of these facilities are owned and operated by local authorities.
10. There is some evidence that the segregated dry recyclable fraction of household waste, which was generated by kerbside collection systems, has been mismanaged, mainly through misclassification of mixed waste streams as 'green list' waste rather than 'amber list' waste. This problem, to a large extent, has now been resolved.

• HOUSEHOLD WASTE

There have been radical changes in the management of household waste since the introduction of the WMA in 1996. At that time, almost all households were served by a

single bin system and, with the exception of the small amount of waste deposited at bring banks, all of this waste was disposed of at landfill. This has since been replaced by a system involving widespread separate collection of dry recyclables from households with some areas served by an additional third bin for the separate collection of compostable household waste. Weight-based household waste collection charges have also been introduced in all local authority areas with the charging systems designed to encourage recycling and recovery of household waste. However, the overall cost of managing household waste has increased dramatically in the past ten years due to the introduction of a properly functioning waste regulation system and this is reflected by increased charges for householders during this period.

Perhaps the most important issue in relation to household waste management is the fact that such a large number of households are either not served by or are not availing of a waste collection service. In 2003, 21% of households representing waste arisings from 721,844 people, fell into this category. This means that, every year, in the region of 287,000 tonnes of household waste is not presented for collection with this waste being disposed of by the householders themselves. Many local authorities have reported recent increases in backyard burning and fly-tipping of household waste which, anecdotally, is being linked to the increases in household waste charges.

There is evidence that household waste has been illegally transported to and disposed of in Northern Ireland, mainly during the period of 2002 to 2004. However, it is not clear exactly how much of the waste deposited in Northern Ireland originated from households and it is suspected that the bulk of this waste originated from either commercial premises or C&D sites.

Other than Cork, Monaghan, Wicklow and Meath County Councils, no local authority reported any knowledge or evidence of illegal landfilling of household waste. Eight illegal landfills containing household waste were reported – three in both Counties Monaghan and Wicklow and one in both County Cork and County Meath. The cumulative quantity of household waste estimated to be contained within these illegal landfills is in the region of 50,000 tonnes

There was some evidence that the segregated dry recyclable fraction of household waste, which was generated by kerbside collection systems, has been mismanaged. This has been partly caused by the ignorance of those involved in such movements of the international regulations pertaining to the shipment of non-hazardous recyclable waste and the problem has by and large been resolved.

• **COMMERCIAL & INDUSTRIAL WASTE**

There is evidence of significant mismanagement of this waste stream, particularly in the period from 1997 to 2002. Fifteen sites have been identified at which C&I waste has been illegally dumped, including large sites in Wicklow and Kildare. In respect of the unauthorised landfilling of C&I waste, it is clear that this activity peaked in the years 1997-2002 and is now occurring on a much-reduced scale. Significant unauthorised movement of C&I waste to Northern Ireland commenced in 2002 with waste from the Republic of Ireland discovered in a number of illegal sites in Northern Ireland. Unauthorised movement of C&I waste to Northern Ireland has reduced significantly in the past year as a result of increased enforcement efforts on both sides of the Border.

- **HAZARDOUS WASTE**

The study findings indicate that hazardous wastes are well managed and regulated. Counties Louth and Monaghan reported the most significant problem in relation to hazardous waste. Each year, significant quantities of diesel laundering residues are located in these counties. The responsibility then lies with each of these local authorities to ensure that these residues are collected and appropriately managed. Typically, appropriate management involves exporting this residue for incineration at the local authority's expense. The border counties involved are incurring costs of up to €700,000 per annum to deal with the current spate of such illegal activities. The location of sites containing drums or barrels containing diesel residue are identified by the local authorities or reported to the local authorities by the general public or via the Gardaí. Illegal dumping of clinical waste was also reported at the Coolnamadra site in County Wicklow. The material was removed in 2005 under the terms of an EPA licence.

- **CONSTRUCTION & DEMOLITION WASTE**

There is evidence of significant mismanagement of this waste stream. During the interview process, the incidents of reported unauthorised activities relating to the collection and management of C&D type materials far exceeded the cumulative reported incidents of unauthorised waste activities for the other waste streams considered in this report. C&D waste collection has always been a private sector function involving a wide variety of persons in haulage, skip hire, plant hire, agricultural contracting and major utilities. Traditionally, much C&D waste has been disposed of in an ad-hoc fashion, for example bricks and concrete being used to improve laneways and entrances to farmers' fields. Similarly, sub-soils have been utilised to raise the level or otherwise generally 'improve' agricultural and other land. When charges at landfill were low (or zero), a significant amount of C&D waste was landfilled. The C&D industry is one of the largest sectoral producers of waste in Ireland, yet an unacceptable situation exists whereby there is a lack of reliable information due to poor record keeping and a general lack of understanding within the sector that some C&D type materials handled are 'wastes'. For example, in 2001 an estimated 500,000 tonnes of "soil" was accepted at unauthorised facilities.

Enforcement issues reported for this waste stream include:

- the operation of C&D waste and/or soil and stone recovery sites without proper authorisation;
- the acceptance of builders rubble at sites permitted for the acceptance of topsoil only for land restoration;
- C&D waste quantities accepted at facilities in excess of permitted quantities allowed by their waste permit (WP);
- the use of soil and stone for land reclamation adjacent to wetlands and foreshores without proper authorisation.

C&D waste is a major component of waste deposited at the unauthorised landfills identified during the course of the study. There are many smaller sites in existence where C&D waste has been disposed of in an unauthorised manner but local authorities were unable to supply details about numbers and locations. It is a matter of

particular concern that the industrial sector that produces the highest volume of waste is the poorest in tracking its waste.

While there were no specific incidents reported of asbestos waste having been illegally dumped, it is likely that some unauthorised sites that contain C&D waste also contain asbestos waste.

• **WASTE TO NORTHERN IRELAND**

The illegal movement of waste from the Republic of Ireland to Northern Ireland started to take place at a significant scale in 2002. The Northern Ireland authorities estimate that tens of thousands of tonnes of waste from the Republic of Ireland have been illegally disposed of in Northern Ireland. This waste originated in various parts of the Republic of Ireland including Wexford, Cork, Waterford and the Dublin region. While some of this waste originated in households, the bulk of the waste appears to be of either commercial/industrial or C&D origin. However, there is also evidence that this practice has become more sporadic than hitherto, partly due to increased regulatory vigilance on both sides of the Border.

• **WASTE COLLECTION & MOVEMENT**

Unauthorised collection of waste is a significant problem with eighteen out of thirty four local authorities reporting problems in this area. The majority of the affected local authorities are either City Councils or local authorities adjacent to cities or large urban areas. These collectors operate without a waste collection permit (WCP) and attract their customers by placing advertisements in local newspapers or on notice boards in shopping centres, phone boxes, etc. These operators are known as “085”, “086” or “087” waste collectors. These unauthorised collectors seem to target commercial waste producers in preference to householders or industrial activities. It is thought that many of these collectors operate as “sole traders” as opposed to being part of a more “formalised” collection network. Many of these collectors operate using car and trailers or vans. Local authorities adjacent to city authorities in particular, are of the opinion that these collectors are responsible for much of the fly-tipping in their areas.

Dublin and Limerick City Councils in particular, reported problems with skip hire companies operating without WCPs. These collectors are suspected of engaging in fly-tipping although some are known to bring the collected waste to authorised facilities.

Prior to the commencement of the waste collection permitting system in 2001, significant opportunity existed for waste collectors to take their waste to unauthorised sites as there was little or no control exercised over the collection and movement of wastes, other than hazardous wastes. This is at the heart of the problem that gave rise to unauthorised landfilling of waste in the Greater Dublin region during the period 1997 to 2002 and unauthorised movement of waste to Northern Ireland between 2002 and 2004.

• **TRANSFRONTIER SHIPMENT OF WASTE (TFS)**

Local authorities have encountered problems associated with the shipment abroad of recyclables for recovery. In most instances, these problems have resulted in the repatriation of these shipments. In total, forty two shipments were repatriated from

Belgium/Holland and eight from Northern Ireland during 2004. The volume of dry recyclables repatriated is estimated to be in the region of 1,000 tonnes. In 2002 the total volume of dry recyclables collected from households and commercial activities was 132,602 tonnes.

• **UNAUTHORISED WASTE TRANSFER, MATERIAL RECYCLING & COMPOSTING**

A number of unauthorised waste transfer stations and waste processing facilities were identified during the course of the study. These facilities do not have the required Waste Management Act authorisations from either the relevant local authority or the EPA. Summary details of these facilities are provided in Table 1 and their approximate locations identified in Figure 1.

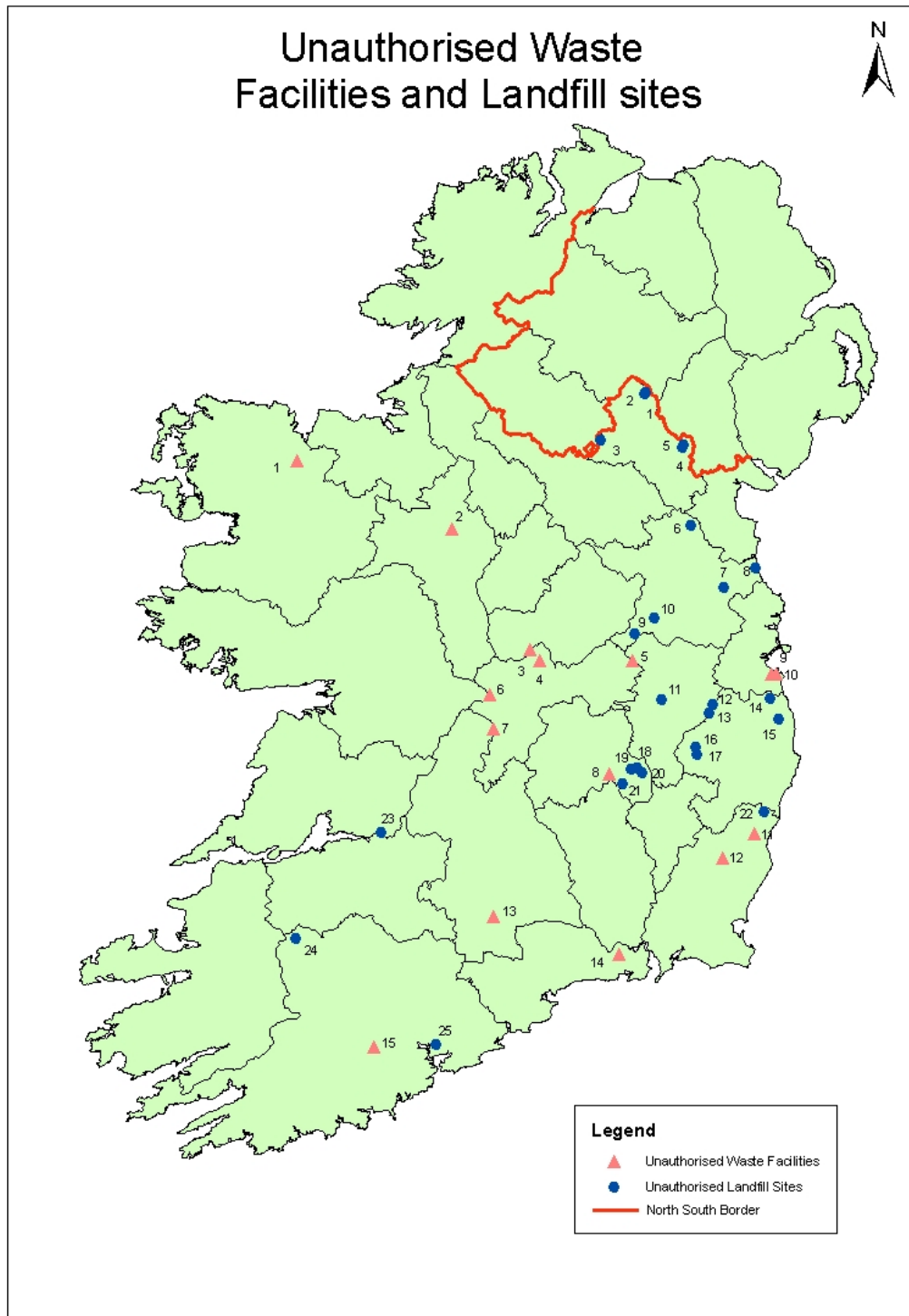
Table 1: Waste Facilities Operating Without Authorisation

Map ID	Location	Operator	County	Description of facility
1	Farrandeelion	Loftus Recycling Ltd	Mayo	Waste Transfer Station
2	Elphin	Beirnes Bins	Roscommon	Waste Transfer Station
3	Moate	Mr. Greg Kinehan	Offaly	Car scrapyard
4	Clara	Mr. Hugh Moran	Offaly	Car scrapyard
5	Edenderry	Mr. John McCann	Offaly	Car scrapyard
6	Shannon Harbour	Mr. Ciaran Yates	Offaly	Waste Transfer Station
7	Birr	Mr. Martin Bannon	Offaly	Car scrapyard
8	Timahoe	Scully Skip Hire	Laois	Waste Transfer Station
9	Grange	South Dublin County Council	Dublin	Composting
10	Georges Place, Dun Laoghaire	Dun Laoghaire Rathdown County Council	Dun Laoghaire Rathdown	Waste compaction station
11	Gorey	Greenstar	Wexford	Waste Transfer Station
12	Ferns	Murray Waste	Wexford	Waste Transfer Station
13	Cahir	Duggan Skip Hire	Tipperary	Waste Transfer Station
14	Six Cross Roads	Waterford City Council	Waterford	Composting
15	Ovens	Mr. Sean Murphy	Cork	Car scrapyard

Of major concern to the OEE is the fact that some of these facilities are owned and operated by local authorities. The identification and closure of facilities operating without any form of authorisation under the WMA is a high priority for the OEE.

The OEE is currently investigating the operation of a number of facilities that have been granted a waste permit from the relevant local authority where suspicion exists that the activities are operating significantly out of compliance with the conditions attached to their permits which makes them unauthorised and where the OEE is not satisfied with the level of enforcement action being undertaken by the local authority concerned. These facilities are not named in this report because they are the subject of investigation and enforcement action.

Figure 1: Locations of Unauthorised Waste Facilities and Landfill sites



• UNAUTHORISED LANDFILLING

Summary details of all unauthorised landfills reported during the information gathering phase of this project are provided in Table 2 and their approximate locations identified in Figure 1. This list does not include historic sites that pre-date the introduction of the waste licensing system in 1997. Also excluded are unauthorised sites which have since been authorised (i.e., Coolnamadra in County Wicklow and The Ballast Pit, Loughbrown, Co. Kildare). With the exception of sites in Cork and Monaghan all other sites were identified prior to 2003. Of note is the relatively small number of sites reported; however, an integral part of the Action Plan being implemented by the OEE is the gathering of additional information to determine the existence of any additional unauthorised landfills of significant scale.

Table 2: Summary Details of Unauthorised Landfills Reported

Map ID	Location	Waste Types				Scale (tonnes)
		Household	C&I	C&D	Hazardous	
1	Kilmurry, Cullaville, Co. Monaghan (Site 1)		√			~1,000
2	Kilmurry, Cullaville, Co. Monaghan (Site 2)		√			~1,000
3	Colemann Island, Clones, Co. Monaghan	√	√			~3,500
4	Oram, Castleblayney, Co. Monaghan	√	√			~200
5	Tullycaghney, Castleblaney, Co. Monaghan	√	√			~2,000
6	Drumconrath, Co. Meath		√	√		~24,000
7	Timoole, Co. Meath	√	√			~10,000
8	Laytown, Co. Meath			√		~50,000
9	Clonard, Co. Meath			√		~83,000
10	Longwood, Co. Meath			√		~2,000
11	Pollardstown, Kildare		√	√		~360,000
12	Roadstone Quarry, Blessington, Co. Wicklow	√	√	√		~110,000
13	Russborough, Co. Wicklow	√	√			~10,000
14	Killegar, Enniskerry, Co. Wicklow	√	√	√		~20,000
15	Kilpedder, Wicklow			√	√	~10,000
16	Whitestown, Wicklow		√	√		~240,000
17	Stevenson's Quarry, Castleruddery, Co. Wicklow		√	√		~180,000
18	Oldcourt, Ballylynan, Co. Laois			√		~2,500
19	Ballycorman, Ballylynan, Co. Laois			√		~2,500
20	Ballynagarr, Ballylynan, Co. Laois			√		~5,000
21	Newtown, Castlecomer, Co. Laois			√		~10,000
22	Coolgreaney, Gorey, Co. Wexford		√			~3,000
23	Parteen, Clare		√	√		~85,000
24	Rockchapel, Co. Cork	√				~25,000
25	Weir Island, Carrigtwohill, Co. Cork			√		~100,000

- **EUROPEAN SITES**

The European Commission brought a case (C-494/01) to the European Court of Justice (ECJ) against Ireland on failure to fulfil obligations under various articles of the EU Waste Framework Directive. The case focused on 12 different complaints received by the European Commission between 1997 and 2000, involving some 18 waste disposal incidents in Ireland. In a judgement in April 2005, the Court declared that Ireland failed to comply with its obligations under a number of provisions of the Waste Directive.

Table 3: Sites listed in ECJ judgment in case C-494/01

Local authority area	Detail of complaint
Carlow County Council	Unpermitted municipal landfill at Powerstown*
Cork County Council	Unpermitted organic waste facility at Ballard, Fermoy Unauthorised operation of a private waste facility at Cullenagh, Fermoy*
Dublin City Council	Unauthorised dumping of rubble waste at Poolbeg Peninsula
Donegal County Council	Unpermitted municipal landfills at Drumnaboden*, Muckish* and Glenalla*
Laois County Council	Unpermitted waste facilities near Portarlinton (Lea & Ballymorris)
Limerick City Council	Disposal of C&D waste on wetlands
Louth County Council	Disposal of C&D waste at Greenore Point
Waterford City Council	Unpermitted municipal landfill at Kilbarry*
Waterford County Council	Unpermitted municipal landfill at Tramore* Unauthorised disposal of waste at Ballynatin, Pickardstown, Ballygunner Bog and Castletown
Wexford County Council	Unpermitted commercial waste transfer station at Pembrokestown*
Wicklow County Council	Unpermitted private waste collection in Bray

*These facilities now hold Waste Licences from the EPA

Reasoned Opinion infringement proceedings are also underway with respect to a number of sites as detailed in Table 4.

Table 4: Sites listed in Reasoned Opinion Infringements Nos. 2002/4128 and 2002/5293

Local authority area	Site
Carlow County Council	Ardristan, Tullow, Co. Carlow
Cork County Council	Murphys Rock, Blackpool
Fingal County Council	Dunsink Landfill*
Kilkenny County Council	Grannyferry/Newrath
Meath County Council	Deposition of waste at Mornington at the Boyne Estuary, Co. Meath Regulation of asbestos at Gogarty's Point, Boyne Estuary
Wicklow	Kilpedder, Co. Wicklow

* This facility now holds a Waste Licence from the EPA

- **FLY-TIPPING**

All local authorities acknowledge that fly-tipping is a problem. Fly-tipped waste consists mainly of "black bags" containing household waste and large bulky household

items such as Waste Electrical and Electronic Equipment (WEEE), mattresses, old furniture etc. In most instances fly-tipping is carried out by private individuals disposing of their own waste as opposed to the activity being conducted for financial gain by individuals or companies. However, the four Dublin authorities as well as Limerick and Galway City Councils reported evidence of organised fly-tipping of waste.

Within the Dublin Region fly-tipping “hotspots” identified included Dunsink Lane (Fingal County Council) and at Lynch’s Lane, Lucan and Killinarden, Tallaght (South Dublin County Council).

In Limerick and Galway Cities, fly-tipping occurs within the city’s functional areas. However, the destination of much of the waste fly-tipped is in the adjacent counties. Galway, Limerick, North Tipperary and Clare County Councils all acknowledged that waste generated within these cities is being fly-tipped in their functional areas. Mostly fly-tipping is occurring on lands that are easily accessed such as bogs and forestry areas. In some instances, those fly-tipping “black bags” attempt to burn the waste so as to avoid the identification of the waste generator

• **BACKYARD BURNING**

Approximately 80% of all local authorities identified backyard burning as being a significant problem. Backyard burning is more prevalent in rural counties as opposed to city areas. Backyard burning is the uncontrolled low temperature burning of waste that releases toxic pollutants directly into the air without treatment or filtering.

The evidence that, particularly in rural areas, participation in waste collection services is low supports the high number of reported incidents of backyard burning. Nationally, on average 21% of households (265,624 households) are either not provided with or not availing of a waste collection service. The assumption is then made that many of these households are managing their waste arisings by backyard burning.

Incidents of backyard burning of commercial waste were reported but at a more minor level than that reported for household waste.

ACTION PLAN

The information gathered during the course of this investigation has been used by the OEE to prepare an action plan to deal with unauthorised waste activity in Ireland. The details of this action plan are contained in this section and implementation of the plan is now being coordinated by the OEE through the National Enforcement Network.

A number of problem areas have emerged as a result of this investigation. They are:

- Illegal Disposal of Waste
- Illegal Movement of Waste to Northern Ireland
- Illegal Movement of Waste to Europe and Beyond
- Poor Management of C&D Waste
- Unauthorised Collection and Fly-Tipping of Waste
- Inconsistent Enforcement of Waste Legislation
- Backyard Burning of Household Waste
- Historic Disposal of Waste (pre 1996)

- Operation of Unauthorised Transfer Stations & Waste Processing Facilities

Specific actions are required to deal with these problem areas and these actions are set out in the following pages.

PROBLEM

ILLEGAL DISPOSAL OF WASTE

ISSUES

- Control of waste collection and movement (other than for hazardous waste) only introduced in 2001
- Large increase in quantities of commercial waste and C&D waste arising from economic growth
- Evidence of significant mismanagement of commercial waste and C&D waste leading to large-scale unauthorised dumping of waste in the Greater Dublin area between 1996 and 2000
- Limited evidence of organised unauthorised dumping of household waste
- European Court of Justice ruling against Ireland in relation to implementation of the Waste Directive
- Policy Direction from the Minister for the Environment, Heritage & Local Government to local authorities and the EPA in relation to illegal waste activity and movement of waste

ACTIONS ALREADY TAKEN

- Assessment of risk being undertaken or planned to be taken at all known sites. Local authorities seeking High Court orders for risk assessment and remediation works in line with polluter pays principle
- EPA is preparing a Code of Practice on risk assessment and remediation of old waste disposal sites in response to the Ministerial Policy Direction issued by the Minister for the Environment & Local Government
- Involvement of the National Bureau of Criminal Investigations in investigating illegal dumping in Co. Wicklow and the Director of Public Prosecutions in prosecuting cases on indictment
- Record fine of €100,000 imposed by Circuit Criminal Court in relation to unauthorised landfilling at Weir's Island, Co. Cork
- Waste removed under licence from EPA at illegal site in Coolnamadra, Co. Wicklow in compliance with High Court Orders

WHERE TO NEXT

ACTION	BY
Completion and publication by the EPA of Code of Practice on risk assessment and remediation of old waste disposal sites	OEE
Complete risk assessment at all known sites and identify and implement appropriate remediation measures, under waste permit or licence, in accordance with the Code of Practice, when published	LAs
Bring those responsible for illegal disposal before the courts, preferably on indictment	LAs
Impose landfill levy on those responsible for illegal disposal	LAs
Gather information on any other sites through a national information line for reporting information about illegal dumping of waste	OEE, LAs
Support information line with a media campaign to advertise the information line and problems related to illegal dumping	OEE
Follow up and investigate all significant cases of suspected illegal dumping reported to or identified by the enforcement authorities	OEE, LAs

PROBLEM

ILLEGAL MOVEMENT OF WASTE TO NORTHERN IRELAND

ISSUES

- Differences in waste treatment and disposal costs between the Republic of Ireland and Northern Ireland
- Insufficient enforcement of TFS Regulations by local authorities in both jurisdictions
- Landfill capacity crisis in Republic of Ireland in late 2001 and early 2002 resulting in diversion of waste to Northern Ireland
- Available capacity of waste infrastructure for disposal and recovery of waste in Republic of Ireland
- Sham recovery of waste from the Republic of Ireland in Northern Ireland
- Lack of clarity about what constitutes 'green list' waste for recovery

ACTIONS ALREADY TAKEN

- Establishment by OEE of Inter-Agency groups to deal with the problem of waste moving illegally to Northern Ireland
- Structures put in place through National Enforcement Network to facilitate improved cooperation and information sharing between authorities in both jurisdictions
- Repatriation of eight shipments of waste to the Republic of Ireland from Northern Ireland in an operation involving the Police Service of Northern Ireland, An Garda Síochána, the EHSNI, the OEE and local authorities.
- Concerted enforcement actions targeting those suspected of engaging in illegal movement of waste to Northern Ireland, including targeted inspections of waste transfer stations
- Restricting the operation of some of the key individuals suspected of involvement in illegal movement of waste from the Republic of Ireland to Northern Ireland and the UK
- Developing common understanding between authorities in both jurisdictions about waste types considered suitable for export
- Provision of guidance and training to local authority staff through the National Enforcement Network

WHERE TO NEXT

ACTION	BY
Continue the practice of joint inspections of transfer stations by local authority and OEE inspectors	OEE, LAs
Continue to gather information on those suspected of engaging in illegal movement of waste to Northern Ireland	OEE, LAs
Pursue on indictment those found to be engaged in illegal shipment of waste to Northern Ireland	OEE, LAs
Co-operate fully with ongoing investigations by Police Service of Northern Ireland and An Garda Síochána	OEE, LAs
Finalise agreement on common understanding about waste types considered suitable for export	OEE, EHSNI
Build on the good working relationships established between the authorities North and South of the Border in the past two years and extend this to include the relevant authorities in Great Britain	All agencies

PROBLEM

ILLEGAL SHIPMENT OF DRY RECYCLABLES TO EUROPE & BEYOND

ISSUES

- Rapid increase in the provision of separate collection of dry recyclables from households with over 40% of households now provided with separate collection
- Absence of markets for the recycling of dry recyclables in the Republic of Ireland
- Misclassification of mixed dry recyclable household waste as 'green list' waste
- Insufficient understanding of provisions of TFS Regulations within many local authorities

ACTIONS ALREADY TAKEN

- Repatriation of forty two containers of mixed dry recyclable household waste from the Netherlands and Belgium by waste contractors and local authorities
- Establishment by OEE of National Enforcement Network Inter-Agency group on TFS
- Preparation by the Inter-Agency group of guidance for local authority staff on enforcement of TFS
- National Enforcement Network seminar on TFS for local authority staff
- Stepping up of enforcement and inspection by local authorities of waste loads at source, on the road and at ports
- Joint inspections of waste facilities by OEE and local authority inspectors
- Involvement by the EPA and local authorities in international enforcement initiatives aimed at tracking waste from source to final destination

WHERE TO NEXT

ACTIONS	BY
Build on the increased level of TFS inspections conducted during 2004 by local authority inspectors	LAs
Build on the work done through the National Enforcement Network aimed at raising the level and consistency of enforcement of the TFS Regulations by local authorities	OEE, LAs
The Irish authorities should continue their involvement in International TFS initiatives such as the European Network for the Implementation and Enforcement of Environmental Law in the EU (IMPEL)	OEE, DEHLG, LAs
Work with other national competent authorities to develop a better common understanding about waste types considered suitable for export for recovery	OEE, DEHLG, LAs
Review the effectiveness of current arrangements for implementation and enforcement of the TFS Regulations in Ireland	DEHLG
Improve knowledge about the final destination of waste shipped abroad for recovery	OEE, DEHLG, LAs

PROBLEM

POOR MANAGEMENT OF CONSTRUCTION & DEMOLITION WASTE

ISSUES

- C&D waste quantities growing every year
- Poor record keeping at sites where C&D waste is produced leading to underestimates of quantities arising
- Evidence of significant mismanagement of the waste stream with C&D waste the predominant material in known unauthorised landfills
- Poor awareness within the industry about waste management issues
- Inconsistent application of the waste permitting regulations in relation to land reclamation activities

ACTIONS ALREADY TAKEN

- Establishment and operation of National Construction and Demolition Waste Council
- Preparation of draft guidelines for C& D waste management

WHERE TO NEXT

ACTION	BY
Those involved in illegal disposal of C&D waste should be pursued on indictment by the enforcement authorities	LAs, OEE
Local authorities need to ensure that they have up to date and reliable information on the quantities and fate of C&D waste in their functional areas	LAs
The C&D sector needs to provide much better and more reliable information on the quantities and fate of waste produced	C&D sector
Sufficient outlets for the recovery and disposal of C&D waste are required and should be planned for by local authorities and the C&D sector through the waste management planning process	LAs, C&D sector
Finalise and consider placing on a statutory footing, the draft guidelines for C&D waste management	DEHLG
Integrate the requirements of the draft guidelines for C&D waste management with the planning and development process for developments that are likely to produce significant quantities of waste	LAs
Radical improvements are required by the C&D sector in relation to general site and materials management to minimise waste produced on site	C&D sector
More work is required by the C&D sector on the development of end-uses, outlets and material specifications for C&D waste	C&D sector
Review the effectiveness of the voluntary C&D waste industry initiative	DEHLG

PROBLEM

UNAUTHORISED COLLECTION AND FLY-TIPPING OF WASTE

ISSUES

- Relatively recent introduction of waste collection permitting system (introduced in 2001)
- Waste being handed over to unauthorised waste collectors ('the man in the van')
- Reduced involvement by local authorities in household and C&I waste collection
- Irresponsible attitude to waste management on the part of some C&I and industrial enterprises and some householders
- Insufficient enforcement by local authorities of WCPs

ACTIONS ALREADY TAKEN

- Several local authorities have established litter hotlines
- 110 additional waste enforcement staff appointed in local authorities in past two years leading to the establishment of waste enforcement teams
- Campaigns against unauthorised waste collectors in several local authorities
- Increasing number of roadside inspections being carried out by local authorities (377 in 2004)
- National and regional concerted enforcement actions by local authorities and OEE consisting of coordinated road blocks and joint local authority/OEE inspections of waste transfer stations

WHERE TO NEXT

ACTION	BY
Run a national media campaign informing the public and the business community that their waste can only be given to either a local authority or a waste collector that holds a valid WCP	OEE, DEHLG
Run a national media campaign on fly-tipping	OEE, DEHLG
Local authorities to build on the increased number of waste facility and roadside inspections so that the waste collection permitting system is properly enforced. This is the weakest link in the waste enforcement chain and the area where the greatest risk of unauthorised waste activity exists. If the collection and movement of waste is properly controlled then the risk of unauthorised disposal is greatly reduced	LAs
Consider the development and implementation a national waste tracking system to allow for the pre-notification and tracking of all waste movements within and outside the State	OEE, LAs, DEHLG
Organise and carry out more concerted enforcement actions	OEE, LAs, Gardai
Provide local authorities with the power to revoke WCPs	DEHLG

PROBLEM

INCONSISTENT ENFORCEMENT OF WASTE LEGISLATION

ISSUES

- Many public bodies have a role to play in the enforcement of waste management legislation
- The need for a seamless approach to enforcement of waste management legislation which means that public bodies with a role to play must work together
- Local authority waste enforcement teams, financed through the environment fund, are now in place
- The need to ensure consistency of approach to waste enforcement by local authorities and that local authority waste enforcement staff have the necessary skills
- Variation in level of skills, expertise and resources available to different local authorities

ACTIONS ALREADY TAKEN

- The National Enforcement Network is up and running
- Inter-Agency working groups are established and operational in ten areas
- Concerted enforcement actions at local, regional and national level are being planned and implemented by these working groups
- An Garda Síochána, the Police Service of Northern Ireland and the EHSNI have been involved in some of these concerted actions
- An Garda Síochána, the National Bureau of Criminal Investigations and the Revenue Commissioners are becoming more involved in the investigation of illegal waste activity
- All public bodies involved in the enforcement of waste legislation were brought together for the first time at the first National Enforcement Network Conference on Waste Enforcement
- Guidance for local authorities has been produced by the Enforcement Network in a number of areas including unauthorised waste investigation, enforcement of Packaging and Farm Plastics Regulations and enforcement of TFS Regulations
- An advanced waste enforcement skills training programme for local authority enforcement staff has been developed by the OEE and training of staff has commenced
- In 2004, local authorities carried out over 12,000 site inspections, mounted 377 check points, served 1588 notices under the WMA and took 303 prosecutions under the WMA

WHERE TO NEXT	
ACTION	BY
All local authority staff engaged in waste enforcement should complete the advanced waste enforcement skills training course	LAs
All local authorities should develop and implement their own unauthorised waste enforcement plan in line with the requirements of the Recommendation for Minimum Criteria for Environmental Inspections	LAs
Continue planning and implementation of enforcement activities at local, regional and national level under the umbrella of the National Enforcement Network and involving whatever public bodies are appropriate for the activity	All
Continue to develop the linkages between An Garda Síochána and the various public bodies enforcing waste legislation, particularly in relation to the detection, investigation and prosecution of environmental crime	All
The enforcement authorities should continue to share information about suspected unauthorised waste activities and work together to ensure that the combined forces of the State are used to combat unauthorised waste activity	OEE, LAs, Others

PROBLEM

BACKYARD BURNING OF HOUSEHOLD WASTE

ISSUES

- 21% of households are either not availing of or not provided with a waste collection service
- 80% of local authorities identified backyard burning as being a significant problem
- Some householders opting out of waste collection due to the introduction of waste charges
- Lack of awareness by some householders about the dangers of backyard burning
- Irresponsible attitude to waste management on the part of some householders

ACTIONS ALREADY TAKEN

- Several local authorities have established litter hotlines
- 110 additional waste enforcement staff appointed in local authorities in past two years leading to establishment of waste enforcement teams
- Provision of useful advice by local authorities on backyard burning on several websites
- Local authorities taking a stronger enforcement line on backyard burning

WHERE TO NEXT

ACTION	BY
Characterise the nature and extent of uncollected household waste within each local authority area	LAs
Establish whether or not satisfactory arrangements are in place in each local authority area for the collection of household waste	LAs
Target households not availing of a waste collection service to ensure that suitable arrangements are in place for disposal of their waste	LAs
Review section 33(3) of the WMA to determine the extent to which the conditions specified are contributing to the large number of households not participating or availing of a waste collection service	DEHLG
Run a national media campaign on backyard burning	OEE, DEHLG
Consider establishing as an offence the burning of household waste on the householders property	DEHLG

PROBLEM

HISTORIC DISPOSAL OF WASTE

ISSUES

- Local authorities responsible for identifying all sites at which disposal of waste took place in the past and ensuring that appropriate actions are taken to make these sites safe
- Older sites are mainly old municipal landfills operated by local authorities (the town dump)
- Some sites may contain hazardous waste such as asbestos

ACTIONS ALREADY TAKEN

- The EPA is preparing a Code of Practice on risk assessment and remediation of old waste disposal sites in response to the Ministerial Policy Direction issued by the Minister for the Environment, Heritage & Local Government
- Local authorities are currently reviewing their waste management plans and providing for the requirement to identify and make safe old waste disposal sites in accordance with sections 22 and 26 of the WMA
- Risk to waters of some of these old sites has been assessed as part of the risk characterisation requirements of the Water Framework Directive

WHERE TO NEXT

ACTION	BY
Completion and publication by the EPA of Code of Practice on risk assessment and remediation of old waste disposal sites	OEE
Implementation by local authorities of their responsibilities under sections 22 and 26 of the WMA	LAs
Identification by local authorities of sites used in the past for the disposal of waste	LAs
Application of the Code of Practice to these sites	LAs
Where appropriate, permitting or licensing of these sites to bring them into compliance with the Waste Directive	

PROBLEM

OPERATION OF UNAUTHORISED TRANSFER STATIONS & WASTE PROCESSING FACILITIES

ISSUES

- There are still some waste facilities operating without the proper authorisations under the WMA
- Some of these facilities are operated by local authorities
- Waste facilities should not be allowed to operate in the absence of the required authorisation under the WMA

ACTIONS ALREADY TAKEN

- All local authorities have been instructed by the OEE to arrange for the cessation of activities at facilities that do not hold the required authorisations
- The OEE is undertaking investigations into a number of complaints received about alleged operation of unauthorised waste facilities
- Training has been provided to local authority personnel by the OEE in relation to the identification and investigation of unauthorised waste activities

WHERE TO NEXT

ACTION	BY
Local authorities need to adopt a zero tolerance attitude to waste management facilities operating without proper authorisation	LAs
Local authorities need to lead by example and ensure that any waste management facilities that they operate have the required authorisations and that they are operated in compliance with these authorisations	LAs
Should unauthorised waste activities continue to operate, the EPA will serve statutory notices on the relevant local authorities directing them to arrange for immediate cessation of the activity	EPA

1. INTRODUCTION

1.1. Background

One of the first priorities of the OEE was to tackle, in cooperation with local authorities, the problems of illegal waste movement and unauthorised disposal of waste in Ireland. This problem was exemplified by the large-scale illegal dumping that took place in County Wicklow during the period 1997 to 2002 and more recent revelations about illegal movement of waste to Northern Ireland and overseas. While immediate steps were taken by the OEE when established to deal with these issues and significant progress is now being made in relation to them, there was a paucity of information about the true nature and extent of unauthorised waste activity in Ireland. For this reason, the OEE commissioned a study to establish the nature and extent of unauthorised waste activity in Ireland for the period from 1996 to the present day so that it could formulate plans and actions to tackle the problem based on reliable information.

The objectives of the study were:

1. to establish and document the extent of unauthorised waste activities in Ireland from the introduction of the WMA, 1996 and the extent to which they occur in each of the thirty four major local authority areas;
2. to establish and document the extent of unauthorised movement of waste outside of Ireland, including unauthorised cross border movement of waste between the Republic of Ireland and Northern Ireland;
3. to review and document the current procedures and practices used in Ireland by the relevant authorities to investigate unauthorised waste activities;
4. to review and document the powers available to relevant authorities in Ireland to tackle unauthorised waste activities and their use of these powers;
5. to review systems/procedures in use in other countries for investigating unauthorised waste activities with a view to establishing best international practice;
6. to develop guidance on the investigation of unauthorised waste activities; and
7. to train key staff in Irish local and public authorities in the use and implementation of the Guidance Notes.

This report draws together information gathered as a result of the study and presents the main findings of the study with the principal focus being the reporting of what was learned about the nature and extent of unauthorised waste activity in Ireland since the introduction of the WMA in 1996. The report also describes the actions already taken and planned to be taken by the OEE in response to these findings and sets out an action plan for dealing with the various issues that arise.

1.2. Approach and Quality of Information Supplied

To establish baseline information on the nature and extent of unauthorised waste activity, a broad consultation process was required. The consultees were:

- Local Authorities
- The EPA
- EHSNI
- Private waste contractors, and
- IWMA

The principal mechanism employed to gather information from consultees was direct interviewing either face to face or by phone. This mechanism was chosen due to the nature of the information being sought and the fact that consultees might be reluctant to express views in writing.

The extent and quality of information received from each of the local authorities during the consultation process varied significantly. Factors that impacted on the comprehensiveness of this information included:

- reservations by many local authorities about revealing details of suspected unauthorised activities, which were under investigation. In some cases, this was because there were concerns that some allegations might not be substantiated. There were concerns that reporting such allegations to the EPA at this early stage might – if they were later found to be incorrect - open the local authority itself to legal action for slander or libel. Perhaps more importantly, a number of significant unauthorised waste activities were regarded as *sub judice*, with local authorities having concerns that premature reporting might prejudice any later legal action. In such instances, information was given only on typical unauthorised activities being encountered in a functional area without revealing any specific details in relation to sites, carriers or alleged offenders.
- the length of time that those interviewed had been involved in the role of waste enforcement. This length of time ranged from a number of years to as little as three months.
- widespread uncertainty and variation regarding the meaning of the term “unauthorised waste activity”. The survey team found that there was some significant local and regional variation as to which type of activity was considered by a local authority as requiring some form of formal enforcement response or was otherwise viewed as being significant. In certain cases, there appeared to be differences of approach in this respect within local authorities and between different staff.

In relation to the private sector, comments provided tended to be of a general nature with a reluctance to make specific allegations about individuals or companies.

The impact of this on the study is that information about specific suspected cases of illegal waste activity might have been withheld from the consultants and the OEE during the consultation phase. This was not altogether surprising given the nature of the information sought. However, in parallel with the study, the OEE and local authorities, through the National Enforcement Network, have started to compile and share information on suspected cases of illegal waste activity and this intelligence-type information has also been drawn on for the purposes of this report. A national information line is also being established to facilitate any individuals or organisations that wish to provide information to the OEE about unauthorised waste activity.

1.3. Limitations on Publishing Information in This Report

Specific cases of illegal waste activity are only mentioned in this report where the OEE is satisfied that no doubt exists that an activity was unauthorised. This places a major restriction on the publication of information where the OEE or a local authority only suspects that illegal activity has taken place. Publication of information in such circumstances could prejudice future legal action against such suspected illegal waste operators.

For this reason, much of the information presented in this report is of a general nature with the intention being to give an overall impression of the true nature and extent of unauthorised waste activity in the period covered by the report.

2. DEFINITIONS & CONTEXT SETTING

2.1. Setting the Context

The waste management situation in Ireland has radically changed in the past ten years or so since the introduction of the WMA in 1996. A simple system involving almost complete reliance on landfill as the sole waste management option with local authorities the main service providers has been replaced by a sophisticated and intricate waste management network involving both the public and private sector. This network typically involves the significant intermediate processing of virtually all types of wastes with the resultant separated fractions passing to a variety of recycling or final disposal options. Major structural change has affected waste service providers, be they local authorities or private-sector organisations, over the period of time covered by this report. These changes have happened in parallel with unprecedented economic growth in Ireland, which has resulted in significant increases in waste quantities being produced.

These changes to the “traditional” pattern of waste management have had a variety of effects, some of which are interlinked. The overall effect has been to increase the price of landfill so significantly as to make alternative waste management options financially viable for the first time. Many of these represent major progress in furthering EU or national government environmental policy goals. However, the increased cost of waste management has also attracted less desirable conduct, including unauthorised practices such as ad-hoc fly-tipping, backyard burning or more organised and larger scale illegal dumping.

In 1998, there were ninety five landfills nationwide. This reflected Ireland’s one-dimensional approach to waste management, which was completely reliant on landfilling. Over the next six years the number of landfills reduced by 70% to approximately thirty. Factors that influenced this reduction in numbers were:

- The requirement that landfill operators obtain a waste licence (WL) from the EPA. Some operators closed their landfill rather than attempt to obtain a WL as the landfills were unengineered and operating in an ad hoc manner. The cost of upgrading these facilities to a standard to meet the requirements of a WL was cost prohibitive.
- Landfills reached their maximum intake capacity and, with no possibility of extending these facilities, they closed.

In tandem with this, municipal solid waste arisings had increased by approximately 25% over the corresponding time period and unprecedented and sustained economic growth had given rise to rapidly increasing quantities of C&D waste.

In 2001, the cumulative effect of these factors was an overall reduction in landfill capacity and an increase in the quantities of waste requiring management. The remaining capacity at existing landfills, almost all of which were operated by local authorities, was diminishing at an accelerated rate.

In an attempt to conserve remaining capacity, local authorities adopted a pricing policy to encourage waste producers and collectors to source alternative outlets to landfilling for waste disposal. Gate fees rose from an average of €40 per tonne in 2000 to an average of €150 per tonne in 2004, which is equivalent to an increase of 375%.

The implementation of landfill quotas exerted further pressure on C&I waste producers, in particular. These quotas restricted the quantity of C&I waste to be accepted at landfills and in some instances, landfills banned acceptance of C&I waste completely.

In response to this crisis, waste producers and collectors were forced to seek alternative disposal routes. However, not all alternative disposal and recovery options taken were authorised.

Evidence to support this claim has been identified by the:

- discovery of a number of illegal landfills i.e. Wicklow, Monaghan, Cork, Kildare and elsewhere;
- discovery of illegal landfills in Northern Ireland containing waste collected in the Republic;
- the discovery of illegal exports of waste overseas, i.e. Holland, Belgium (although some of these were misclassification of waste rather than deliberate illegal trafficking);
- the discovery of illegal waste shipments to Northern Ireland;
- increases in backyard burning; and
- increases in fly-tipping.

To understand the extent and impact of unauthorised waste activity during the period covered by this study, it is necessary to examine the individual waste streams (household, C&I, C&D and hazardous) as the factors influencing the management of these waste streams are quite different.

The main body of the report therefore presents an analysis of the nature and scale of unauthorised waste activity for each of the major waste streams. For each waste stream, key issues and events over the past ten years are identified. The drivers for unauthorised activity for each waste stream are then explored and opportunities for mismanagement of the waste stream identified. The nature and scale of unauthorised activity for the waste stream is then set out, based on the information obtained during the course of the study and a summary of any sites identified that have been used for the unauthorised disposal of the waste.

2.2. Household Waste

The term household waste derives its meaning from the WMA. It is important that this definition is understood because the WMA places key duties on local authorities in relation to the management of household waste.

Section 5 of the WMA defines household waste as follows:

household waste means waste produced within the curtilage of a building or self-contained part of a building used for the purposes of living accommodation.

As the Act also separately defines other categories of waste - commercial waste, industrial waste, etc. – the definition of household waste does not embrace these other waste types. “Household waste” needs also to be distinguished from the term “municipal waste”: municipal waste embraces not only household waste but also commercial and other waste which is similar in composition to household waste.

In essence, household waste is waste which stems from domestic dwellings, be they houses or apartments, as well as from other buildings that are used for living accommodation.

2.2.1. Quantities and Composition

The most recent EPA estimate for national household waste generation is 1.5 million tonnes (EPA, 2004a). As can be seen from Table 2.1, this quantity has significantly increased since 1998.

Table 2.1: Household Waste Quantities

Date	Tonnes per year
2003	1,528,000
2001	1,469,000
1998	1,221,000

A typical composition of household waste is shown in Table 2.2.

Table 2.2: Composition of Household Waste (Fehily Timoney & Co., 2002)

Waste Type	% of Total
Glass	7
Paper/Cardboard	21
Metal	5
Plastic	9
Textile	2
Organic	32
Garden	12
Other	12
TOTAL	100

2.2.2. Household Waste Collection

Section 33 of the WMA requires a local authority – a county council, city council or town council – to collect household waste or to ensure that there are alternative and adequate arrangements in place for its collection. In general, this is a binding duty, and one which is subject only to minor exceptions. This requirement means that a local authority either collects household waste using its own staff and vehicles or has to ensure that this process is adequately provided for by the private sector.

2.2.3. Provision of Waste Management Infrastructure

In parallel to the requirements relating to the collection of household waste, the WMA places particular duties on local authorities in relation to the provision of sites for the management of that waste. Section 38 states that a local authority shall provide and operate such facilities as may be necessary for the recovery or disposal of household waste. Alternatively, local authorities are required to arrange for others to establish

such facilities: they can enter into agreements with other local authorities in this respect or can make arrangements with private sector operators. This duty therefore allows a local authority, for example, to develop its own landfill sites, to develop a landfill in conjunction with another local authority or to utilise a landfill operated by the private sector for the disposal of household waste.

Traditionally, local authorities have been the providers of landfill infrastructure. However, since waste management arrangements in Ireland have become more sophisticated, local authorities have developed recovery facilities and other waste processing sites – baling stations for example – themselves or in conjunction with the private sector.

The overall strategic framework which governs the provision of all waste infrastructure finds its basis in Section 22 of the WMA. This section requires local authorities to make waste management plans, setting out the arrangements for waste arising in their areas. Since the Act came into force, many of these were initially published by local authorities acting singly. However, regional waste management plans have now become the norm, albeit that counties Wicklow, Kildare and Donegal have elected to remain outside the regional structure. Dublin and Cork are, by virtue of size, stand-alone regions. At the time of writing, all waste management plans are under review, with the exception of Cork which is completed.

2.2.4. Summary

Household waste has its own definition under the WMA, and is distinct from other waste types, such as commercial or industrial waste. Local authorities are under a duty to provide for its collection, disposal or recovery. This duty can be discharged by the local authority undertaking the activity itself or by involving one or more third parties. The key strategic document that sets out present and future waste management arrangements for household waste is the local authority's waste management plan.

2.3. Commercial & Industrial Waste

Like 'household waste', the terms 'commercial waste' and 'industrial waste' derive their meanings from the WMA. It is important to embrace these definitions and, particularly, their distinction from household waste. This is vital, for the reason that the WMA sets down contrasting responsibilities on local authorities in relation to the management of these waste types. These contrasts have a major affect on how C&I wastes are managed.

Section 5 of the WMA contains a statutory definition of commercial waste:

"commercial waste" means waste from premises used wholly or mainly for the purposes of a trade or business or for the purposes of sport, recreation, education or entertainment but does not include household, agricultural or industrial waste.

Similarly, industrial waste is defined as:

"industrial waste" includes waste produced or arising from manufacturing or industrial activities or processes.



Unauthorised Waste Site

These definitions result in a clear distinction from that which pertains to household waste. However, for a number of reasons, the scope and practical usage by the waste management industry and by local authorities of the terms 'industrial waste' and 'commercial waste' varies significantly. This is partly because the definition of commercial waste refers to waste from premises used for the purposes of trade while industrial waste refers to waste generated by manufacturing. Clearly, there is overlap here. Hence many waste collectors and a number of local authorities preferentially utilise the term 'commercial waste', even when referring to waste that has been collected from premises involved in the manufacture of goods. An effect of this convention is that differential statistics for these two waste types need to be taken with some considerable caution. And this is the reason that this chapter discusses C&I waste together rather than separately.

2.3.1. Quantities and Composition

The EPA has estimated that approximately 1.3 million tonnes of commercial waste was generated in 2003 (EPA, 2004a). While no figure is given for that year in respect of industrial waste, the quantity generated was about nine million tonnes in 2001. Like household waste, the quantity of commercial waste has significantly increased since 1998: see Table 2.3. However, this trend would appear not be reflected in the industrial waste generation figures.

Table 2.3: Commercial and Industrial Waste Quantities

Date	Tonnes per year	
	Commercial Waste	Industrial Waste
2003	1,332,735	Not available
2002	1,129,852	Not available
2001	1,156,732	9,008,211
1998	754,797	9,074,751

A typical composition of commercial waste is shown in Table 2.4.

Table 2.4: Composition of Commercial Waste

Waste Type	% of Total
Glass	5
Paper/Cardboard	56
Plastic	9
Metal	1
Textile	0
Organic	22
Other	7
TOTAL	100

Industrial waste includes waste produced or arising from manufacturing, industrial or processing activities. Industrial waste arisings are either classified as being hazardous or non-hazardous solids, sludges or liquids. The volume of industrial waste arisings generated in any region or county is influenced by the following factors:

- Economic activity
- Size of industrial or manufacturing facilities
- Nature and type of industrial or manufacturing facilities
- Number of industrial or manufacturing facilities present in the region

Typically, industrial or manufacturing waste arisings can be classified as:

- Process waste and/or by-products
- Wash waters and effluents
- Sludges (water and wastewater treatment) both hazardous and non-hazardous
- Hazardous wastes (solids and liquid waste streams)

The top ten reported non-hazardous industrial waste types in 2002 are contained in Table 2.5 (EPA, 2001).

Table 2.5: Top Ten Reported Non-Hazardous Industrial Wastes in 2001

EWC Code	Non-hazardous industrial waste description	Tonnes
01 03 01	Tailings (from further physical processing of metaliferous metals)	2,612,886
01 03 03	Red mud from alumina production (from further physical processing of metaliferous metals)	861,121
01 03 99	Wastes not otherwise specified (from further physical processing of metaliferous metals)	206,274
10 01 02	Coal fly ash (from power station and other combustion plants)	202,950
02 07 99	Wastes not otherwise specified (from the production of alcoholic and non-alcoholic beverages, excluding coffee, tea and cocoa)	196,370
03 01 02	Sawdust (from wood processing and the production of panels and furniture)	188,949
01 01 02	Waste from mineral non-metaliferous excavation (from mineral excavation)	143,769
02 02 02	Animal tissue waste (from the preparation and processing of meat, fish and other foods of animal origin)	130,904
02 02 99	Wastes not otherwise specified (from the preparation and processing of meat, fish and other foods of animal origin)	128,385
01 01 01	Waste from mineral metaliferous excavation (from mineral excavation)	112,060
	Total	4,783,668



Fly-tipped Waste

2.3.2. Commercial and Industrial Waste Collection

The duties under the WMA on a local authority in respect of C&I waste are quite different to those relating to household waste. While local authorities are required by law to make arrangements for the collection of household waste, there is no similar obligation for the other waste types. Instead, Section 33 of the WMA simply confers discretion on a local authority to be involved in the collection of C&I waste if it elects to do so.

2.3.3. Provision of Waste Management Infrastructure

In a similar manner to those elements of the WMA that set down the arrangements for household, C&I waste collection by local authorities, the Act also has a contrasting approach to the provision of infrastructure for the management of these waste types. While Section 38 allows for a local authority to establish disposal or recycling facilities for commercial or industrial waste, there is no formal obligation on local government for this to be done. A local authority can establish specific infrastructure; but – and more commonly – a local authority may simply allow industrial or commercial waste to be received at its household waste disposal or recovery facilities. As will be seen, this discretion also facilitates a local authority to elect not to receive such waste at its sites if it is so minded.

As was the case with household waste, the key strategic document which sets down how industrial and commercial waste infrastructure should be provided is the waste management plan.

2.3.4. Summary

Industrial and commercial wastes are treated by the WMA as quite distinct from household waste. However, the nature of the relevant definitions in the Act means that the categories of commercial waste and industrial waste do in practice overlap. Unlike household waste, a local authority is not under a duty to provide industrial or commercial waste collection services or processing or disposal infrastructure. However, a local authority can do so if it wishes. Waste management plans provide a strategic role in setting out how provision should be made for the disposal or recovery of these waste types.

2.4. Construction & Demolition Waste

Unlike household, commercial or industrial waste, C&D waste does not have a statutory definition in the WMA. In practice, it is a subset of all of these waste types, as C&D waste can be generated from building activities taking place at domestic dwellings, commercial establishments and industrial premises.

In the absence of any statutory definition, the term has a variety of slightly different meanings. For example, for landfill licensing purposes, the EPA has defined C&D waste as:

All wastes which arise from construction, renovation and demolition activities².

A full description of C&D wastes (including excavated soil from contaminated sites) is outlined in Chapter 17 of the European Waste Catalogue and Hazardous Waste List (2002).

2.4.1. Quantities and Composition

As C&D waste is a sub-set of household and C&I waste, there are no accurate national figures on waste arisings. This is also partly because much C&D waste is handled locally and by numerous bodies of different sizes, including small builders. Moreover, the recognition that C&D waste is subject to formal regulation under the WMA has been slow in respect of some individuals and commercial entities.

Best estimates of the national C&D waste arising suggest that approximately 3.6 million tonnes were generated in 2001 (EPA, 2001 pages 37-38). This has been noted to be 35% more than a similar estimate for C&D waste generation for the year 1998. Of the 2001 total, 56% was classed as “new construction, repair and maintenance waste”, 38% comprises excavated soil and the remaining 6% stemmed from demolition activities (EPA, 2001 figure 4.8).

2.4.2. Construction and Demolition Waste Collection

C&D waste collection has always been a private sector function, with virtually no local authority offering service provision. Moreover, a wide variety of persons are involved in the haulage of C&D waste, including small to large builders, skip hire operators, plant hire companies, agricultural contractors, major utilities and so on.

2.4.3. Provision of Waste Management Infrastructure

There is no explicit requirement for local authorities to provide infrastructure for the disposal and recycling of C&D waste beyond the general duty to make arrangements for household waste disposal that has been already described. C&D waste is generally handled by a wide variety of private sector-based organisations, as well as by public utilities.

2.4.4. Summary

C&D waste is a sub-set of the contents of household and C&I wastes that have been described earlier in this chapter. However, there is no formal statutory definition. Issues such as differential conventions on the meaning of the term “C&D waste” and a wide variety of handlers and outlets for such materials mean that there is a notable absence of reliable composition and quantity-generation statistics. Local authorities neither have a strong role in the supply of C&D collection services nor in infrastructure provision. C&D waste management is mainly a private sector function.

² See EPA Licence 156-1

2.5. Hazardous Waste

Hazardous waste has a statutory definition under the WMA. Section 4 defines hazardous waste as:

- (i) *hazardous waste for the time being mentioned in the list prepared pursuant to Article 1 (4) of Council Directive 91/689/EEC of 12 December, 1991 1, being either—*
 - (I) *Category I waste that has any of the properties specified in Part III of the Second Schedule, or*
- (ii) *Category II waste that—*
 - (A) *contains any of the constituents specified in Part II of the Second Schedule, and*
 - (B) *has any of the properties specified in Part III of the said Schedule,*
- (iii) *such other waste, having any of the properties specified in Part III of the Second Schedule, as may be prescribed for the purposes of this definition.*

While this definition appears complex, in summary it means that a hazardous waste is a waste identified as such on what is known as the European Waste Catalogue and Hazardous Waste List – which is what is referred to by the reference to Directive 91/689. To be a hazardous waste under Irish law, the relevant entry in the Catalogue must also exhibit one or more of the hazardous properties listed in the Second Schedule to the WMA. In 2002, the EPA published the European Waste Catalogue and Hazardous Waste List.

Hazardous waste is a sub-set of the previous categories of C&I waste. While small quantities of hazardous substances are also generated by householders, that material only falls within the statutory definition of hazardous waste after it has been centrally collected or stored. This is because Directive 91/689 excludes all waste arising from domestic premises from its definition of 'hazardous waste'.

2.5.1. Quantities and Composition

Excluding contaminated soil, Table 2.6 shows the quantities of hazardous waste estimated to arise in Ireland from 1996 to 2001 with the top ten hazardous wastes contained in Table 2.7. It will be immediately apparent that, unlike the other waste streams described in the previous three chapters, the annual hazardous waste generation rate has remained static over this period.

Table 2.6: Hazardous Waste Quantities³ (EPA, 2004 page 11)

Date	Tonnes per year
2001	323,089
1998	324,842
1996	327,462

³ Figures exclude contaminated soil.

Table 2.7: Top Ten Reported Hazardous Industrial Wastes in 2001

EWC Code	Hazardous industrial waste description	Tonnes
07 05 04	Other organic solvents, washing liquids and mother liquors (from the MFSU* of pharmaceuticals)	81,433
06 03 99	Wastes not otherwise specified (waste salt and their solutions from inorganic chemical processes)	27,554
07 05 01	Aqueous washing liquids and other liquors (from the Manufacture Formulation Supply and Use of pharmaceuticals)	21,279
07 05 03	Organic halogenated solvents, washing liquids and other liquors (from the MFSU of pharmaceuticals)	5,395
07 07 04	Other organic solvents, washing liquids and mother liquors (from the MFSU of fine chemicals and chemical products not otherwise specified)	4,244
06 02 01	Calcium hydroxide (from waste alkaline solutions from inorganic chemical processes)	4,101
07 05 99	Wastes not otherwise specified (from the MFSU of pharmaceuticals)	2,697
07 05 07	Halogenated still bottoms and reaction residues (from the MFSU of pharmaceuticals)	2,512
07 07 08	Other still bottoms and reaction residues (from the MFSU of fine chemicals and chemical products not otherwise specified)	2,415
13 06 01	Oil waste not otherwise specified	2,371
	Total	154,001

2.5.2. Hazardous Waste Collection

The private sector is the sole provider of collection infrastructure for hazardous waste in Ireland. Some local authorities provide for the collection of household hazardous waste at civic amenity sites and by privately contracting collections for household hazardous waste.

2.5.3. Provision of Waste Management Infrastructure

Like waste collection, most of the infrastructure for hazardous waste disposal and recovery is provided by the private sector. There are three main exceptions:

- A number of local authorities have made provision for the deposit of hazardous materials arising from households at civic waste facilities.
- A small number of local authorities allow low-hazard asbestos wastes to be accepted for disposal at their landfill sites.
- A number of local authorities contract private waste management companies to provide on their behalf specialist collection for household hazardous waste. In 2003, a total of nineteen local authorities provided a mobile collection service in their functional areas.

In the main, the private sector is involved in two forms of hazardous waste facility. Firstly, there are a number of waste transfer stations where wastes are stored and/or bulked-up prior to export to specialised recovery or disposal facilities. Secondly, there are also a number of specialised treatment plants in Ireland which process certain types of waste, such as solvents, oils and clinical waste.

2.5.4. Summary

Hazardous waste is primarily a sub-set of industrial and commercial waste. Being part of those groups, the private sector is primarily responsible for hazardous waste management, with the local authorities mainly taking the role of regulatory supervision. Private sector waste infrastructure is available in Ireland, although a significant amount of hazardous waste is exported for specialised disposal or recovery.

3. DEVELOPMENT OF WASTE MANAGEMENT IN IRELAND

This chapter highlights the key issues that have driven the current arrangements for the management of household, C&I, C&D and hazardous waste. Waste management has been effected by many factors and it is important to have an understanding of the impact of these factors when considering the nature and extent of unauthorised waste activity. Factors considered are:

- Economic Growth and Demographic Change
- Waste Collection Service Provision
- User Charges, Landfill Access and Quotas
- Waste Management Planning, and
- Waste Licensing, Waste Permitting and Public Opposition

3.1. Economic Growth And Demographic Change

3.1.1. Household Waste

It has been noted earlier that household waste generation has greatly increased since the first national waste statistics were collated in 1996. A very significant driver has been the enhanced wealth of the general population of Ireland due to the effects of economic growth. For example, between 1995 and 2000, the national income – as measured by Gross Domestic Product (GDP) – doubled. This affects waste generation rates for the reason that waste production levels are closely associated with economic growth.

Increases in waste generation rates have also been stimulated by population change. The population of Ireland has steadily increased in recent years, being a function of inward migration and also a generally younger age structure than many other EU countries. This process has not affected Ireland uniformly, with particularly high growth levels in urban areas such as the greater Dublin region.

A third factor in increased waste generation is the significant changes in how Irish people are choosing to live. While numbers of households in Ireland are increasing markedly due to population change, a further cause is a drop in average household size. For example, the Central Statistical Office (CSO) has indicated that the average size of a household in Ireland is now three persons, a distinct contrast to the equivalent figure for 1971 - four persons per dwelling. It seems likely that this trend will continue, mirroring norms in other EU states. Again, this leads to an increase in waste generation, particularly where people are living alone.

3.1.2. Commercial and Industrial Waste

Like the volume of household waste generated in Ireland, the annual production of commercial waste has substantially increased since 1996. The cause of this trend is

the economic growth that has taken place during the time period. It is not clear from published statistics if this same phenomena applies to industrial waste.

3.1.3. Construction and Demolition Waste

Inevitably economic growth has greatly stimulated the volumes of C&D waste being produced annually. This is because there is a close association between growth in GDP, construction-related activity and C&D waste production levels.

Besides economic growth, the demographic changes described in relation to household waste also apply to C&D waste. For example, the very significant amount of house building taking place across the country inevitably causes additional volumes of C&D waste to arise.

3.1.4. Hazardous Waste

While economic growth and demographic change have affected the other waste types discussed by greatly increasing the annual amounts generated, they do not seem to have had a similar effect in respect of hazardous waste. This may be due to structural change within the Irish industry, which is becoming more service-based, but it is also likely that greater efficiencies in resource use at the site of waste generation have contributed to this welcome trend. In particular, the vast majority of sites that produce hazardous waste operate under the control of an Integrated Pollution Prevention and Control (IPCC) licence issued by the EPA. A fundamental requirement of these licences is the need to demonstrate continuous improvement especially in terms of hazardous waste minimisation.

3.2. Waste Collection Service Provision

3.2.1. Household Waste

By 2002, only eleven of the twenty nine county councils in Ireland were involved in household waste collection. However, public sector-based waste collection remains prevalent in the major cities, with only one of the five city councils – Limerick City Council – no longer involved. A small number of the town councils (formerly urban district councils or borough corporations) still provide their own household waste collection services. Overall, there is an approximately 50:50 split between the tonnage of household waste collected by local authorities and by contractors. However, this is heavily skewed, with a public near-monopoly existing in the major centres of population: Dublin, Cork and Galway Cities.

Over the last 15 years, there has been a gradual withdrawal by many local authorities from household waste collection. For some rural areas, there has never been a local authority collection service.

The result is that different private sector contractors may compete against each other for waste generated by householders. They may also compete with the local authority collection service itself. However, in relation to the kerbside collection of recyclables, tenders have been issued by certain local authorities to contract out this service. Hence in some areas, normal household waste collection for disposal purposes is arranged by a local authority, with the private sector involved in the kerbside collection of

recyclables such as exists in Dublin. In other cases, both aspects of the collection service remain with the local authority.

3.2.2. Commercial and Industrial Waste

In 1996, a significant number of local authorities were handling commercial waste, with a substantial level of coverage in the major cities. The contribution by local authorities to the collection of industrial waste was not so significant: although, as noted earlier, it seems likely that a proportion of industrial waste has been traditionally categorised as commercial waste. As noted, this is because the definitions of C&I waste tend to be used loosely by practitioners.

Since 1996, a number of local authorities ceased collecting non-household waste. While this trend has some similarities to that affecting household waste management, the effect on commercial waste collection arrangements is more extreme. While certain local authorities presently neither collect household, commercial nor industrial waste at all, others provide collection services only for household waste and have withdrawn from commercial waste collection. Dublin City Council still operates both a household waste and commercial waste collection service; this is an exception rather than the rule. For example, Waterford County Council ceased being involved in commercial waste collection by 2002. Other local authorities have also followed this pattern, with the result that the private sector picked up this aspect of the business.

3.2.3. Construction and Demolition Waste

Traditionally, much C&D waste has been disposed of in an ad-hoc fashion, for example bricks and concrete being used to improve laneways and entrances to farmers' fields. Similarly, sub-soils have been utilised to raise the level or otherwise generally improve agricultural and other land. When charges were low (or zero), a significant amount of C&D waste was landfilled.

Since waste licensing came into force, a very significant new outlet for C&D wastes such as sub-soils, rubble and so on has been for infrastructure provision at landfill sites. This includes daily or intermediate cover, site access roads and so on. In addition, many civic waste sites allow for the acceptance of builders' waste from households and – in some instances – from small commercial vehicles, such as light vans.

Overall, a very large variety of private sector-based hauliers are involved in C&D wastes. Many are generators of such wastes, such as large, medium and small-sized builders. Others are plant hire companies, whereby vehicles will be used intermittently for the movement of such wastes in conjunction with the haulage of materials such as quarry stone, sand and gravel and so on. Many skip hire companies are also extensively involved in C&D waste handling, albeit that a recent trend has been for specialisation, thereby resulting in C&D waste management becoming a principal focus of some businesses. Conversely, some larger skip-hire businesses have removed themselves from handling C&D waste to concentrate on the management of more general C&I waste.

3.2.4. Hazardous Waste

The collection arrangements for the management of hazardous waste have not been subject to the marked changes which have affected non-hazardous industrial and commercial wastes. This is because a private sector-based hazardous waste collection service has been present for a number of years prior to 1996, developing with the industrialisation of Ireland since the mid-1970s. Accordingly, a small number of firms continue to provide nearly comprehensive collection services. Although there have been a few new entrants, the main change has been ownership. Most of the long-term hazardous waste collectors are now under new ownership, some of which is multinational.

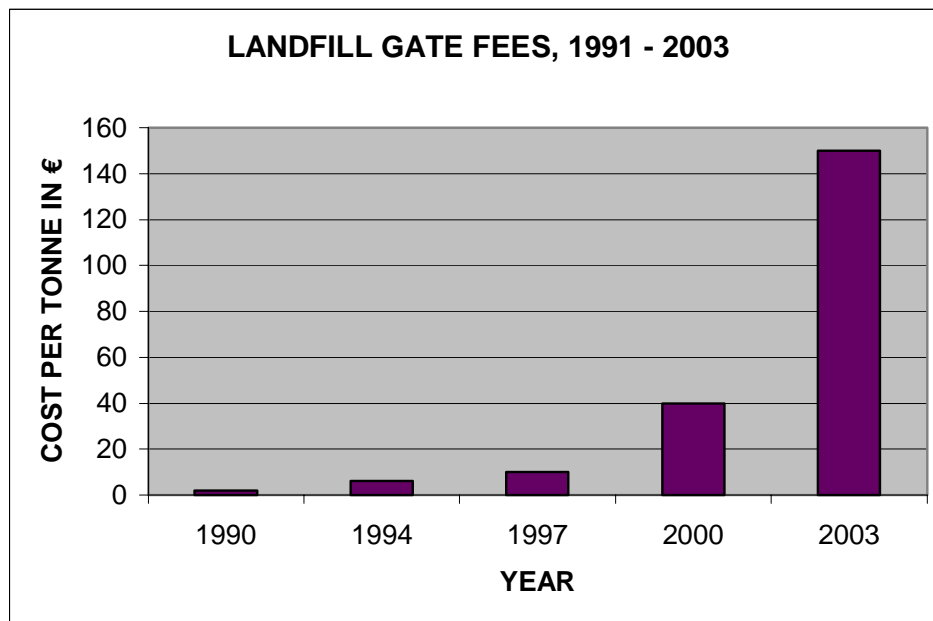
3.3. User Charges, Landfill Access & Quotas

3.3.1. Household Waste

A significant difference between Ireland and many other countries is that there are no local rates or city taxes levied on domestic property owners. It is not possible to recoup the cost of the provision of waste collection services by such mechanisms. Instead, household waste collection costs are levied directly onto householders as an annual charge. In some local authority areas, it is charged on a pre-paid bag or tag basis.

Although the local authority collection service in some areas had been free in the past, this has now changed. It is government policy that householders should be subject to full user charges for the service on a weight/volume basis. This is part of the process of implementing the EU 'Polluter Pays Principle'. The result is that waste charges have very significantly increased in recent years. Figure 3.1 provides an illustration of the increase in landfill charges over the period 1991-2003.

Figure 3.1: Average Landfill Charges 1991-2003 (Mr. Billy Moore, 2004)



3.3.2. Commercial and Industrial Waste

As is the case with household waste, landfill gate fees for the disposal of C&I waste have increased considerably since 1996. However, certain additional contrasts can be drawn between household waste and the other waste types.

Firstly, while the collection of household waste by the public sector in the major cities occurred in the absence of user charges until quite recently, this approach did not apply to generators of commercial or industrial wastes. Such bodies have always been subject to trade refuse charges. However, while these very substantially increased due to landfill gate fee rises, generators were always used to paying some level of waste collection fee.

Secondly, a significant issue that has uniquely affected C&I waste management has been the imposition of landfill access bans and quotas. In certain instances, the deposit of waste stemming from commercial or industrial sources was banned altogether by local authority landfill operators. In a small number of instances, this affected all waste from these sources, albeit that the more common version was to confine access to the deposit of industrial and commercial waste to generators solely located within the area of jurisdiction of the local authority landfill operator.

Like landfill bans, landfill quotas started to be introduced in 2001. Typically, they either fixed a waste contractor's allowable use of a landfill site on the previous year's input or progressively reduced the allowable input by a defined percentage.

Both landfill bans and quotas were a response to:

- The increasing scarcity in the availability of long-term landfill capacity;
- The WMA's statutory duty on local authorities to arrange solely for the collection and disposal of household waste; and
- A virtual absence in the provision of 'merchant' landfills for non-household waste operated by the private sector.

3.3.3. Construction and Demolition Waste

Changes in landfill management since 1996 have affected C&D waste management in a variety of ways. As noted above, improved landfill operational standards have provided new outlets in the form of cover materials. However, while this has been a general rule, certain types of landfill have moved to synthetic cover materials. The reason is that these displace significantly less void-space than the traditional forms of cover, such as sub-soils. Such differences are significant as, while a landfill site in one location may provide a significant outlet for C&D waste, another may not. Moreover, the introduction of synthetic cover systems at a particular landfill may mean that a significant local outlet for C&D waste may abruptly diminish.

3.3.4. Hazardous Waste

Hazardous waste charges in Ireland have always been quite high, as they often need to reflect long distance shipping costs to waste management facilities abroad. In Ireland, the co-disposal of hazardous wastes in landfill sites does not occur, unlike some other EU countries such as Great Britain. This means that the ban on co-

disposal which is contained in the EU Landfill Directive has not had a major affect on hazardous waste disposal arrangements - nor on prices. Furthermore, new entrants into the hazardous waste processing business in mainland Europe has meant increased competition, a factor which has tended to stabilise gate fees. For example, high calorific value liquid wastes are now consigned from Ireland for combustion in cement kilns, rather than passing to the traditional and more expensive option of high temperature incineration.

3.4. Waste Management Plans

All the waste management plans, required to be prepared and adopted by local authorities under the WMA, were completed by the end of 2001. This was not an easy process. Although a number had been completed in draft format two to three years before that date, a change of national law was necessary to cause their formal adoption. Because many waste plans indicated the necessity of providing waste-to-energy infrastructure, a number of local authorities declined to adopt them. This was mainly due to the elected members taking the view that the approval of a plan, which proposed incineration was not acceptable. This problem was addressed by changes to the WMA by the Waste Management (Amendment) Act 2001, which removed the responsibility for the adoption of the plan from the elected members and placed it in the hands of the county or city manager. All waste management plans are currently under review with the exception of Cork which is completed.

3.5. Waste Licensing, Waste Permitting & Public Opposition

3.5.1. Household Waste

An entirely new system for the environmental regulation of waste management facilities was introduced by the WMA. In the period 1997 to 1999, all existing local authority landfills were required to apply to the EPA for a Waste Licence (WL). Due to the large number of sites involved, the system was phased in on the basis of the annual waste input of each facility, with the largest sites being required to be subject to licence applications early on. In addition, any new major waste facility was required to be issued with an EPA licence prior to its operation.

The WMA sets down stringent criteria which must be satisfied for a WL to be granted. These criteria had their basis in certain specified requirements of EU law. In some cases, the licence application needed to be accompanied by an environmental impact statement.

Due to a significant historic legacy of poor standards of operation at many waste facilities in Ireland prior to the end of the 1990s, public opposition to both new and existing waste facilities was, and remains, significant. This opposition was articulated extensively in the process by which WLs were granted for both the existing and new waste infrastructure. In addition, prior to the WMA coming into effect, a number of landfills had their duration of operation significantly reduced as a result of court orders. Examples included the Tralee landfill in County Kerry, Ballymahon landfill in County Longford and the Doora landfill in County Clare. Legal challenges continued after the introduction of waste licensing.

3.5.2. Commercial and Industrial Waste

In the manner already described in relation to household waste, the introduction of the new waste licensing system led to a significant number of local authority-run landfill sites restricting the intake of waste through, for instance, the introduction of quota systems. Similarly, the establishment of new waste disposal infrastructure was delayed by local public opposition and a small number of landfill sites were closed by High Court order, e.g. Carrowbrowne Landfill, Co. Galway and Ballyguyroe Landfill, Co. Cork.

3.5.3. Construction and Demolition Waste

The period 1998 to 2000 saw C&D waste activities become subject to formal regulation by the introduction of the waste licensing system and also by the enactment of the Waste Management (Permit) Regulations 1998. Waste licensing applied to both landfill sites which utilise C&D waste for infrastructural reasons, as well as to the small number of sites which are dedicated to C&D waste disposal. C&D waste transfer stations involved in consigning more than 5,000 tonnes of such waste annually to other disposal facilities also are embraced by the licensing regime.

The Waste Management (Permit) Regulations 1998 require that C&D waste recycling facilities are subject to Waste Permits (WPs), albeit that they become waste-licensable if their disposal element exceeds 5,000 tonnes per year. A second important facet of the Permit Regulations is that they authorise the deposit of C&D waste for the purposes of land reclamation and land-raising provided that such activity is considered to be recovery. The enforcement provisions of the WMA are intended to ensure that C&D waste passes solely to licensed sites or those which have been granted WPs.

3.5.4. Hazardous Waste

The introduction of waste licensing has not had any major negative effect on the existence of hazardous waste facilities in Ireland. All hazardous waste sites became licensed, albeit that some had to fund significant upgrades in equipment for environmental protection reasons.

It is interesting to observe that the introduction of waste licensing for the pre-1996 hazardous waste infrastructure did not result in the very significant public opposition that affected many of the existing landfills. However, significant opposition was experienced in respect of a new hazardous waste facility in Fermoy, Co. Cork and also in relation to a proposal to construct a hazardous waste incinerator in Ringaskiddy, Co. Cork.

4. DRIVERS FOR THE “UNAUTHORISED WASTE” PROBLEM

Having set out above the key issues that affected waste management in Ireland from the mid 1990s to the present day, this chapter will demonstrate how those issues resulted in certain difficulties in the management of the different waste streams.

4.1. Household Waste

While the current management arrangements for household waste are less than satisfactory in some aspects, there is a need to reflect on what was happening prior to the WMA coming into force. This is essential in order to obtain a comparative perspective between the nature of the problem at that time and what it is today.

While household waste management was significantly cheaper in financial terms in 1996, it was associated with significant long-term costs, mainly of an environmental nature. Before 2000, the standard of operation of the landfill infrastructure was well-below acceptable international norms, with the result that neighbours to such sites were often subject to a major and ongoing environmental nuisance. More insidious environmental pollution – particularly to surface water and groundwater – was also a common effect. Besides resulting in environmental damage, the overly-cheap nature of waste management practices has left a significant financial legacy to this day: many local authorities are now having to pay to rectify problems associated with the older infrastructure. This includes pollution control measures, but also covers extremely costly site capping and restoration works. Effectively, the widespread failure to address these issues at the time many older sites were receiving waste has meant that the site users were being subsidised, either by present-day taxpayers or by current users who have to pay the presently high levels of landfill gate fees.

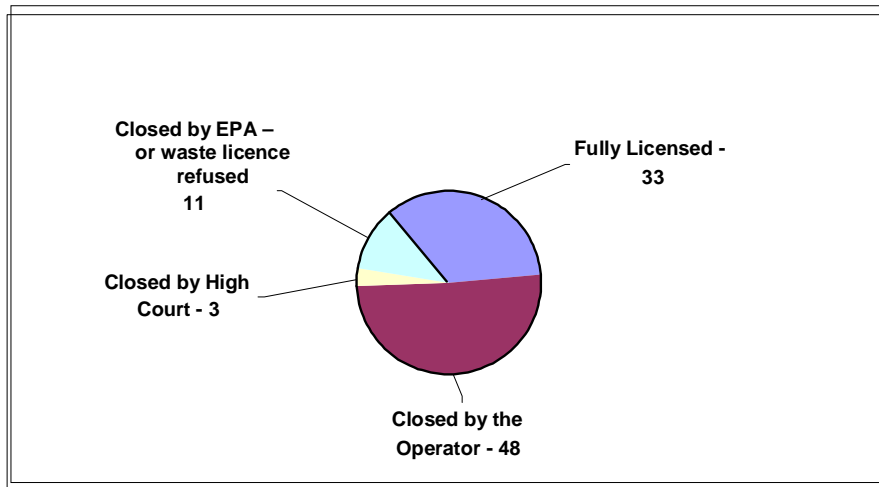
The historically poor standard of site operation has also left a further legacy. This is the national lack of confidence about the environmental integrity of waste management facility operation. This is articulated in widespread public opposition to virtually all types of waste facility.

4.1.1. Pre-1996 Waste Disposal Infrastructure

Up to 1996, Ireland was comprehensively served by a relatively large number of small landfills which provided sufficient capacity for the quantity of household waste collected. Only 4% of household waste was recovered (EPA, 1995 page 25), mainly at a limited number of bring facilities such as bottle banks.

Since that time, there has been a gradual reduction in the total number of landfills operating in Ireland and a gradual increase in infrastructure and facilities for the recovery of waste. Figure 4.1 illustrates the status of landfills that were open in 1995.

Figure 4.1: Open Landfills in 1995 – Status 2003



A major cause of this change was environmental regulation, which came into effect with the enactment of the waste licensing system under the WMA. Prior to that time, local authorities were left to operate their own landfill sites without any independent supervision or regulation. Hence it is not surprising that the introduction of licensing has meant very heavy expenditure to improve operational standards.

Since 1995, some of the smaller landfills have been shut down by their operators because they reached capacity. In other cases, the economics of continued operation became extremely questionable. For example, seventeen landfill sites were identified in 1995 as accepting less than 2,000 tonnes of waste annually. Overall, Figure 4.1 illustrates that over half of the landfills operating in 1995 were subsequently closed by the local authority operator.

Figure 4.1 also illustrates that a much smaller number of landfill sites were subject to licence applications to the EPA, which proved unsuccessful. As noted, the WMA sets out stringent legal criteria which must be satisfied for a licence application to succeed including that the EPA cannot grant a licence unless the activity can be operated in a manner which will not cause environmental pollution. Many of the sites closed by the EPA were poorly selected and had significant environmental impacts.

Finally, the standard of operation of some other landfill sites allowed successful legal challenges to their continuation to be mounted by local residents. Often this was in relation to the site's lack of compliance with common-law property rights, national or EU law and/or nuisance issues. Examples include the relatively new site operated by Cork County Council at Ballyguyroe and the Carrowbrowne facility in County Galway. The latter was the major destination of household waste generated in Galway City.

4.1.2. New Landfill Infrastructure

What is notable about the period between 1996 to about 2002 is that very few new landfills came on stream. While a new landfill site had opened in North Kerry in 1994, a much larger facility for household waste generated in the Dublin area - at Arthurstown,

County Kildare - was delayed for three years due to legal challenges relating to its planning permission. This site finally opened in 1997.

In the period from 1997 to 1999, applications to the EPA to establish new landfill infrastructure for household waste at Hardbog (South Tipperary County Council), East Wicklow (Wicklow County Council), East Limerick (Limerick County Council), Inagh (Clare County Council), and Knockharley (Meath County Council) were made. Of these, only the Inagh and Knockharley sites have been constructed. The East Wicklow proposal was subject to a successful legal challenge by a local opposition group, which also caused the withdrawal of the East Limerick proposal. Despite an application being lodged in 1997, the facility at Hardbog only became fully licensed in 2004 - again due to legal challenges (The Hardbog facility licence has again become subject to judicial challenge.)

A significant effect of the difficulty in the establishment of new final disposal infrastructure for household waste was an over-reliance on older waste facilities. And as noted earlier, the supply of these was also rapidly declining.

4.1.3. Waste Plans

As waste management plans set down a strategic structure for waste collection, disposal and recovery arrangements, delay in their adoption in the period up to 2001 significantly affected the ability of certain local authorities to establish modern waste infrastructure in the period 1998 to 2001.

4.1.4. Further Pressures on the Existing Landfill Infrastructure

A direct result of landfill closures and the difficulties in the establishment of new waste facilities is that there has been a significant intensification of usage of the older waste sites. This has resulted in them filling more rapidly than expected.

Pressures on the existing waste infrastructure also meant that certain parts of the country became reliant on one major landfill site, for example, the Balleally landfill site in North Dublin. After the closure of the Dunsink landfill at the time waste licensing came into force, this site became the major disposal facility for waste generated in the Dublin region. By the end of the 1990s, this one site provided one fifth of the total landfill capacity of Ireland.

The Balleally facility was licensed in 2000, being allowed to accept 460,000 tonnes of waste per year. However, the site was becoming increasingly full and, for that reason, the duration for the filling of the facility with biodegradable waste was limited by the EPA to continue only to the end of 2002. In addition, Fingal County Council's original proposal to extend this facility was refused by the EPA in 2000, being granted later on in 2003 after a re-design and an application for the review of the original licence.

The situation has improved somewhat since 2001, as illustrated in Table 4.2.

Table 4.2: Estimated Landfill Capacity Remaining in 2001 and 2004 (DEHLG, 2004 page 58)

Region	Estimated landfill capacity remaining in 2001	Estimated landfill capacity remaining in 2004
Dublin	3 years	7 years
Cork	2 years	20 years
Connaught	6 years	7 years
South East	2 years	4 years
Clare/Kerry/Limerick	8 years	7 years
North East	37 years	19 years
Midlands	8 years	7 years
Donegal	2 years	2 years
Kildare	2 years	6 years
Wicklow	3 years	13 years
Total	6 years	10 years

4.1.5. Household Waste Collection Charges and Landfill Gate Fees

The scarcity of landfill supply has caused gate fees to rapidly increase year-by-year as illustrated in Figure 3.1. Table 4.3 outlines recent gate fees charged by each local authority. All costs quoted are inclusive of landfill tax.

Table 4.3: Local Authority Landfill Charges for Municipal Waste – September 2004 (www.wyg.ie)

Landfill Operator	€ per tonne
Cork County Council	240
Wicklow County Council	201
Fingal County Council	185
Wexford County Council	180
Kerry County Council	170
South Tipperary County Council	165
Clare County Council	160
Carlow County Council	156
Limerick County Council	155
Westmeath County Council	150
Mayo County Council	150
North Tipperary County Council	148.50
Monaghan County Council	145
Louth County Council	145
Roscommon County Council	140
Ballinasloe UDC	137
Offaly County Council	135
Laois County Council	135
Kilkenny County Council	126
Cavan County Council	125
Donegal County Council	125
Cork City Council	Household only
Waterford County Council	Household only

4.1.6. Waste Recovery Infrastructure

Ireland's size and island situation places the country at a significant disadvantage in respect to its ability to provide significant infrastructure for the recovery of waste. In summary, a lack of economies of scale means that it is costly to establish recovery facilities here. The national market for materials recovered is also limited in extent.

Moreover, EU free-trade law permits the unrestricted export of bona-fide recyclable wastes. The result is that wastes recovered from the household waste stream in Ireland can freely pass to larger and more sophisticated recovery facilities abroad or can be sent for recycling to countries where labour costs are significantly cheaper. Again, this reality places a significant restriction on the development of indigenous waste processing infrastructure.

The net result is that while Ireland has developed some significant intermediate waste recycling infrastructure – such as mechanical sorting – there are few, if any, actual final processing facilities⁴. Indeed, over the period 1995 to the present, the situation worsened with the closure of both the Irish Glass Bottle plant at Ringsend and ISPAT's (formerly Irish Steel) facility in Cork. The result of these closures is that virtually all cullet collected from bottle banks and scrap metal passes abroad for ultimate recovery.

While high landfill gate fees have significantly stimulated the diversion of waste to waste recovery infrastructure, it has done so on the basis of comparative price. In other words, it is still financially costly to consign these wastes overseas for ultimate recovery, but the price is less than the use of landfill.

Increasingly in this decade, household waste recovery is becoming extensive and the norm rather than the exception. There has been a major roll-out of kerbside collection systems, as well as the significant reinforcement of the bring facility infrastructure. This process is a result of government policy, high landfill prices and also has been stimulated by the application of subsidies from Repak Ltd. in relation to packaging waste and the Waste Management (Packaging Waste) Regulations 2003.

4.1.7. Summary of the Problem

As has been noted, a very large proportion of the older landfill sites were shut down between 1996 and 2001. In that period, few new sites opened, while the extension of the life of certain of the existing sites also proved difficult. Waste generation rates were growing significantly.

The resultant scarcity of landfill capacity caused gate fees to rise. This coincided with the implementation of a national policy for imposing realistic waste charges on all producers of household waste, which itself caused user charges to increase significantly. These changes were compounded by increases in landfill charges for other reasons, particularly due to compliance costs associated with the new waste licensing system.

While recycling facilities and new collection arrangements are now coming on stream, this process only got underway in a significant manner after 2002. It still has not resulted in final as opposed to intermediate recycling infrastructure that converts waste into useable materials; instead, most new infrastructure is associated with the processing and sorting of waste to make it suitable for export to non-Irish reprocessors.

The result is that both the private sector waste industry involved in waste collection and the individual householder have a choice: this is to pay the additional charges or to seek alternative solutions. Alternatives could include enhanced waste recovery, but also extend to unauthorised practices. As the householder-landfill waste lifecycle

⁴ The obvious exception to this general rule is waste composting plant.

evident in 1996 developed into a much more intricate and sophisticated system by the early years of 2000, the temptation for engaging in unauthorised activity increased. This was compounded by spiralling waste management costs arising from landfill gate fee increases. What was, in effect, a heavily subsidised system for the collection and disposal of household waste with either zero or low cost to the householder, poorly operated landfills and limited involvement by the private sector was replaced during the late nineties by a system that required the householder to pay for collection, major investment in disposal and recovery infrastructure and increased involvement by the private sector. During this period of intensive change there was therefore significant temptation and opportunity for both householders and those in the business of waste collection to find the cheapest outlet for their waste with some choosing unauthorised options.

4.2. Commercial & Industrial Waste

4.2.1. Landfill Provision and Access

In the section on household waste management, it was noted that a very substantial reduction of landfill supply occurred across Ireland in the period 1996 to 2002. This had very significant effects on the management options available for C&I waste.

The reasons for the reduction in landfill supply have been described above. However, because local authorities do not have a statutory duty to facilitate the disposal of C&I waste, a significantly greater effect was felt by hauliers and generators of these materials. This took two forms. Firstly, hauliers of C&I wastes were not allowed to continue to access certain local authority landfills. This denial of access either affected all such wastes or solely C&I waste that was generated outside the local authority landfill operator's functional area. Examples include South Dublin County Council's Ballyogan landfill site, which was extremely short of capacity, the Kilbarry site in Waterford and many other facilities.

Secondly, the above-mentioned quota system was introduced. In summary, quotas affected three key sites. These were:

- Balleally in Fingal, a site which takes an inordinate proportion of the national waste arising and where an early proposal for an extension was not approved by the EPA;
- Kinsale Road in Cork, where there was no potential for a lateral extension of the landfill footprint; and
- Ballinasloe landfill in County Galway, which was already under pressure due to the closure of Galway City's Carrowbrowne landfill by a High Court Order.

However, quotas then spread to other sites, such as the nearby landfills in the Cork County area that started to receive waste which hitherto passed to Kinsale Road.

The restrictions on landfill availability and access were also not cushioned by the development of new facilities. In the period 1996 to 2000, only one – the KTK landfill site at Kilcullen, Co. Kildare - provided entirely new capacity when it was licensed in April 1999. However, access restrictions at the Ballyogan site and the quota system introduced at Balleally resulted in the KTK site coming under pressure and hence quotas were also introduced there in 2001. Effectively, this limited access to the KTK site to a small number of the larger waste hauliers that had been customers to the site since it had started up.

However, a significant number of WL applications from private sector operators were made later in 2001. What is telling is that that virtually none provide any significant capacity to this day. For example, in 2001, besides Cork County Council lodging an application for a landfill at Bottlehill, Celtic Waste Ltd (now Greenstar) proposed landfill sites to accept a range of wastes at five locations in Ireland, Indaver (Ireland) lodged an application for a waste-to-energy plant at Carranstown, Co. Meath and KTK Sand and Gravel Ltd. applied for another site at Ballymore Eustace, Co. Kildare to accept a range of industrial and commercial waste types.

Of the five facilities proposed by Greenstar in 2001, only one was built by the end of 2004. In 2004, a draft proposed licence for the Carranstown incinerator was granted but is now subject to objections. The second KTK site at Ballymore Eustace, Co. Kildare – which was expected to take up to 250,000 tonnes of non-biodegradable C&I waste from the Dublin area – was restricted to only accepting C&D waste when it was licensed in June 2002. It was later also subject to a successful legal challenge in 2004 that caused site operations to cease.

4.2.2. Waste Recovery Infrastructure

In the section on household waste above, it was noted that Ireland has very little “final” waste recovery infrastructure, but that increasingly there has been heightened investment in intermediate waste sorting/processing facilities. This trend strongly applies in respect of industrial and commercial wastes, whereby investment has been generally much more rapid than that affecting the household waste stream.

The major drivers for the investment by the private sector in intermediate waste processing capability have been the circumstances outlined above: landfill access problems, quotas and heightened gate fees. Even on their own, quotas inevitably required private sector waste collectors to look at enhanced recycling opportunities. However, all these factors combined have resulted in virtually all waste contractors of any size developing transfer stations and recycling facilities with major waste segregation capability.

These factors have perhaps caused one of the most marked changes in waste management arrangements in Ireland since the WMA came into force. While a small number of local authorities were at the end of 2004 still simply collecting household waste and taking it all to landfill, very little industrial or commercial waste passes direct to landfill from private sector-based collectors. This is a very significant change since 1996, when virtually all waste collectors operating outside the major cities were simply collecting waste from commercial or industrial premises and transporting it to a nearby local authority landfill site. Since 2000/2001, a major investment has been made in waste processing technology, including picking lines and other forms of waste segregation. Moreover, an essential element of such businesses is either the direct ownership of, or access to, a waste transfer or waste recovery facility.

While there has been major investment in waste recovery technology, the previous chapter has indicated that there are significant reasons why such facilities involve mainly intermediate processing. This results in segregated waste streams which are potentially suitable for recycling. However, it does not commonly lead to final recycling being undertaken in Ireland. The result is that very significant volumes of recyclables are being consigned out of Ireland for processing either in Europe or further afield.

4.2.3 Summary of the Problem

It is mainly the private sector that has been traditionally involved in the management of industrial and commercial waste in Ireland. In 1996, a very large proportion of this waste stream was taken directly to landfill sites, with most non-city based waste contractors being solely involved in the provision of waste receptacles and waste transport. Since that time, this pattern has changed markedly, being stimulated by increased landfill gate fees and landfill access problems caused by scarcity of availability and by the imposition by certain local authorities of quota systems.

A result of these changes was the need for waste companies to make a very substantial investment in intermediate waste processing technology, particularly in the form of waste transfer stations and waste sorting systems, which is reflected by the increase in these types of facilities in recent years. However, all these require some access to waste disposal capacity in the form of landfill. Some waste contractors chose not to avail of legitimate landfill outlets and sought alternatives. These included unauthorised dumping both in Ireland and elsewhere. Moreover, the steep increases in landfill gate fees acted as an incentive for less scrupulous operators to seek cheaper disposal options including unauthorised dumping. Finally, as waste lifecycles were becoming more complex due to intermediate waste processing, it was also apparent that cheap or even fraudulent outlets for segregated waste had an attraction to some less responsible organisations, mainly for reasons of competitive advantage.

4.3. Construction & Demolition Waste

4.3.1. Infrastructure Provision

It has been noted that C&D waste is being generated in increasing volumes across the country. However, for a number of reasons, the provision of infrastructure for C&D waste storage, recycling and disposal remains patchy to this day. This is partly a reflection of the low environmental hazard of these materials, as well as C&D waste disposal always having been a common-place, localised but small-scale activity and that knowledge about the scope of the regulatory provisions appears to be limited in some parts of Ireland.

Due to the material's weight, bulk and potentially low final disposal cost – at least in comparison to wastes of a more biodegradable nature – the catchment for C&D waste disposal facilities tends to be close to the major cities. This also means that there tends not to be that much intermediate processing. However, Dublin is an exception to this general rule. In County Dublin, significant waste processing and handling capacity is available for C&D waste management.

However, a much lower level of establishment of intermediate processing capacity for C&D waste has occurred outside the greater Dublin area. This is partly because direct haulage to final C&D disposal outlets in the surrounding rural areas is feasible. Hence access to final disposal facilities at local rural locations also seems to preclude intermediate processing. For example, in 2002 a major C&D recovery facility at the Kinsale Road landfill site in Cork ceased operation due to the fact that most material accepted at this facility was being beneficially reused on site by the adjoining landfill and sufficient material had been accepted to meet the on-site requirements.

4.3.2. Summary of the Problem

C&D waste is commonplace and arises in both small and large quantities from building activities. It is handled by a large number of different bodies of varying sizes. Being bulky and heavy, it tends to be managed locally, except in Dublin.

Being of a low hazard, there remains a poor level of recognition that C&D waste must be managed in accordance with the WMA. The occurrence of small-scale unauthorised C&D waste deposition sites is frequent and, due to their nature, difficult to regulate as the activities are essentially transient, with the sources of the waste being difficult to identify. However, their existence would tend to under-cut the financial cost of more legitimate C&D waste facilities and hence suppress investment in this type of infrastructure.

4.4. Hazardous Waste

4.4.1. Infrastructure Provision

In comparison to the arrangements affecting non-hazardous waste, hazardous waste management in Ireland is generally much more 'mature', in the sense that infrastructure exists to manage these materials, either using indigenous capacity or the option of export. Accordingly, there is adequate capacity for hazardous waste management within Ireland and hence there is not the significant mismatch between supply and demand that affects other waste streams. However, a significant proportion of the existing capacity is totally reliant on the subsequent transport of hazardous wastes out of Ireland

The National Hazardous Waste Management Plan (EPA, 2001) contains policies which require an increasing emphasis on 'final' hazardous waste disposal infrastructure to be established within the state, with less reliance on intermediate waste processing and subsequent export. The Plan envisages the need for hazardous waste landfills and thermal treatment to be established in proximity to the major sources of hazardous waste arisings.

4.4.2. Waste Collection Infrastructure

The highlighting by the National Hazardous Waste Management Plan of 'unreported' waste remains an issue of some concern – indeed it is this aspect of hazardous waste management that makes it classifiable into the 'unauthorised waste' category.

The unreported waste category in the National Hazardous Waste Management Plan generally concerns small levels of hazardous waste arisings, often stemming from small-scale waste producers and the agricultural sector. In essence, the problem is that, while there would appear to be waste collection infrastructure availability, this availability is not being utilised by many small-scale waste producers and the agricultural sector.

4.4.3. Summary of the Problem

In comparison to the other waste streams, hazardous waste management in Ireland is generally much more 'mature', in the sense that infrastructure exists to manage these

materials, either using indigenous capacity or the option of export to continental Europe. Despite national economic growth and heightened industrial activity, the general trend for annual hazardous waste generation does not indicate any significant increase – a marked difference to the other waste types discussed earlier. While there is a need to attract indigenous final disposal capacity, in relation to unauthorised waste practices, the issues in the main relate to improving the collection efficiencies in respect of small waste generators and improving agricultural hazardous waste management practices.

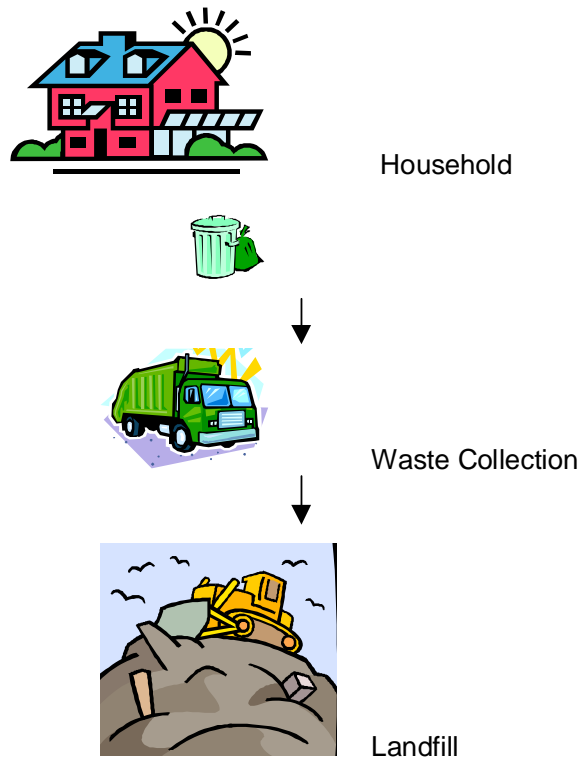
5. OPPORTUNITIES FOR MISMANAGING WASTE

This chapter describes typical life cycles for the management of household, C&I and C&D waste and identifies the areas within each life cycle where the greatest opportunities for unauthorised behaviour and activity exist. What is apparent are the very rapid changes which have affected waste management in Ireland since the WMA came into effect. A simple and highly landfill-reliant system involving waste producer/hauler/landfill site has been replaced by a sophisticated and intricate waste management network. This network typically involves the significant intermediate processing of virtually all types of wastes with the resultant separated fractions passing to a variety of recycling or final disposal options.

5.1. Household Waste

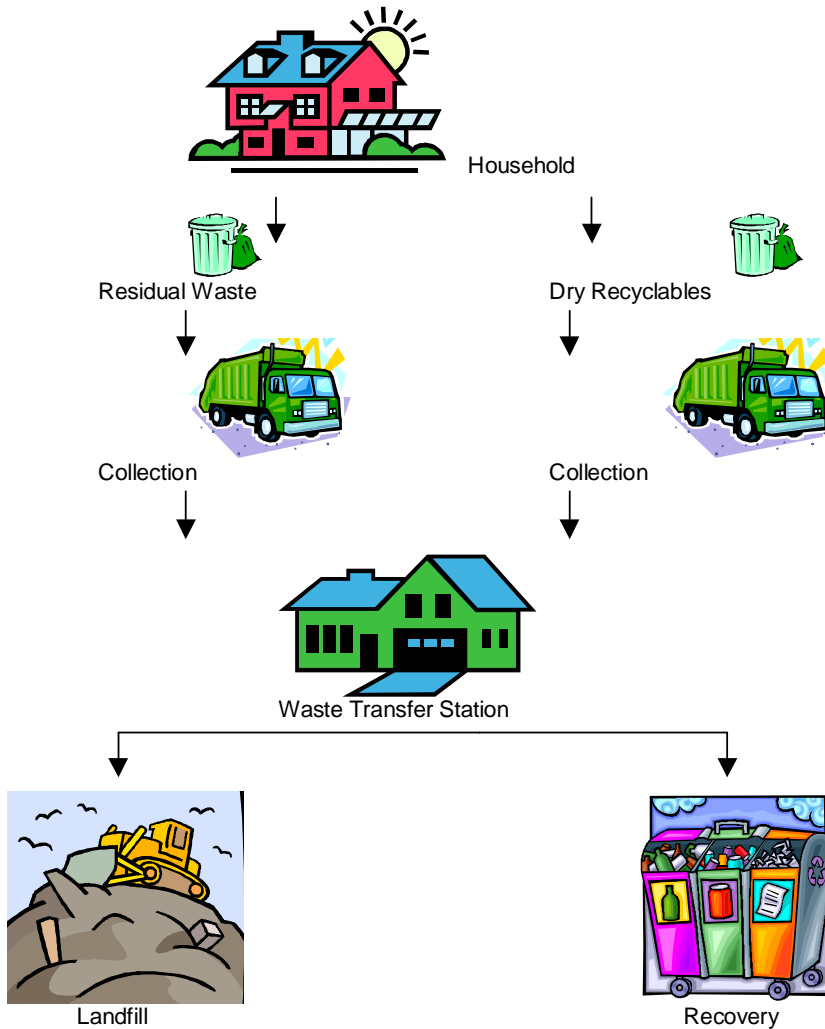
The following illustrations identify weaknesses in the waste disposal and recovery life cycles for two waste collection scenarios for household waste. The first scenario depicts the traditional system used. For each scenario depicted, the weak points are identified. It is at these weak points that the greatest opportunity exists for potential mismanagement or unauthorised waste activities to occur.

Figure 5.1: Scenario 1 - One bin collection with landfill disposal



Weaknesses in Waste Chain Life Cycle – Scenario 1	
Waste Chain Link	Weakness
Householder	<ul style="list-style-type: none"> Misrepresentation of waste stream for collection e.g. the inclusion of inappropriate waste streams with household or commercial waste for collection for disposal Backyard burning, not participating in a refuse collection service
Waste Collection	<ul style="list-style-type: none"> Operation without a WCP Collecting waste streams not authorised on WCP Transporting collected waste to facilities not authorised on WCP Illegally disposing of collected waste at unauthorised facilities in Ireland, Northern Ireland or overseas
Disposal Facility	<ul style="list-style-type: none"> Operating without a WL Accepting unapproved waste streams in breach of WL Accepting waste volumes in excess of volumes stated in WL

Figure 5.2: Scenario 2 - Two bin collection via a Waste Transfer Station for recovery and disposal



Weaknesses in Waste Chain Life Cycle – Scenario 2	
Waste Chain Link	Weakness
Householder	<ul style="list-style-type: none"> • Misrepresentation of waste stream for collection e.g. the inclusion of inappropriate waste streams with household or commercial waste for collection for disposal • Backyard burning, not participating in a refuse collection service
Waste Collection	<ul style="list-style-type: none"> • Operation without a WCP • Collecting waste streams not authorised on WCP • Transporting collected waste to facilities not authorised on WCP • Illegally disposing of collected waste at unauthorised facilities in Ireland, Northern Ireland or overseas • Illegally disposing of collected waste at unauthorised Waste Transfer Station
Waste Transfer Station	<ul style="list-style-type: none"> • Operating without a WP or WL • Accepting unapproved waste streams in breach of WP or WL • Accepting waste volumes in excess of volumes stated in WP or WL • Transferring waste to unauthorised waste collectors • Sending waste to illegal disposal sites • Failure to remove contaminants and dispose of appropriately • Transportation of biological fines as 'green list' waste • Shipment of mixed dry recyclables as 'green list' waste • Misclassification of 'amber list' waste as 'green list' waste • Transportation of grossly contaminated "recyclables" to recovery • Failure to ship mixed dry recyclables under TFS
Recovery Facility	<ul style="list-style-type: none"> • Accepting dry recyclables for recovery but being disposed
Disposal Facility	<ul style="list-style-type: none"> • Operating without a WL • Accepting unapproved waste streams in breach of WL • Accepting waste volumes in excess of volumes stated in WL

5.2. Commercial & Industrial Waste

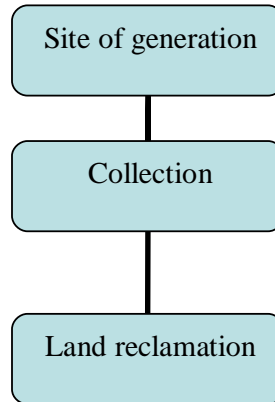
The various waste chain life cycle options used for the collection and management of C&I waste are similar to the waste chain cycles illustrated above for the collection and management of household waste. The only exception is that some commercial, and predominantly all industrial waste is collected using various forms of skips. Commercial waste is normally co-handled with household waste at transfer stations and material recovery facilities provided by the private sector. The weaknesses in the chain life cycles for commercial waste collection scenarios are identical to those identified for household waste.

5.3. Construction & Demolition Waste

C&D materials are collected from source as either mixed C&D, soil and stone and segregated C&D materials, for example, timber, metals, plastics, etc.

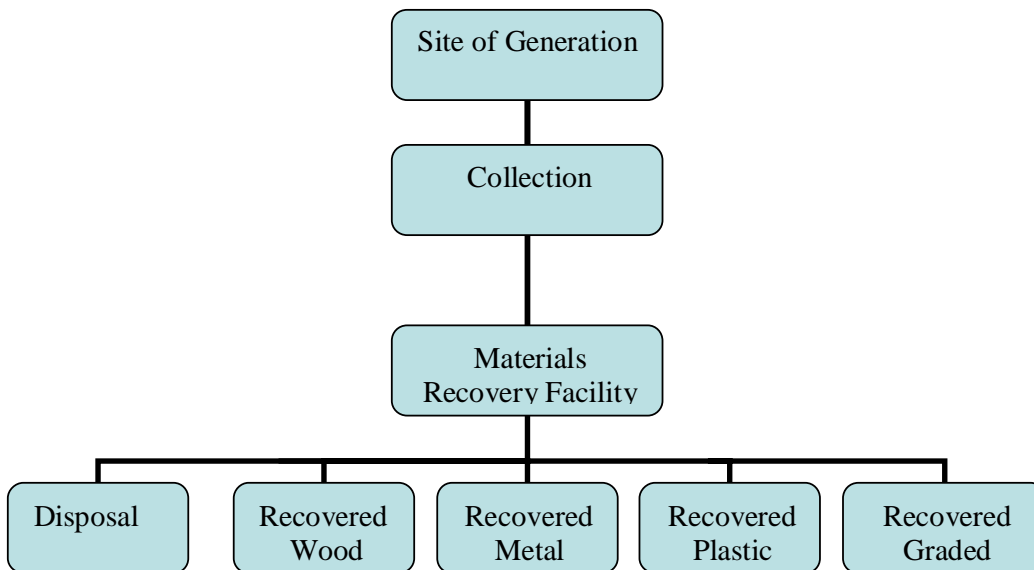
Figures 5.3 and 5.4 identify weaknesses in the waste disposal and recovery cycles for the management of C&D materials. It is at these points that the greatest opportunities exist for mismanagement or unauthorised waste activities to occur. For each scenario depicted, the weak points are identified.

Figure 5.3: Recovery of Soil and Stone



Weakness in Waste Chain Life Cycle	
Waste Chain Link	Weakness
Site of Generation	Soil and stone contaminated when presented for collection
Waste Collection	Operation without a WCP Collecting waste streams not authorised on WCP Transporting collected waste to facilities not authorised on WCP Illegally disposing of collected waste at unauthorised facilities
Land reclamation	Operating site without a WP Accepting contaminated soil and stone in breach of WP Accepting waste volumes in excess of volumes stated in WP

Figure 5.4: Mixed C&D and Separated Collected Recyclables of C&D Origin



Weakness in Waste Chain Life Cycle	
Waste Chain Link	Weakness
Site of Generation	<ul style="list-style-type: none"> • Recyclable fractions contaminated when presented for collection • Mixed C&D waste sent for recovery • On-site burning and other forms of on-site disposal
Waste Collection	<ul style="list-style-type: none"> • Operation without a WCP • Collecting waste streams not authorised on WCP • Transporting collected C&D waste to facilities not authorised on WCP • Illegally disposing of C&D waste at unauthorised facilities • Recovery of C&D waste at site permitted for the acceptance of soil and stone only
Materials Recovery Facility	<ul style="list-style-type: none"> • Operating without a WP or WL • Accepting unapproved waste streams in breach of WP or WL • Disposal of waste at sites permitted or licensed for recovery • Accepting waste volumes in excess of volumes stated in WP or WL • Transferring waste to unauthorised waste collectors • Failure to remove contaminants and dispose of appropriately • Accepting contaminated soil and stone in breach of WP
Disposal Facilities	<ul style="list-style-type: none"> • Operating without a WP or WL
Recovery Facilities	<ul style="list-style-type: none"> • Operating without a WP or WL • Failure to remove contaminants and dispose of appropriately

6. NATURE AND EXTENT OF UNAUTHORISED WASTE ACTIVITY

In the previous chapter, the areas of potential weakness in the management of the different waste streams were identified. In this section, an analysis of the nature and extent of unauthorised activity in relation to the management of the waste streams is presented. This is based on a consideration of the main potential areas of weakness and the information obtained in the course of the study.

6.1. Uncollected Household Waste

Some waste produced never makes it into the waste management system. This is because the waste is disposed of or recovered directly by the producer. This in itself is not necessarily a problem unless the producer is engaging in unauthorised practices such as fly-tipping or backyard burning for the disposal of the waste. The issue of uncollected waste and its management is of most significance for the household sector.

The EPA has estimated that in the region of 287,000 tonnes of household waste was not presented for collection in 2003. This volume represents waste arisings from over 700,000 persons. The estimate is based on the percentage of households provided with a waste collection service, presented by waste management region in Table 6.1.

Table 6.1: Percentage of Households Provided with Waste Collection Service (EPA, 2004b)

Waste Management Planning Region	Percentage of Households provided with Waste Collection Service
Dublin Region	100%
Cork Region	69%
Connaught Region	63%
South East Region	79%
Mid-West Region	63%
North-East Region	70%
Midlands Region	74%
Donegal	45%
Kildare	97%
Wicklow	76%
National	79%

Nationally, on average 21% of households are either not provided with or not availing of a waste collection service. In 2002, the Central Statistics Office (CSO) reported the number of households in the State at 1,264,878 houses. The estimated number of households not participating in a waste collection service is therefore in the region of 266,000 households.

While it cannot be assumed that householders disposed of all of this waste in an unauthorised manner, the fact that such a large quantity of household waste never enters the waste collection system is itself of significance. The only reasonable conclusion that can be arrived at is that significant quantities of household waste are

being disposed of directly by householders, the most likely route being backyard burning⁵.

6.2. Waste To Northern Ireland

The EHSNI was consulted in order to obtain information on cross-border unauthorised waste matters. The EHSNI estimates that in the order of tens of thousands of tonnes of waste have been illegally transported from the Republic of Ireland to Northern Ireland in 2003/2004. The types of wastes that are reported by the EHSNI as originating in the Republic of Ireland include municipal solid waste, commercial/industrial and C&D waste. No further information was provided on the relative amounts of each waste type. In the region of fifty sites containing waste from the Republic of Ireland have been identified. The EHSNI consider that regular waste vehicles are used to transport the material and that much of the waste crosses at Newry with amounts crossing the border at all main crossing points. The major environmental problem from the illegal waste movement arises from biodegradable wastes being deposited in unlicensed and un-engineered sites. The EHSNI reports that many of these sites are showing signs of serious environmental pollution.

In December 2004, ten facilities in the Republic of Ireland were raided by An Garda Síochána with the support of the OEE as part of a coordinated action targeting a number of companies suspected of having engaged in illegal shipment of waste to Northern Ireland. A large amount of documentation was taken during these raids and investigations are ongoing in both jurisdictions which are likely to lead to prosecutions.

Waterford City Council reported that shipments of waste from two private collectors was returned from Northern Ireland. In one case, the shipment had been burned prior to its return while in the second case the shipment was not accompanied by the appropriate TFS documentation. In both cases, the waste involved originated from C&I activities.

6.3. Backyard Burning

Backyard burning was identified by twenty seven local authorities as being a significant problem in their functional areas (see Table 6.2). Private householders were identified as the single biggest offender, though some local authorities have experienced problems with commercial enterprises and with building contractors/developers.

⁵ Some householders in rural areas would also be bringing their waste directly to their local landfill.

Table 6.2: Local Authorities that identified Backyard Burning as a Problem

Counties	Backyard Burning
Donegal County Council	Yes
Cavan County Council	Yes
Sligo County Council	Yes
Galway County Council	Yes
Roscommon County Council	Yes
Mayo County Council	Yes
Limerick City Council	Yes, widespread
Limerick County Council	Yes, both domestic and commercial
North Tipperary County Council	Yes, both domestic and commercial
Clare County Council	Yes, domestic (urban and rural) and organised
Kerry County Council	Yes
Cork County Council	Yes
Waterford County Council	Yes, rural, but reducing
Waterford City Council	Yes
Kilkenny County Council	Yes
Carlow County Council	Yes
Wexford County Council	Yes, both domestic and commercial
South Tipperary County Council	Yes, both household and commercial
Kildare County Council	Significant problem
Wicklow County Council	Yes
Dublin City Council	Yes, at halting sites and some commercial
Fingal County Council	Yes, at halting sites
South Dublin County Council	Yes, household and commercial
Dun Laoghaire/Rathdown County Council	Yes
Offaly County Council	Yes
Westmeath County Council	Yes
Longford County Council	Yes, nothing major
Laois County Council	Yes, household, commercial and by developers

While it cannot be assumed that all householders not participating in weekly waste collection services dispose of refuse by backyard burning, the number of complaints received by the local authorities suggest that a significant portion are using backyard burning as their preferred method of refuse disposal.

Local authorities are attempting to tackle the problem of backyard burning among householders and others using:

- Bye-laws
- awareness and information campaigns
- issuing of warning letters

Leitrim County Council, for instance, has introduced Bye-Laws to ensure that all householders located within a 200 m radius from public roads serviced by a permitted refuse collector participate in a refuse collection service.

The more preferred method to raise public awareness in relation to backyard burning is through the use of the media. Local authorities have placed advertisements with local radio stations and in local newspapers indicating that it is an offence to dispose of refuse through backyard burning. Warning letters are sometimes issued to householders suspected of being involved in backyard burning.

When commercial enterprises are reported to local authorities for backyard burning, these facilities are normally visited by a waste enforcement officer or community

warden. If there is visible evidence that backyard burning has taken place, the facility manager is given a verbal warning and instructed to cease any backyard burning activities immediately and to produce evidence that the facility is being serviced by a permitted waste collector. In most cases it has been reported that the verbal warning is sufficient to ensure that burning on site ceases. It would also be common practice for the investigating waste enforcement officer/community warden to revisit the facility to ensure that no further evidence of backyard burning was detectable and to review documented evidence that the facility operator was using a permitted waste collector to manage all waste generated on site.

The third main group identified as being involved in backyard burning are building contractors/developers. It is now common practice among the planning sections of most local authorities that planning permission applications submitted by developers be accompanied by a waste management plan. These plans should outline the waste segregation techniques to be practised during the site's development and identify how each of the waste fractions separated on site are to be managed. Some local authorities have developed information packs outlining the expectations required that must be met in relation to the appropriate disposal of waste on construction sites. Monthly commencement notices prepared by the planning section of the local authorities are used to identify developers/builders to whom the information pack should be circulated.

6.4. Fly-Tipping

Like backyard burning, fly-tipping is considered a serious problem among local authorities. Fly-tipping can be described as the indiscriminate dumping of:

- bags containing household waste
- waste electronic and electrical equipment
- end-of-life vehicles
- pallets
- C&D material and other waste streams.

Indiscriminate fly-tipping occurs at random locations in most counties, but fly-tippers tend to favour fly-tipping in remote locations such as bogs, forestry areas and on commonage land. Fly-tipping is suspected to be conducted by both private individuals and unauthorised waste collectors that predominantly operate in cities and the larger urban areas. These unauthorised waste collectors tend to fly-tip in rural areas adjacent to the cities and the urban areas. It has been reported that some fly-tippers, to conceal evidence and to avoid detection, burn fly-tipped waste. Where end-of-life vehicles have been abandoned, it is not uncommon for these vehicles to be also burned to avoid tracing owners.

Local authorities have developed a number of procedures aimed at identifying fly-tippers and measures to prevent this activity occurring. When a fly-tipping incident is reported to, or detected by a local authority, the investigating waste enforcement officer attempts to retrieve evidence that may be used to identify the waste producer. If details such as names and addresses are retrieved, either a litter fine is issued under the Litter Pollution Control Act or a Section 18 Notice is served under the WMA. The fly-tipped waste is then removed for disposal at an appropriate facility.

Where fly-tipping occurs on commonage or on lands in remote areas, the local authority in this instance tends to seek the cooperation of the landowners in preventing fly-tippers access to this land. This cooperation involves, for instance, the local authority removing fly-tipped waste and the landowner's improving fences and erecting gates in an attempt to prevent future access. Similarly, where fly-tipping is occurring in forestry areas, local authorities have sought the cooperation of the forestry owners in removing the waste and in improving security by the erection of gates and fences.

If the registered owner of lands cannot be readily identified by the local authority, then the local authority uses the Land Registry to trace the registered owners of the land. This technique is used by the local authority to identify the owners of commonage land and bog land in an attempt to seek their cooperation to prevent further fly-tipping on these lands. For instance, Wicklow County Council has issued Coillte with a WCP, thereby authorising them to collect fly-tipped waste from their lands.

In Galway, the County Council indicated that they had a particular problem with the fly-tipping of large household bulky items on commonage land and in bogs in the hinterland of the city. In an attempt to eradicate this problem, Galway County Council, in association with Galway City Council, commenced a monthly collection service collecting large bulky household items. Depending on the item collected, an appropriate fee is charged. Since the commencement of this service, there has been a noticeable decrease in the quantity of these materials fly-tipped. The County Council suspected that unauthorised waste collectors were responsible for a lot of the fly-tipping of large household bulky items.

Fly-tipping is also reported to be occurring at bottle banks and civic amenity sites. A number of local authorities have erected closed circuit TV or have increased their physical presence at these sites in an attempt to prevent fly-tipping.

In local authority housing estates where particular fly-tipping "hot spots" occur, general practice is that the Environment Section will liaise with their colleagues in the Housing Section in an attempt to curtail the problem. If there is a suspected health risk associated with fly-tipping in these housing estates or in general urban areas then assistance is sought from local Environmental Health Inspectors.

Within the Dublin Region fly-tipping "hotspots" identified included Dunsink Lane (Fingal County Council) and at Lynch's Lane, Lucan and Killinarden, Tallaght (South Dublin County Council).

6.5. Unauthorised Collection & Movement

55% of all local authorities acknowledge that unauthorised waste collectors operated within their functional areas. The local authorities that identified this problem were:

- Cork County Council	- Dunlaoghaire Rathdown County Council
- Waterford County Council	- Laois County Council
- Waterford City Council	- Galway County Council
- Kildare County Council	- Galway City Council
- Wicklow County Council	- Limerick City Council
- Dublin City Council	- Limerick County Council
- Fingal County Council	- North Tipperary County Council
- South Dublin County Council	- Clare County Council

As can be seen from the list above, the majority of the affected local authorities are either City Councils or local authorities adjacent to cities or large urban areas. The most common form of unauthorised waste collection reported was the collection of waste without a permit. The majority of these operators are known as “085”, “086” or “087” waste collectors. These collectors operate without a WCP and attract their customers by placing advertisements in local newspapers or on notice boards in shopping centres, phone boxes, etc. These unauthorised collectors seem to target commercial waste producers in preference to householders or industrial activities.

It is thought that many of these collectors, colloquially known as ‘the man in the van’ operate as “sole traders” as opposed to being part of a more “formalised” collection network. Local authorities adjacent to city authorities in particular, are of the opinion that these collectors are responsible for much of the fly-tipping in their areas. In particular, Clare, Waterford, Limerick, North Tipperary and Galway County Councils expressed this concern. Many of these collectors operate using cars and trailers or vans. Dublin and Limerick City Councils in particular, reported problems with skip hire companies operating without WCPs. It must be acknowledged that the aforementioned City Councils are not the only local authorities experiencing this problem.

For example, Waterford and Limerick City Councils, together with Clare, Donegal, Wicklow and Cork County Councils have all been successful in securing prosecutions against these types of unauthorised waste collectors, while other local authorities are preparing case files to send to their solicitors to initiate court proceedings.

Overall, there was little evidence of widespread organised unauthorised activity in relation to the collection and movement of household waste. This is probably because local authorities have a specific statutory responsibility for the collection and disposal of household waste in their functional areas. A relatively small number of private sector operators are legitimately involved in the collection of household waste and these are all well known to the local authorities in whose areas they operate. Even before the advent of a properly functioning waste collection permitting system in 2001, local authorities kept a close eye on the collection of household waste in their functional areas and made provision for the disposal of household waste at their landfills.

However, the rising cost of landfill gate fees, particularly in 2001 and 2002, provided an incentive for private sector collectors of household waste to shop around for the best price and this led to a situation where waste, including household waste, began to move significant distances for disposal. In the majority of cases this simply meant that household waste collected in one county was disposed of in an authorised manner in another county. However, a real incentive existed for collectors of waste to consider unauthorised means for the disposal of household waste. It was about this time that significant quantities of waste began to be moved to Northern Ireland and there is evidence that at least some of this waste originated in households in the Republic of Ireland, particularly from the South East region.



Enforcement Officers Conducting a Roadside Inspection

6.6. Unauthorised Export Of Waste

6.6.1. Household Waste

The widespread introduction of a two bin collection service means that an increasing amount of the household waste stream is separately collected for recycling. In 2002, the volume of dry recyclables collected was 132,602 tonnes. Since then, the rate of roll out of the two bin collection service has significantly increased to an estimated 563,681 households, representing a national coverage of 44%. This exemplifies the changing face of waste management in Ireland and the pace at which this change is occurring.

The widespread introduction of separate collection for recyclable waste from households has meant that those collecting recyclable materials from households have to find markets and outlets for the waste collected. As Ireland has virtually no indigenous capacity for the processing of dry recyclables (glass, plastic, paper, cardboard) the only viable option is for these wastes to be exported for recovery elsewhere.

With the exception of some paper/cardboard, the vast majority of dry recyclables collected are exported for recovery. The export of waste (TFS) is governed by international law with strict rules applying to the movement of so-called 'amber' and 'red list' wastes. For these wastes to be moved from one country to another, consent of both countries of destination and transit are required (i.e. countries through which the waste is passing and the country where the recovery operation is taking place). Source separated dry recyclables such as glass, cardboard and plastic can, however, be exported for recovery without these strict rules applying as so-called 'green list' waste as long as they are separated into their individual components, they are free of contamination and they do not represent a risk to the environment or human health. If either the country of destination or the countries of transit are unhappy with any waste shipments that come to their attention, they can require the waste to be returned to the country of origin.

Over the past two years, a number of shipments of dry recyclables have been intercepted and returned by competent authorities in Northern Ireland, Holland and Belgium. In most instances, these shipments did not comply with the provision of the TFS Regulation 259/93.

The primary offences reported were:

- Waste streams were considered as household waste as opposed to dry recyclables and subsequently should have been classified as 'amber list' as opposed to 'green list' wastes.
- There was evidence of the presence of some biodegradable waste giving rise to odours.
- Breach of Article 11 of the TFS Regulations in that appropriate documentation did not accompany 'green list' shipments.
- Exporters failed to comply with the provision of the TFS Regulations and shipments were alleged to be illegal under Article 26 of the Regulations.

In most instances, these problems have resulted in the repatriation of containers either by the companies responsible for their export or by the relevant local authority. In total, ten County Councils have been involved in the repatriation of waste. These were Waterford City and County Councils, Clare, South Tipperary, Galway, Kerry, Fingal and South Dublin County Councils and Cork and Dublin City Councils.



'Green List' Waste being Inspected at Rotterdam

In total, forty two containers were repatriated from Belgium/Holland and eight from Northern Ireland. Of the eight containers repatriated from Northern Ireland, six were destined for authorised waste recovery facilities in Northern Ireland. In relation to the remaining two containers, there was no evidence that they were being brought to an authorised waste facility and the authorities faced considerable problems with their repatriation. Given the nature of these problems, police protection was required on both sides of the Border.

In terms of quantifying the volume of dry recyclables involved, it is dependant on the method used to pack shipment containers. If any recyclables are baled, the payload for each shipment container is approximately 25 tonnes or, if loosely packed, the payload varies between 18 and 22 tonnes. Assuming an average 20 tonnes per container the volume of dry recyclables repatriated is estimated at 1,000 tonnes.

In summary, the widespread introduction of separate collection of dry recyclables from households in the Republic of Ireland has meant the development of an entirely new waste management practice: the export of these materials for recovery abroad. Prior to the introduction of separate collection, recycling of household waste was limited to the recycling of materials collected at recycling banks around the country, mainly glass and aluminium. The volumes were low and, prior to the closure of the Irish Glass Bottle Company, glass was recycled at the plant in Ringsend, Dublin. Large quantities of mixed dry recyclables are now being collected from households all around the country. This is a welcome development but brings with it the attendant issue of how and where these materials are to be recovered.

The repatriation events referred to above illustrate the fact that transfrontier movement of waste can only be controlled through the cooperation and collaboration of enforcement agencies in different jurisdictions. The movement of waste for recovery is an international business and the control and regulation of the business requires an international response.

6.6.2. Commercial and Industrial Waste

As with household waste dry recyclables, similar problems have been encountered with the shipment of commercially sourced dry recyclables.

Two consignments of waste destined for recycling/recovery were returned from Rotterdam. Both of these consignments were shipped as 'green list' waste but were re-classified in Rotterdam to 'red list'. The first consignment involved the shipment of shrink-wrap packaging to India as 'green list' waste which is the appropriate classification if the destination of the waste was within the EU under the TFS Regulation for this waste stream for recovery. However, in India, shrink-wrap is classified as 'red list' and, as a result, the Dutch authorities required the repatriation of this consignment

The second case involved the shipment of used disposable camera casings for recovery/disposal. This consignment was shipped as 'green list' waste. Upon inspection of this consignment by the Dutch authorities, they discovered that the batteries contained in disposable cameras had not been removed, and therefore the consignment was re-classified as 'red list' waste. Again, the Dutch authorities required the repatriation of this consignment.

6.7. Unauthorised Waste Transfer & Material Processing

Recent changes in waste management practices, resulting in increased segregation of waste collected from households and businesses, has spawned the development of a network of facilities required for intermediate and final processing of household, C&I, and C&D waste. These facilities, which are either operated by the private sector or by local authorities, all require authorisation under the WMA from either the EPA or a local authority. There are three types of authorisation available: a licence from the EPA for the larger and more complex facilities, a permit from a local authority for smaller, less complex facilities and a certificate of registration from the EPA for small waste recovery facilities operated by local authorities. While transitional rules applied for a period of time following the introduction of the WMA, there are no longer any circumstances in which a facility requiring authorisation under the WMA can be operated in the absence of such authorisation.

A number of unauthorised waste transfer stations and waste processing facilities were identified during the course of the study, which are listed in Table 6.3. At the time of reporting, these facilities do not have the required WMA authorisations from either the relevant local authority or the EPA. Of major concern to the OEE is the fact that some of these facilities are owned and operated by local authorities. The identification and closure of facilities operating without any form of authorisation under the WMA is a high priority for the OEE.

The OEE is also currently investigating the operation of a number of facilities that have been granted a WP from the relevant local authority where suspicion exists that the facilities are operating significantly out of compliance with the conditions attached to their permits which makes them unauthorised. These facilities are not named in this report because they are the subject of investigation and enforcement action.

Table 6.3: Waste Facilities Operating Without Authorisation

Location	Operator	County	Description of facility
Farrandeelion	Loftus Recycling Ltd	Mayo	Waste Transfer Station
Elphin	Beirnes Bins	Roscommon	Waste Transfer Station
Moate	Mr. Greg Kinehan	Offaly	Car scrapyard
Clara	Mr. Hugh Moran	Offaly	Car scrapyard
Edenderry	Mr. John McCann	Offaly	Car scrapyard
Shannon Harbour	Mr. Ciaran Yates	Offaly	Waste Transfer Station
Birr	Mr. Martin Bannon	Offaly	Car scrapyard
Timahoe	Scully Skip Hire	Laois	Waste Transfer Station
Grange	South Dublin County Council	Dublin	Composting
Georges Street, Dun Laoighire	Dun Laoghaire Rathdown County Council	Dun Laoghaire Rathdown	Waste compaction station
Gorey	Greenstar	Wexford	Waste Transfer Station
Ferns	Murray Waste	Wexford	Waste Transfer Station
Cahir	Duggan Skip Hire	Tipperary	Waste Transfer Station
Six Cross Roads	Waterford City Council	Waterford	Composting
Ovens	Mr. Sean Murphy	Cork	Car scrapyard

6.8. Unauthorised Landfilling

Summary details of all unauthorised landfills reported during the information gathering phase of this project are provided in Table 6.4. This list does not include historic sites that pre-date the introduction of the waste licensing system in 1997. Also excluded are unauthorised sites, which have since been authorised (i.e., Coolnamadra in County Wicklow and The Ballast Pit, Loughbrown in Co. Kildare). Nor does it include sites where the local authority or the EPA suspect that unauthorised activity occurred and where the naming of the site might prejudice future legal action.

There was evidence of significant unauthorised landfilling of C&I waste and C&D waste, mainly in the period between 1997 and 2002, and primarily in the greater Dublin area. By far the greatest level of unauthorised landfilling during this period occurred in counties Wicklow and Kildare. Initial indications in County Wicklow were that unauthorised dumping had taken place at about one hundred sites within the County. Further investigation by Wicklow County Council resulted in the identification of a number of sites where unauthorised disposal of waste occurred in a planned and organised manner with the remainder mainly consisting of sites at which waste had been fly-tipped.

Investigations are ongoing at all of the sites listed in Table 6.4 and a number of cases are now proceeding through the Courts. In relation to the sites in County Wicklow, investigations are underway, either by Wicklow County Council, the EPA, the National Bureau of Criminal Investigation or cases are with the Director of Public Prosecutions. Therefore the level of information that can be reported on these sites is limited as these investigations are ongoing.

It is likely that other sites exist at which unauthorised disposal of C&I waste took place since 1996 although the scale of activity is likely to have been significantly below that that which occurred in counties Wicklow and Kildare. As part of its ongoing work, the OEE will continue to seek information on any sites suspected of having been used for unauthorised landfilling of waste so that appropriate enforcement action can be taken against those responsible.

Table 6.4: Summary Details of Unauthorised Landfills Reported

Location	Waste Types				Scale (tonnes)
	Household	C&I	C&D	Hazardous	
Kilmurry, Cullaville, Co. Monaghan (Site 1)		√			~1,000
Kilmurry, Cullaville, Co. Monaghan (Site 2)		√			~1,000
Colemann Island, Clones, Co. Monaghan	√	√			~3,500
Oram, Castleblaney, Co. Monaghan	√	√			~200
Tullycaghney, Castleblaney, Co. Monaghan	√	√			~2,000
Drumconrath, Co. Meath		√	√		~24,000
Timoole, Co. Meath	√	√			~10,000
Laytown, Co. Meath			√		~50,000
Clonard, Co. Meath			√		~83,000
Longwood, Co. Meath			√		~2,000
Pollardstown, Kildare		√	√		~360,000
Roadstone Quarry, Blessington, Co. Wicklow	√	√	√		~110,000
Russborough, Co. Wicklow	√	√			~10,000
Killegar, Enniskerry, Co. Wicklow	√	√	√		~20,000
Kilpedder, Wicklow			√	√	~10,000
Whitestown, Wicklow		√	√		~240,000
Stevenson's Quarry, Castleruddery, Co. Wicklow		√	√		~180,000
Oldcourt, Ballylynan, Co. Laois			√		~2,500
Ballycorman, Ballylynan, Co. Laois			√		~2,500
Ballynagarr, Ballylynan, Co. Laois			√		~5,000
Newtown, Castlecomer, Co. Laois			√		~10,000
Coolgreaney, Gorey, Co. Wexford		√			~3,000
Parteen, Clare		√	√		~85,000
Rockchapel, Co. Cork	√				~25,000
Weir Island, Carrigtwohill, Co. Cork			√		~100,000

There is limited evidence of organised unauthorised landfilling of household waste since the introduction of the WMA in 1996. There is, however, evidence of widespread fly-tipping of household waste, particularly in the past two to three years, as mentioned earlier in this chapter. Only four local authorities, namely Cork County Council, Monaghan County Council, Wicklow County Council and Meath County Council reported unauthorised landfills where household waste was deposited during the time period covered by the survey.

As regards unauthorised disposal of C&D waste, the most common unauthorised activities reported to or identified by local authorities were:

- The recovery of soil, stone and other C&D materials at facilities without an appropriate WP
- The recovery of C&D type material at facilities only permitted to accept topsoil
- The contamination of C&D and topsoil with other building materials prior to deposition for recovery for land reclamation
- The “restoration” of wetlands and foreshores with topsoil without appropriate authorisation
- Land restoration without appropriate authorisation

To determine the number of unauthorised sites used for the disposal of C&D waste, topsoil and sand and stone proved very difficult. The main difficulty was that each local authority implements its own individual style of recording complaints and investigations in relation to these activities. As this method of data recording can vary significantly between each local authority, it proved very difficult to make accurate comparisons. In the absence of accurate detailed information relating to the number of unauthorised sites and those involved in the collection of C&D type material, many local authorities attempted to estimate the percentage of complaints received and collectors investigated for unauthorised waste activities compared to other unauthorised activities investigated in their functional area. A sample of the number of C&D complaints received/investigated versus other waste related activities is outlined in Table 6.5.

Table 6.5: Number of C&D Complaints vs Other Waste Related Activities

County Council	% of Complaints/Site Inspections relating to C&D Wastes Vs Total Complaints/Site Inspections
Donegal	62
Dun Laoghaire/Rathdown	73
Fingal	33
Longford	22
Offaly	65
Wexford	43
Laois	22
North Tipperary	36
Cork	53

It should not be assumed that the County Councils outlined in the table above are the only County Councils who have received complaints in relation to the unauthorised management of C&D type material. It serves to illustrate the fact that a significant percentage of complaints received are in relation to C&D waste.

When considering the number of complaints received by the local authority regarding the management of C&D waste, it must be borne in mind that, in the majority of counties, the number of WP applications relating to sites for the management of soil and stone, topsoil and C&D waste far exceeds the number of permits related to other activities. Despite the fact that the waste permitting system has been in place for the past seven years, there is still a relatively low level of awareness among contractors involved in the management of topsoil and sand and stone as to a need to obtain a WP to use these materials for land restoration. The perception among the industry is that these materials are not a waste but a resource and do not pose any environmental impact.

7. ACTION PLAN

The information gathered during the course of this investigation has been used by the OEE to prepare an action plan to deal with unauthorised waste activity in Ireland. The details of this action plan are contained in this section and implementation of the plan is now being coordinated by the OEE through the National Enforcement Network.

A number of problem areas have emerged as a result of this investigation. They are:

- Illegal Disposal of Waste
- Illegal Movement of Waste to Northern Ireland
- Illegal Movement of Waste to Europe and Beyond
- Poor Management of C&D Waste
- Unauthorised Collection and Fly-Tipping of Waste
- Inconsistent Enforcement of Waste Legislation
- Backyard Burning of Household Waste
- Historic Disposal of Waste (pre 1996)
- Operation of Unauthorised Transfer Stations & Waste Processing Facilities

Specific actions are required to deal with these problem areas and these actions are set out in the following pages.

PROBLEM

ILLEGAL DISPOSAL OF WASTE

ISSUES

- Control of waste collection and movement (other than for hazardous waste) only introduced in 2001
- Large increase in quantities of commercial waste and C&D waste arising from economic growth
- Evidence of significant mismanagement of commercial waste and C&D waste leading to large-scale unauthorised dumping of waste in the Greater Dublin area between 1996 and 2000
- Limited evidence of organised unauthorised dumping of household waste
- European Court of Justice ruling against Ireland in relation to implementation of the Waste Directive
- Policy Direction from the Minister for the Environment, Heritage & Local Government to local authorities and the EPA in relation to illegal waste activity and movement of waste

ACTIONS ALREADY TAKEN

- Assessment of risk being undertaken or planned to be taken at all known sites. Local authorities seeking High Court orders for risk assessment and remediation works in line with polluter pays principle
- EPA is preparing a Code of Practice on risk assessment and remediation of old waste disposal sites in response to the Ministerial Policy Direction issued by the Minister for the Environment & Local Government
- Involvement of the National Bureau of Criminal Investigations in investigating illegal dumping in Co. Wicklow and the Director of Public Prosecutions in prosecuting cases on indictment
- Record fine of €100,000 imposed by Circuit Criminal Court in relation to unauthorised landfilling at Weir's Island, Co. Cork
- Waste removed under licence from EPA at illegal site in Coolnamadra, Co. Wicklow in compliance with High Court Orders

WHERE TO NEXT

ACTION	BY
Completion and publication by the EPA of Code of Practice on risk assessment and remediation of old waste disposal sites	OEE
Complete risk assessment at all known sites and identify and implement appropriate remediation measures, under waste permit or licence, in accordance with the Code of Practice, when published	LAs
Bring those responsible for illegal disposal before the courts, preferably on indictment	LAs
Impose landfill levy on those responsible for illegal disposal	LAs
Gather information on any other sites through a national information line for reporting information about illegal dumping of waste	OEE, LAs
Support information line with a media campaign to advertise the information line and problems related to illegal dumping	OEE
Follow up and investigate all significant cases of suspected illegal dumping reported to or identified by the enforcement authorities	OEE, LAs

PROBLEM

ILLEGAL MOVEMENT OF WASTE TO NORTHERN IRELAND

ISSUES

- Differences in waste treatment and disposal costs between the Republic of Ireland and Northern Ireland
- Insufficient enforcement of TFS Regulations by local authorities in both jurisdictions
- Landfill capacity crisis in Republic of Ireland in late 2001 and early 2002 resulting in diversion of waste to Northern Ireland
- Available capacity of waste infrastructure for disposal and recovery of waste in Republic of Ireland
- Sham recovery of waste from the Republic of Ireland in Northern Ireland
- Lack of clarity about what constitutes 'green list' waste for recovery

ACTIONS ALREADY TAKEN

- Establishment by OEE of Inter-Agency groups to deal with the problem of waste moving illegally to Northern Ireland
- Structures put in place through National Enforcement Network to facilitate improved cooperation and information sharing between authorities in both jurisdictions
- Repatriation of eight shipments of waste to the Republic of Ireland from Northern Ireland in an operation involving the Police Service of Northern Ireland, An Garda Síochána, the EHSNI, the OEE and local authorities.
- Concerted enforcement actions targeting those suspected of engaging in illegal movement of waste to Northern Ireland, including targeted inspections of waste transfer stations
- Restricting the operation of some of the key individuals suspected of involvement in illegal movement of waste from the Republic of Ireland to Northern Ireland and the UK
- Developing common understanding between authorities in both jurisdictions about waste types considered suitable for export
- Provision of guidance and training to local authority staff through the National Enforcement Network

WHERE TO NEXT

ACTION	BY
Continue the practice of joint inspections of transfer stations by local authority and OEE inspectors	OEE, LAs
Continue to gather information on those suspected of engaging in illegal movement of waste to Northern Ireland	OEE, LAs
Pursue on indictment those found to be engaged in illegal shipment of waste to Northern Ireland	OEE, LAs
Co-operate fully with ongoing investigations by Police Service of Northern Ireland and An Garda Síochána	OEE, LAs
Finalise agreement on common understanding about waste types considered suitable for export	OEE, EHSNI
Build on the good working relationships established between the authorities North and South of the Border in the past two years and extend this to include the relevant authorities in Great Britain	All agencies

PROBLEM

ILLEGAL SHIPMENT OF DRY RECYCLABLES TO EUROPE & BEYOND

ISSUES

- Rapid increase in the provision of separate collection of dry recyclables from households with over 40% of households now provided with separate collection
- Absence of markets for the recycling of dry recyclables in the Republic of Ireland
- Misclassification of mixed dry recyclable household waste as 'green list' waste
- Insufficient understanding of provisions of TFS Regulations within many local authorities

ACTIONS ALREADY TAKEN

- Repatriation of forty two containers of mixed dry recyclable household waste from the Netherlands and Belgium by waste contractors and local authorities
- Establishment by OEE of National Enforcement Network Inter-Agency group on TFS
- Preparation by the Inter-Agency group of guidance for local authority staff on enforcement of TFS
- National Enforcement Network seminar on TFS for local authority staff
- Stepping up of enforcement and inspection by local authorities of waste loads at source, on the road and at ports
- Joint inspections of waste facilities by OEE and local authority inspectors
- Involvement by the EPA and local authorities in international enforcement initiatives aimed at tracking waste from source to final destination

WHERE TO NEXT

ACTIONS	BY
Build on the increased level of TFS inspections conducted during 2004 by local authority inspectors	LAs
Build on the work done through the National Enforcement Network aimed at raising the level and consistency of enforcement of the TFS Regulations by local authorities	OEE, LAs
The Irish authorities should continue their involvement in International TFS initiatives such as the European Network for the Implementation and Enforcement of Environmental Law in the EU (IMPEL)	OEE, DEHLG, LAs
Work with other national competent authorities to develop a better common understanding about waste types considered suitable for export for recovery	OEE, DEHLG, LAs
Review the effectiveness of current arrangements for implementation and enforcement of the TFS Regulations in Ireland	DEHLG
Improve knowledge about the final destination of waste shipped abroad for recovery	OEE, DEHLG, LAs

PROBLEM

POOR MANAGEMENT OF CONSTRUCTION & DEMOLITION WASTE

ISSUES

- C&D waste quantities growing every year
- Poor record keeping at sites where C&D waste is produced leading to underestimates of quantities arising
- Evidence of significant mismanagement of the waste stream with C&D waste the predominant material in known unauthorised landfills
- Poor awareness within the industry about waste management issues
- Inconsistent application of the waste permitting regulations in relation to land reclamation activities

ACTIONS ALREADY TAKEN

- Establishment and operation of National Construction and Demolition Waste Council
- Preparation of draft guidelines for C& D waste management

WHERE TO NEXT

ACTION	BY
Those involved in illegal disposal of C&D waste should be pursued on indictment by the enforcement authorities	LAs, OEE
Local authorities need to ensure that they have up to date and reliable information on the quantities and fate of C&D waste in their functional areas	LAs
The C&D sector needs to provide much better and more reliable information on the quantities and fate of waste produced	C&D sector
Sufficient outlets for the recovery and disposal of C&D waste are required and should be planned for by local authorities and the C&D sector through the waste management planning process	LAs, C&D sector
Finalise and consider placing on a statutory footing, the draft guidelines for C&D waste management	DEHLG
Integrate the requirements of the draft guidelines for C&D waste management with the planning and development process for developments that are likely to produce significant quantities of waste	LAs
Radical improvements are required by the C&D sector in relation to general site and materials management to minimise waste produced on site	C&D sector
More work is required by the C&D sector on the development of end-uses, outlets and material specifications for C&D waste	C&D sector
Review the effectiveness of the voluntary C&D waste industry initiative	DEHLG

PROBLEM

UNAUTHORISED COLLECTION AND FLY-TIPPING OF WASTE

ISSUES

- Relatively recent introduction of waste collection permitting system (introduced in 2001)
- Waste being handed over to unauthorised waste collectors ('the man in the van')
- Reduced involvement by local authorities in household and C&I waste collection
- Irresponsible attitude to waste management on the part of some C&I and industrial enterprises and some householders
- Insufficient enforcement by local authorities of WCPs

ACTIONS ALREADY TAKEN

- Several local authorities have established litter hotlines
- 110 additional waste enforcement staff appointed in local authorities in past two years leading to the establishment of waste enforcement teams
- Campaigns against unauthorised waste collectors in several local authorities
- Increasing number of roadside inspections being carried out by local authorities (377 in 2004)
- National and regional concerted enforcement actions by local authorities and OEE consisting of coordinated road blocks and joint local authority/OEE inspections of waste transfer stations

WHERE TO NEXT

ACTION	BY
Run a national media campaign informing the public and the business community that their waste can only be given to either a local authority or a waste collector that holds a valid WCP	OEE, DEHLG
Run a national media campaign on fly-tipping	OEE, DEHLG
Local authorities to build on the increased number of waste facility and roadside inspections so that the waste collection permitting system is properly enforced. This is the weakest link in the waste enforcement chain and the area where the greatest risk of unauthorised waste activity exists. If the collection and movement of waste is properly controlled then the risk of unauthorised disposal is greatly reduced	LAs
Consider the development and implementation a national waste tracking system to allow for the pre-notification and tracking of all waste movements within and outside the State	OEE, LAs, DEHLG
Organise and carry out more concerted enforcement actions	OEE, LAs, Gardai
Provide local authorities with the power to revoke WCPs	DEHLG

PROBLEM

INCONSISTENT ENFORCEMENT OF WASTE LEGISLATION

ISSUES

- Many public bodies have a role to play in the enforcement of waste management legislation
- The need for a seamless approach to enforcement of waste management legislation which means that public bodies with a role to play must work together
- Local authority waste enforcement teams, financed through the environment fund, are now in place
- The need to ensure consistency of approach to waste enforcement by local authorities and that local authority waste enforcement staff have the necessary skills
- Variation in level of skills, expertise and resources available to different local authorities

ACTIONS ALREADY TAKEN

- The National Enforcement Network is up and running
- Inter-Agency working groups are established and operational in ten areas
- Concerted enforcement actions at local, regional and national level are being planned and implemented by these working groups
- An Garda Síochána, the Police Service of Northern Ireland and the EHSNI have been involved in some of these concerted actions
- An Garda Síochána, the National Bureau of Criminal Investigations and the Revenue Commissioners are becoming more involved in the investigation of illegal waste activity
- All public bodies involved in the enforcement of waste legislation were brought together for the first time at the first National Enforcement Network Conference on Waste Enforcement
- Guidance for local authorities has been produced by the Enforcement Network in a number of areas including unauthorised waste investigation, enforcement of Packaging and Farm Plastics Regulations and enforcement of TFS Regulations
- An advanced waste enforcement skills training programme for local authority enforcement staff has been developed by the OEE and training of staff has commenced
- In 2004, local authorities carried out over 12,000 site inspections, mounted 377 check points, served 1588 notices under the WMA and took 303 prosecutions under the WMA

WHERE TO NEXT	
ACTION	BY
All local authority staff engaged in waste enforcement should complete the advanced waste enforcement skills training course	LAs
All local authorities should develop and implement their own unauthorised waste enforcement plan in line with the requirements of the Recommendation for Minimum Criteria for Environmental Inspections	LAs
Continue planning and implementation of enforcement activities at local, regional and national level under the umbrella of the National Enforcement Network and involving whatever public bodies are appropriate for the activity	All
Continue to develop the linkages between An Garda Síochána and the various public bodies enforcing waste legislation, particularly in relation to the detection, investigation and prosecution of environmental crime	All
The enforcement authorities should continue to share information about suspected unauthorised waste activities and work together to ensure that the combined forces of the State are used to combat unauthorised waste activity	OEE, LAs, Others

PROBLEM

BACKYARD BURNING OF HOUSEHOLD WASTE

ISSUES

- 21% of households are either not availing of or not provided with a waste collection service
- 80% of local authorities identified backyard burning as being a significant problem
- Some householders opting out of waste collection due to the introduction of waste charges
- Lack of awareness by some householders about the dangers of backyard burning
- Irresponsible attitude to waste management on the part of some householders

ACTIONS ALREADY TAKEN

- Several local authorities have established litter hotlines
- 110 additional waste enforcement staff appointed in local authorities in past two years leading to establishment of waste enforcement teams
- Provision of useful advice by local authorities on backyard burning on several websites
- Local authorities taking a stronger enforcement line on backyard burning

WHERE TO NEXT

ACTION	BY
Characterise the nature and extent of uncollected household waste within each local authority area	LAs
Establish whether or not satisfactory arrangements are in place in each local authority area for the collection of household waste	LAs
Target households not availing of a waste collection service to ensure that suitable arrangements are in place for disposal of their waste	LAs
Review section 33(3) of the WMA to determine the extent to which the conditions specified are contributing to the large number of households not participating or availing of a waste collection service	DEHLG
Run a national media campaign on backyard burning	OEE, DEHLG
Consider establishing as an offence the burning of household waste on the householders property	DEHLG

PROBLEM

HISTORIC DISPOSAL OF WASTE

ISSUES

- Local authorities responsible for identifying all sites at which disposal of waste took place in the past and ensuring that appropriate actions are taken to make these sites safe
- Older sites are mainly old municipal landfills operated by local authorities (the town dump)
- Some sites may contain hazardous waste such as asbestos

ACTIONS ALREADY TAKEN

- The EPA is preparing a Code of Practice on risk assessment and remediation of old waste disposal sites in response to the Ministerial Policy Direction issued by the Minister for the Environment, Heritage & Local Government
- Local authorities are currently reviewing their waste management plans and providing for the requirement to identify and make safe old waste disposal sites in accordance with sections 22 and 26 of the WMA
- Risk to waters of some of these old sites has been assessed as part of the risk characterisation requirements of the Water Framework Directive

WHERE TO NEXT

ACTION	BY
Completion and publication by the EPA of Code of Practice on risk assessment and remediation of old waste disposal sites	OEE
Implementation by local authorities of their responsibilities under sections 22 and 26 of the WMA	LAs
Identification by local authorities of sites used in the past for the disposal of waste	LAs
Application of the Code of Practice to these sites	LAs
Where appropriate, permitting or licensing of these sites to bring them into compliance with the Waste Directive	

PROBLEM

OPERATION OF UNAUTHORISED TRANSFER STATIONS & WASTE PROCESSING FACILITIES

ISSUES

- There are still some waste facilities operating without the proper authorisations under the WMA
- Some of these facilities are operated by local authorities
- Waste facilities should not be allowed to operate in the absence of the required authorisation under the WMA

ACTIONS ALREADY TAKEN

- All local authorities have been instructed by the OEE to arrange for the cessation of activities at facilities that do not hold the required authorisations
- The OEE is undertaking investigations into a number of complaints received about alleged operation of unauthorised waste facilities
- Training has been provided to local authority personnel by the OEE in relation to the identification and investigation of unauthorised waste activities

WHERE TO NEXT

ACTION	BY
Local authorities need to adopt a zero tolerance attitude to waste management facilities operating without proper authorisation	LAs
Local authorities need to lead by example and ensure that any waste management facilities that they operate have the required authorisations and that they are operated in compliance with these authorisations	LAs
Should unauthorised waste activities continue to operate, the EPA will serve statutory notices on the relevant local authorities directing them to arrange for immediate cessation of the activity	EPA

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An Ghníomhaireacht um Chaomhnú Comhshaoil

STÁDAS NA GNÍOMHAIREACHTA

Is comhlacht poiblí neamhspleách í an Ghníomhaireacht um Chaomhnú Comhshaoil (EPA) a bunaíodh i mí Iúil 1993 faoin Acht fán nGníomhaireacht um Chaomhnú Comhshaoil, 1992. Ó thaobh an Rialtais, is í an Roinn Comhshaoil agus Rialtais Áitiúil a dhéanann urraíocht uirthi.

Déanann Bord Feidhmeach lánaimseartha comhdhéanta d'Ard-Stiúrthóir agus ceathrar Stiúrthóirí bainistíocht ar an EPA. Cinntítear neamhspleáchas trí nósanna imeachta roghnaithe i gcás an Ard-Stiúrthóra agus na Stiúrthóirí agus an tsaoirse, de réir mar a sholáthraítear sa reachtaíocht, gníomhú as a stuaim féin. Tá an sannadh, faoin reachtaíocht, maidir le freagracht dhíreach as réimse leathan feidhmeanna mar bhonn taca ag an neamhspleáchas sin. Faoin reachtaíocht, is cion sainiúil é iarracht a dhéanamh tionchar a imirt ar an Ghníomhaireacht, nó ar aon duine a bhíonn ag gníomhú thar ceann na Gníomhaireachta, ar bhealach míchuí.

Cuidíonn Coiste Comhairleach ar a bhfuil dhá chomhalta déag arna gceapadh ag an Aire Comhshaoil, Oidhreacht agus Rialtais Áitiúil leis an nGníomhaireacht.

FREAGRACHTAÍ

Tá réimse leathan dualgas agus cumhachtaí reachtúla ag an EPA faoin Acht fán nGníomhaireacht um Chaomhnú Comhshaoil. Chomh maith leis sin, tá curtha le hacmhainn an EPA maidir le forfheidhmiú le cumhachtaí san Acht um Chaomhnú an Chomhshaoil 2003. Áirítear orthu seo a leanas príomhfhreagrachtaí an EPA:

- ceadúnú a dhéanamh ar phróisis thionsclaíocha mhóra/choimpléascacha a bhféadfadh cumas truaillithe suntasach a bheith ag baint leo;
- monatóireacht ar chaighdeán comhshaoil, lena n-áirítear bunachair shonraí a bhunú ar a mbeidh rochtain ag an bpobal;
- tuarascálacha tréimhsiúla maidir le staid an chomhshaoil a fhoilsiú;
- sárchleachtais comhshaoil a chur chun cinn;
- taighde comhshaoil a chur chun cinn agus a chomhordú;
- gníomhaíochtaí diúscartha dramhaíola agus aisghabhála suntasacha, lena n-áirítear láithreacha líonta talún a cheadúnú agus plean bainistíochta guaisdramhaíola náisiúnta a ullmhú;
- córas a chur i bhfeidhm a cheadaíonn rialú astaithe VOC a bhíonn mar thoradh ar scaoileadh GMOanna isteach sa chomhshaol in aon turas;

- rialacháin GMO a chur i bhfeidhm agus a fhorfheidhmiú ó thaobh GMOanna a choinneáil agus a scaoileadh amach sa chomhshaol in aon turas;
- clár hidriméadrach náisiúnta a ullmhú agus a chur i bhfeidhm;
- dréacht a chur le chéile de Phlean Leithroinnte Náisiúnta do thrádáil líntas astaithe gáis ceaptha teasa; Údarás Inniúla Náisiúnta a bhunú le ceadanna trádála agus líntais a eisiúint orthu siúd atá clúdaithe ag an scéim; monatóireacht, léargas, agus fíorú maidir le hastuithe ó chuideachtaí rannpháirteacha; agus Clár Trádála Astuithe Náisiúnta a bhunú;

agus, faoin Oifig Forfheidhmiúcháin Comhshaoil, a bunaíodh i 2003 agus atá tiomanta as reachtaíocht comhshaoil a chur i bhfeidhm agus a fhorfheidhmiú in Éirinn;

- feabhas a chur ar chomhlíonadh reachtaíocht cosanta comhshaoil in Éirinn;
- feasacht a ardú maidir leis an tábhacht a bhaineann le forfheidhmiú i gcás reachtaíochta cosanta comhshaoil in Éirinn;
- ceadúnais IPPC agus ceadúnais Dramhaíola a eisiúint an EPA a fhorfheidhmiú;
- iniúchadh agus tuairiscí ar fheidhmíocht údarás áitiúil maidir lena bhfeidhmeanna cosanta comhshaoil a chur ar bun, lena n-áirítear:
 - forfheidhmiú maidir le ceadúnais dramhaíola a sháraítear;
 - gníomh maidir le dumpáil mhídhleathach;
 - ceadanna bailithe dramhaíola a chur i bhfeidhm, agus
 - tionscnaimh a bheidh mar fhreagracht ar an táirgeoir a fhorfheidhmiú (mar shampla, sa réimse a bhaineann le dramhaíl pacáiste);
- gníomh in aghaidh údarás áitiúil nach bhfuil ag comhlíonadh a gcuid feidhmeanna cosanta comhshaoil ar bhealach cuí;
- an dlí a chur nó cuidiú le húdarais áitiúla an dlí a chur ó thaobh sháraithe suntasacha reachtaíochta cosanta comhshaoil ar bhealach caoithiúil; agus
- cuidiú le húdarais áitiúla a gcuid feidhmíocht cosanta comhshaoil a fheabhsú ar bhonn cás ar chás, trí ghréasán forfheidhmithe a bhunú le malartú eolais a chur chun cinn chomh maith le sárchleachtas, agus trí threoir chuí a sholáthar.



Office of
Environmental
Enforcement

Headquarters and South East Region

**Environmental Protection Agency
PO Box 3000, Johnstown Castle Estate
County Wexford, Ireland**

Bosca Poist 3000, Eastát Chaisleán Bhaile Sheáin
Contae Loch Garman, Éire

T: +353 53 60600

F: +353 53 60699

South/South West Region

**Environmental Protection Agency
Inniscarra, County Cork, Ireland**

Inis Cara, Contae Chorcaí, Éire

T: +353 21 487 5540

F: +353 21 487 5545

East/North East Region

**Environmental Protection Agency
McCumiskey House, Richview
Clonskeagh Road, Dublin 14, Ireland**

Teach Mhic Chumascaigh, Dea-Radharc
Bóthar Cluain Sceach, Baile Átha Cliath 14, Éire

T: +353 1 268 0100

F: +353 1 268 0199

West/North West Region

**Environmental Protection Agency
John Moore Road
Castlebar, County Mayo, Ireland**

Bóthar Sheán de Mórdha
Caisleán an Bharraigh, Contae Mhaigh Eo, Éire

T: +353 94 904 8400

F: +353 94 904 8499

E: info@epa.ie

W: www.epa.ie

LoCall: 1890 33 55 99

