

Local Authority Prevention Demonstration Programme (LAPD)

SEPTEMBER 2006 - SEPTEMBER 2009



SYNTHESIS REPORT FOR MONAGHAN COUNTY COUNCIL



Working together to prevent waste in County Monaghan



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Monaghan County Council would like to acknowledge the contribution made by the many people in various organisations and businesses in County Monaghan who participated in this programme. We would like to thank Dr. Gerry Byrne and the staff of the Office of Climate Change, Licensing and Resource Use of the EPA. We would also like to acknowledge the contribution made by the Clean Technology Centre, in particular Dermot Cunningham and Eileen O'Leary.

NOTE ON THIS REPORT

This synthesis report is an amalgamation of a number of technical reports submitted to the Environmental Protection Agency as part of the Local Authority Prevention Demonstration Programme (LAPD). Full technical reports are available from Monaghan County Council's Environment Section or for download on www.monaghan.ie

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Welcome



MESSAGE FROM MAYOR, MONAGHAN COUNTY COUNCIL

Monaghan County Council is pleased to have been involved with the Environmental Protection Agency (EPA) and The National Waste Prevention Programme. This synthesis report highlights all the positive aspects of the Council's involvement with the Local Authority Prevention Demonstration (LAPD) programme over the last number of years.

Waste prevention and environmental protection is a key function of Local Authorities. However, without the co-operation of the wider community this would not be possible. Therefore, I would like to thank all those that participated in this programme for their valuable contribution.

We hope that this booklet can be used by other local authorities to develop similar programmes. We also hope that it will stimulate interest in waste prevention, which, I am glad to say has been demonstrated as a way to save money. In the current economic climate I think this booklet is a timely reminder for us all to look at ways we can reduce our environmental costs while at the same time protecting our environment.

Finally, I would like to thank the staff in the Council's Environment Section for all their efforts.

Cllr Heather Humphries
Monaghan County Mayor



MESSAGE FROM COUNTY MANAGER, MONAGHAN COUNTY COUNCIL

The Local Authority Prevention Demonstration Programme (LAPD) jointly funded by the Environmental Protection Agency and Monaghan County Council has been working closely with businesses, public sector organisations, farms and schools in the County over the last three years.

Based on the recommendation of the North East Waste Management Plan, project staff have, over the last number of years engaged various stakeholders from throughout the County on waste prevention and sustainable resource use.

Reducing and preventing waste not only helps the environment but, as this project demonstrates, results in substantial costs savings to organisations in areas such as energy, commercial water costs and waste management costs.

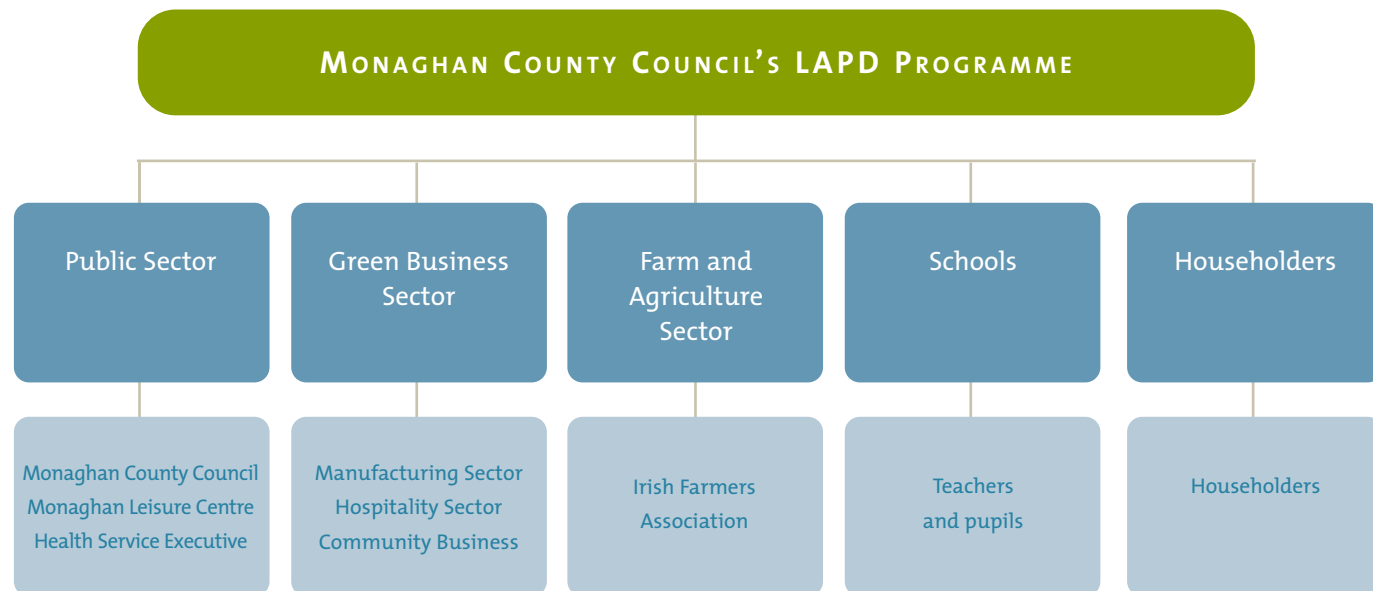
I would like to thank all the participating businesses, public sector organisations, schools, farmers and any other person or organisation who contributed to the success of this project. Hopefully, its successes can be replicated elsewhere.

I also wish to acknowledge the work of Dr. Gerry Byrne and the Office of Climate Change, Licensing and Resource Use in the Environmental Protection Agency and the project's technical advisors, The Clean Technology Centre for their ongoing support to Monaghan County Council's Environment Section.

I would like to thank the management and staff of Monaghan County Council's Environment Section for their ongoing commitment to environmental protection in County Monaghan.

Declan Nelson
County Manager

Since September 2006 Monaghan County Council has been involved in the Local Authority Prevention Demonstration Programme (LAPD) under the auspices of the National Waste Prevention Programme (NWPP) which is administered by the Environmental Protection Agency (EPA). Funding of €420,000 through the LAPD Programme has provided financial and technical support over a three year period to Monaghan County Council to develop a comprehensive and integrated waste prevention programme.



The benefits that accrued from participating in this programme are:

- Technical training received by Monaghan County Council staff
- Increased awareness of prevention across a number of different sectors
- Enhanced relationship between Monaghan County Council and other state agencies
- Enhanced relationship between Monaghan County Council and local businesses
- Raised profile of Monaghan County Council Environment Section nationally
- Compliance with national and regional policy objectives

Project Performance Indicators

KEY PERFORMANCE INDICATOR	RESULT
TOTAL FINANCIAL SAVINGS	€510,000
€ Savings in public sector	€97,000
Savings in business sector	€377,000
Savings in agriculture sector	€36,000
TOTAL WASTE PREVENTED AND DIVERTED FROM LANDFILL	2,080 tonne
Waste prevented or diverted public sector	80 tonne
Waste prevented or diverted business sector	2,000 tonne
TOTAL M³ WATER CONSERVED	26,000 m ³
m ³ water conserved public sector	14,000 m ³
m ³ water conserved business sector	12,000 m ³
TOTAL KWH OF ENERGY SAVED	876,000kWh
kWh of energy saved public sector	58,000 kWh
kWh of energy saved business sector	618,000 kWh
kWh of energy saved agriculture sector	200,000 kWh

To put these savings into context

- 876,000 kWh of energy is the same amount of electricity used by 175 homes in a year based on SEI figure of 5,000kwh per home per year in Ireland
- 26,100 m³ of water would fill Monaghan leisure centre pool 65 times
- 2080 tonne of waste is the same as is landfilled by 2000 householders in Ireland annually.

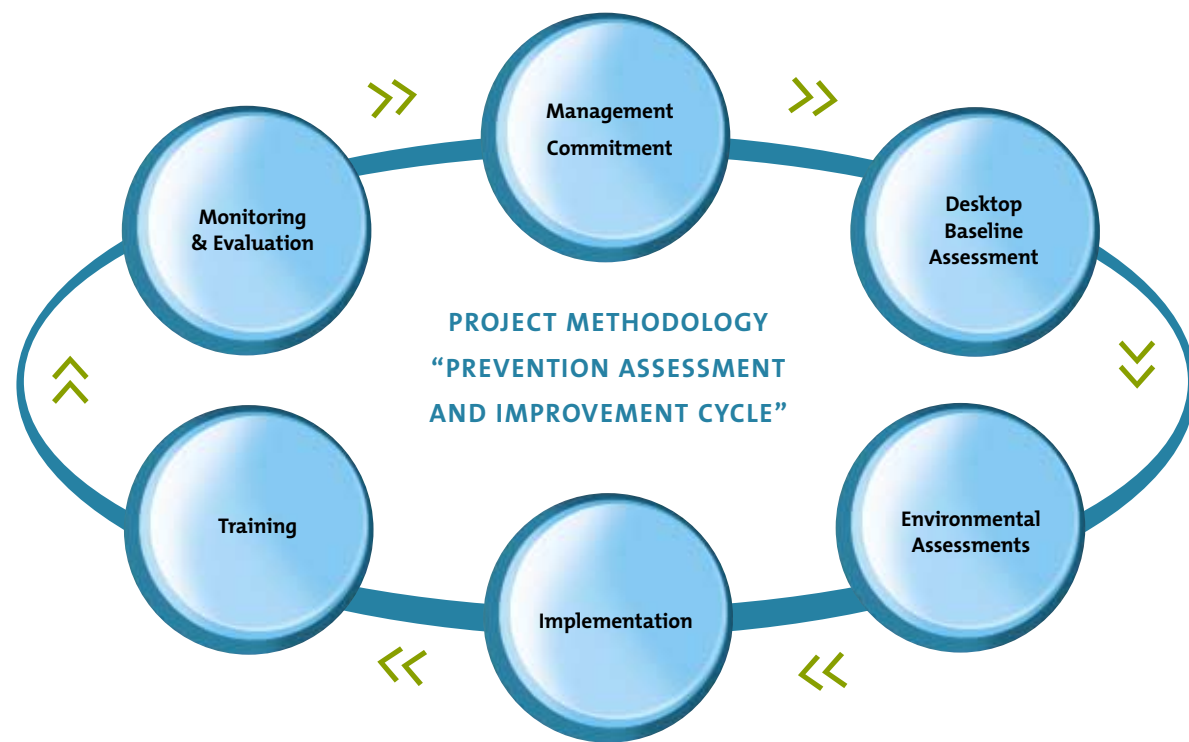
Project Lessons

The main lessons learned by the LAPD team that would be applicable to other Local Authorities or businesses participating in or developing a prevention programme are:

- The biggest savings achieved were in the public and business sectors. Future prevention programme should initially focus on these sectors.
- An integrated, holistic approach that includes waste, water and energy is the most effective approach to waste prevention.
- The most successful approach taken during this project was where the *prevention assessment continuous improvement model* was used.
- For any prevention project to be successful, full co-operation from management and staff in the participating organisation is required.
- There are significant financial savings to be made from developing a prevention programme.
- There is a need to increase awareness at policy level of the benefits of developing a prevention programme.
- Time, especially at the start up phase, is required for any prevention programme to come to fruition.

Project Methodology

The methodology used in this project is based on the best practice model of environmental assessment and continuous improvement. Each step of the model is as important as the next or previous step. Experience has taught the LAPD team that if any component of the model is missing, delivering a prevention project that will bring worthwhile results becomes increasingly difficult.



Prevention Project Tools

- Waste characterisation studies
- Walk through audits
- Desktop analyses of bills - energy, water, waste
- Production of prevention reports - identifying opportunities
- Training and awareness
- Follow up advice and mentoring



Walk through audit with SEI energy assessors.



Conducting a waste audit.

Initiative 1: Public Sector

Monaghan County Council

In the current economic climate it makes sense for Local Authorities to look at all utilities and environmental costs and analyse where savings can be made through developing prevention and conservation measures. Within Monaghan County Council the following activities were undertaken.

- In the Corporate Headquarters improvements were made to waste management procedures which resulted in 50% less waste going to landfill.
- An energy training programme was undertaken by twelve staff members with the assistance of Sustainable Energy Ireland, which resulted in savings to date of €33,000. This was achieved through the following:
 - Elimination of electricity MIC and Wattless penalties
 - Changes to the motor (variable speed) on the gas flare at Scotch Corner landfill
 - Energy savings in Ballybay Waste Water Treatment Plant through changes to timings on aeration system
- The LAPD team is working with Monaghan Leisure Centre to ensure that the facility is operated to highest possible environmental standards. Waste management, energy and water are being looked at as areas of improvement. In 2007 a waste segregation system was established in the facility.

MCC FACILITIES - KEY PERFORMANCE INDICATOR	RESULT
€ saved in environmental costs p.a.	€35,000
Tonnes waste diverted from landfill	8
kWh electricity prevented p.a.	37,000 kWh
Staff trained	20



Changes to Ballybay aeration system timings resulted in energy savings

Initiative 1: Public Sector

Health Service Executive

The LAPD worked with three HSE facilities within Monaghan County. Pre-intervention each facility had a different level of environmental performance. Post intervention each facility had improved its environmental performance and demonstrated that a preventative approach to environmental management pays.

Successes of the project include:

- Waste prevention at source, particularly food waste through an improved food ordering system from wards.
- Reduction in waste classified as risk waste through proper identification and segregation.
- Increased waste diversion from landfill through better segregation.
- 225 employees of HSE received environmental training.
- Water conservation through leak detection and use of water conservation devices.

HSE FACILITIES - KEY PERFORMANCE INDICATOR	RESULT
€ saved in environmental costs p.a.	€62,000
Tonne of non risk waste prevented and diverted from landfill p.a.	72
Kgs of risk waste prevented p.a.	1800
kWh electricity saved p.a.	21,000kWh
Water saved p.a. (m3)	14,000
Number of people trained	225

The performance indicators would suggest that this programme was a success. If the programme was replicated nationally, it could potentially result in savings of €1.5- €2 million per annum for the HSE based on the savings achieved in County Monaghan.

Initiative 1: Public Sector

Key Recommendations for delivering Prevention in Public Sector

- To meet national, regional and local environmental policy objectives, prevention needs to be adopted as a key objective in the public sector.
- Commitment, particularly from management, and staff of the public sector is required to implement environmental change.
- By developing a preventative approach to waste management considerable savings can be made.



Awareness exercise with HSE staff.



Changes to landfill gas flare motor resulted in energy savings.

Initiative 2: Greening Monaghan Business

A key objective of the North East Waste Management Plan was to “Implement best waste management practices in the workplace with the emphasis on waste prevention” and to “Broaden the remit of environmental awareness to waste prevention and minimisation in the business sector”.

Monaghan County Council has tried to meet these objectives by developing a prevention programme in businesses that focuses on the following:

- Cleaner production and resource use efficiency.
- Waste prevention and, where appropriate, diversion from landfill.
- Training and awareness.
- Working with business organisations to implement best practice across the sector.

The response from the business community in County Monaghan to prevention has been positive. A mix of manufacturing, service industry, hospitality and community run businesses have participated and benefitted from advice given by Monaghan County Council to improve their resource use efficiency.

Successes of the project include:

- In total 35 businesses participated in project.
- Includes 18 pubs and 3 hotels participating in hospitality waste prevention programme.
- 3 community type businesses participating.
- Significant waste prevention and waste diversion.
- Increased environmental awareness in the business community.
- 12 companies received training from Sustainable Energy Ireland.
- Significant energy savings achieved in these twelve companies.
- Increased co-operation between private and public sector.
- ‘Calling Time on Waste’ booklet distributed to 4600 publicans nationally.



Calling Time On Waste Booklet.

Initiative 2: Greening Monaghan Business

KEY ENVIRONMENTAL PERFORMANCE INDICATORS MANUFACTURING AND SERVICE INDUSTRY

The number of companies participating and the savings achieved has made this initiative a success. What has been demonstrated is that by developing a preventative approach to environmental management money can be saved. However, to achieve these savings companies must commit time and resources.

KEY PERFORMANCE INDICATOR	RESULT
€ saved in environmental costs	€377,000
Tonne of waste diverted/prevented	2,000
M ³ of water prevented	12,000
kWh of energy saved	618,000 kWh
Number of companies participating in training	26

Key Recommendations for Green Business

- Local Authorities need to engage with trade and sector organisations for Green Business prevention programmes to be successful
- Businesses are interested in training and awareness delivered at a local level, local authorities should try and facilitate resource use training.
 - There is a need to co-ordinate all environmental services provided to businesses at a national level by state agencies such as EPA and SEI.
 - Support of Greenbusiness.ie should be promoted.
 - Support should be given to the community sectors that are running not for profit businesses.

Initiative 3: Agriculture Sector

Monaghan County Council's LAPD team worked closely with the Irish Farmers Association (IFA) to recruit farmers to participate in the prevention programme. One of the primary objectives of this project was to research types and quantities of waste being produced on farms. The LAPD discovered that whilst waste is not generally a problem for farmers, there are some issues of concern regarding storage and disposal of hazardous waste. Furthermore, it was discovered that there are significant savings to be made by farmers in energy conservation.

THE FARMS THAT PARTICIPATED INCLUDED:

- 2 Mushroom Farms
- 5 Dairy Farms
- 1 Poultry Farm
- 1 Integrated Piggery
- 1 Suckler Farm

Successes of the project include:

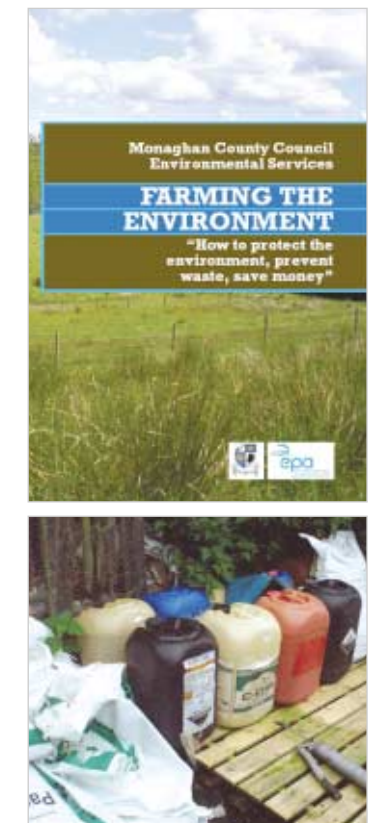
- Savings in energy conservation for participating farmers.
- Identification of hazardous wastes as an issue for farms.
- Greater co-operation between farming community and the Local Authority.
- Publication of 'Farming the Environment Booklet', 2,500 of which have been distributed around the country.

The KEPIs from this project clearly demonstrate the potential for savings in energy efficiency in the agriculture sector.

KEY PERFORMANCE INDICATOR	RESULT
Cost savings to farmers	€36,000
No of audits carried out	10
kgs waste diverted	200
kWh of energy prevented	200,000 kWh
No of booklets distributed	2,500

Key Recommendations for Agriculture Sector

- There is scope for a prevention awareness programme in the agriculture sector.
 - There is a need to develop hazardous waste collection systems for the farming community. This should include some type of benchmarking exercise.
- Energy and water conservation on farms could provide considerable savings to farmers.



Top: Farm Booklet
Below: Farm Waste

Initiative 4: Schools Programme

The objective of this initiative was to promote prevention as the most desirable form of waste management and to get schools to move beyond recycling. The main work undertaken included:

- Introduction of the concept of prevention and resource use into 28 schools.
- Delivery of prevention project competition in which over 700 students participated.
- 3 waste characterisation studies completed.

Key Recommendations from Schools Project

- Need to incorporate prevention into the Green Schools programme.
 - Need to develop benchmarks for the education sector - energy, waste and water.
- Monaghan County Council should conduct a prevention competition for schools every few years.

This project demonstrates that when offered a unique opportunity to participate in a local competition schools are willing to participate.

KEY ENVIRONMENTAL PERFORMANCE INDICATORS	RESULT
Number of students participating in schools competition	700
Number of school visited	28



EAO working with students on waste prevention.

Initiative 5: Households

At the outset of this project Monaghan County Council wanted to engage with householders on a prevention programme. Some intervention work was undertaken with 10 householders. However, the Green Homes Scheme, also funded under the NWPP, was instigated around this time and it was felt that resources would be better spent by Monaghan County Council delivering the other initiatives in this programme.

Key Recommendations from Household Project

- Working directly with householders is labour intensive. Resources might be better used in areas like the public and business sector where more waste can be prevented.
- Monaghan County Council should continue to support national household environmental awareness campaigns like Change and Power of One.
- Food waste is a particular issue that could be addressed within a national prevention programme.

Press coverage of household programme.

Mullaghmatt/Cortolvin goes Eco-Aware

Policy and Legal Requirement

It is important that any project like this meets national, regional and local policy objectives. The LAPD, where possible, has been mindful of these policies and has tried to work within this remit. The following policy objectives have been met.

Relevant Item of Legislation	Associated MCC legislative Requirements	How LAPD contributes to fulfilment of MCC legislative requirements
County Monaghan Development Plan 2007-2013 Planning and Development Acts 2000 - 2002	Monaghan County Development Plan: Policy for Air Quality: "Env. 49. Encourage a more energy efficient approach to the design and servicing of buildings for residential, commercial, industrial and other uses, including public buildings."	<ul style="list-style-type: none"> Work on energy use reduction in various sectors in Co. Monaghan.
	"Env. 43. Provide information on environmental issues, promote sustainable development and encourage a high standard of environmental protection."	<ul style="list-style-type: none"> Awareness and training in water, energy and resource use/minimisation and waste reduction/diversion in County Monaghan.
North-East Regional Waste Management Plan 2005 - 2010; Waste Management Acts 1996 - 2001	Policies for Waste Prevention "The local authorities will broaden the remit of the Environmental Awareness Officers to assist with waste prevention and minimisation."	<ul style="list-style-type: none"> Work with various sectors to prevent waste, increase diversion, reduce energy and minimise water use.
	"Ensure that the SME sector recognises hazardous waste and improve awareness of the need to manage this waste appropriately, through educational programmes focused on ways in which the generation of hazardous waste in SMEs can be prevented, reduced, recycled and source separated."	<ul style="list-style-type: none"> Highlighted the appropriate management methods for hazardous waste in individual small businesses and HSE.
	Implement best waste management practices in the workplace with the emphasis on waste prevention.	<ul style="list-style-type: none"> Working with the business community on waste prevention.
	That each Country has a prevention plan.	<ul style="list-style-type: none"> Monaghan County Council is one of only three such projects that is operating under phase 1 of the LAPD programme.
Water Framework Directive 2000/60/EC	Must aim to achieve good status in all waters by 2015 and must ensure that status does not deteriorate in any waters by the end of 2015 for all surface waters.	<ul style="list-style-type: none"> Reduction at source in BOD and effluent volume to sewer from various sites. Reduction in water use by end users; leak identification & repair.

BROADER LEGISLATIVE AREAS

Relevant Item of Legislation		How LAPD contributes to fulfilment of MCC legislative requirements
Water Services Act 2007	Duties of care in relation to water conservation.	<ul style="list-style-type: none"> Reduction in water use by end users through leak identification & repair.
Kyoto Protocol on Climate Change and planned Post-Kyoto EU emission reduction targets	For Ireland, greenhouse gas emissions by 2012 must only be 13% above 1990 levels under Kyoto; and For post-Kyoto: for Ireland, for emissions not covered by the emissions trading scheme: emissions by 2020 must be 20% below 2005 levels.	<ul style="list-style-type: none"> Reductions in energy use achieved by various sectors.
Ireland's energy efficiency action plan under Directive 2006/32/EC on energy end-use efficiency and energy services	Aims: To reduce greenhouse gas emissions by at least 20%. To ensure that 20% of final energy consumption is met with renewable sources. To raise energy efficiency by 20%.	<ul style="list-style-type: none"> Reductions in energy use achieved by end users. Raising energy efficiency awareness across a range of sectors.

Publicity and Publications

Monaghan County Council was committed to promoting the programme in the media. Whilst much of the work went unseen by the general public, where appropriate, the LAPD team made every effort to promote the programme at local and national level. Two publications were produced during the life time of this project.

In year one of the programme "Farming the Environment" was produced. The objective of this booklet was to introduce the concept of prevention and sustainable resource use to the farming community. The booklet was well received within the farming community and it received considerable publicity, highlighting the importance of prevention nationally.

In year two "Calling Time on Waste" was printed and distributed to 4600 publicans nationally. The booklet, which was produced in co-operation with the Vintners Federation of Ireland, has practical examples of how publicans could introduce environmental management focusing on prevention into their business.

EXAMPLES OF PUBLICITY RECEIVED

- 7 minute slot on Eco-Eye programme on RTE 1
- National and local coverage of launch of 'Farming the Environment' booklet
- National and local coverage of launch of 'Calling Time on Waste' booklet
- Local coverage of schools programme
- Local coverage of household programme
- 4 radio interviews on Monaghan's prevention programme
- Presentations at a number of conferences



Local publicans at launch of Calling Time on Waste

Conclusion

Overall Monaghan County Council has demonstrated that prevention pays. In each of the participating organisations, businesses, farms and schools savings have been made by developing a programme based on the prevention assessment and continuous improvement methodology.

The next challenge for Monaghan County Council is to build on the successes, and the challenges of this project by disseminating the results to other Local Authorities and by continuing to work within County Monaghan with those that are already involved as well as new interested organisations.

Monaghan County Council needs to continue to look at its own activities to ensure that they are operated to the highest possible environmental standards and that the Local Authority works at implementing national, regional and local policy objectives.



Photo taken while filming for ECO EYE.

Thank you for taking the time
to read this brochure

