NATIONAL LITTER POLLUTION MONITORING SYSTEM

LOCAL AUTHORITY INFORMATION UPDATE #4

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This newsletter, the forth in the series, describes the activities which have been advanced by the local authorities since the circulation of the last issue in May 2001.

Aims

As stated in the three previous publications these Updates aim to:

1. Provide a summary of the key activities undertaken;
2. Describe the progress of implementation of the National Litter Pollution Monitoring System, address any issues, which arise during the System's implementation;
3. Facilitate information dissemination between local authorities via a series of case studies or success stories from around the country, and
4. Provide additional information and request feedback as required.

Structure

This newsletter provides a short overview of the main activities undertaken since May 2001.

It also addresses best practice of litter control in Ireland and examines a sample number of best practice litter prevention measures around the country.

Kilkenny County Council and Cavan County Council have prepared an overview of the implementation of the National Litter Pollution Monitoring System within their functional areas, including details of the problems encountered and how they were overcome. This should be of assistance to local authorities who are currently implementing the system.

Finally in this edition of the Information Update we have included a section detailing a number of Frequently Asked Questions. It is hoped that this section will provide quick solutions to queries you might have in relation to the National Litter Pollution Monitoring System.

Other questions you may have can be answered by contacting the Litter Monitoring Body on 01 803 0401 or laura.scanlan@tesltd.ie.

2. ACTIVITIES UNDERTAKEN SINCE MAY 2001

The following provides a short synopsis of the activities carried out by the Litter Monitoring Body since the publication of the last Information Update.

Implementation Survey

Since the last Information Update the Litter Monitoring Body has carried out two rounds of telephone surveys in May 2001 and a follow up survey in October 2001 to assess progress. An essential role of the Litter Monitoring Body is to measure progress with the implementation of the National Litter Pollution Monitoring System nation-wide and report the results to the Department of the Environment and Local Government.

During the June survey there were a total of 56 local authorities implementing the system. This situation improved in Oct/Nov 2001 with a total of 72 local authorities proceeding with the implementation of the system. To date ten local authorities have returned results to the Litter Monitoring Body.

GIS Training

Further training in the GIS software took place in the Local Government Computer Services Board's headquarters during the Summer months of 2001.

Phase Two GIS training was to facilitate the production of the Litter Generation Potential Maps. Each training session ran for approximately two hours.

A pre-requirement for Phase Two was that Phase One training should have been completed.

Both of these training course; Phase One and Phase Two are available on request from the LGCSB. If you require information regarding training please contact Deirdre Galvin on 01 609 7000.

Meetings and Presentations
Directors of Services Presentation
The National Litter Pollution Monitoring System was presented to Directors of Services on the 7th February 2002. Response to the presentation was excellent, provoking a positive discussion on the system.

Regional Meetings
A series of Phase Two Regional Meetings for all local authorities were held over the summer months. As there have been staff turnovers within local authorities, some delegates would have been new to the concepts of the National Litter Pollution Monitoring System. It was thus decided to include in the agenda for the meetings, presentations by the Litter Monitoring Body on the background to the Monitoring System, the purpose of the identification of Potential Litter Generators, the methodology required for visual surveys and instruction in the methodologies required for Litter Quantification Surveys and Litter Pollution Surveys. As well as providing local authority staff with instruction in relation to successfully implementing the system, the regional meetings also provided a platform for questions to be asked in relation to specific problems encountered in the implementation of the system. The dates and locations of all Phase Two[1] Regional Meetings are detailed in Table 1.

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[1] Covered the background to the system, and the methodologies required for the identification of Potential Litter Generators and the performance of Litter Quantification Surveys and Litter Pollution Surveys.

Table 1 Phase Two Regional Meetings

1	29th May 2001	Custom House, Dublin 1
2	14th June 2001	County Hall, Kilkenny
3	20th June 2001	City Hall, Cork
4	25th June 2001	Custom House, Dublin 1
5	26th June 2001	City Hall, Galway
6	27th June 2001	Aras an Chontae, Carrick on Shannon
7	31st October 2001	Custom House, Dublin 1

Additional Training
While official training is complete (as described in previous section), additional training is available on request contact TES Consulting Engineers 01 803 0401 or Deirdre Galvin LGCSB 01 609 7000

3. REMINDERS TO LOCAL AUTHORITIES

Litter Monitoring Officers
County Councils and City Councils are reminded to notify TES Consulting Engineers of the name of the nominated Litter Monitoring Officer.

The main duties of the Litter Monitoring Officer include overseeing the following:

- the identification of all Potential Litter Generators within the functional area, using either a Geodirectory or visual surveys, and the inputting of the data into the GIS software package designed by the LGCSB and circulated to all local authorities
- the creation of Litter Generation Potential Maps according to the methods set out in the Monitoring Manual, and
- the carrying out of the "benchmark" Litter Quantification and Litter Pollution Surveys in 2001 and the follow-up surveys in 2002 and subsequent years; and the

submission of the survey results to the Litter Monitoring Body,
- using the templates provided.

The appointment of a Litter Monitoring Officer would ensure that efforts are focused more effectively on system implementation, promote better co-ordination between county councils and the Town Councils/borough councils and improve contact between TES Consulting Engineers and local authorities in the discharge of their respective duties under the system.

Website Update
All local authorities are urged to update the Litter Management Best Practice section of

www.tesltd.ie

New/Updated information should be emailed to laura.scanlan@tesltd.ie for inclusion on the website and subsequent Information Updates

4. THE LITTER MONITORING MANUAL AND GIS SOFTWARE

The complete Litter Monitoring Manual has now been circulated to all local authorities. The timetable of circulation of all items is detailed below in Table 2. If you require any section/item please contact Laura Scanlan, 01 8030401 or laura.scanlan@tesltd.ie

Table 2 Overview of Monitoring Manual Circulation

Circulation Date	Item	Contents
June 2000	Section One of the Monitoring Manual	• A5 Plastic Folder containing Part One of the Monitoring Manual; • Floppy disk with Survey Form; • LGCSB Phase I software; • LGCSB Phase I User Manual; and • Questionnaire.
March 2001	Section Two of the Monitoring Manual	• Part Three and Part Four of the Monitoring Manual (A5); • Floppy disk containing Litter Quantification Survey; Questionnaire and Results Database; • LGCSB Phase II software • LGCSB Phase II User Manual
May 2001	Section Three of the Monitoring Manual	• Part Five of the Monitoring Manual (A5) • Floppy disk containing Litter Pollution Survey Questionnaire
September 2001	Additional mail shot	• Updated Litter Pollution Survey Results Database.

5. BEST PRACTICE

An important aspect of the Litter Monitoring Body's role is to obtain information on litter management best practice. From consulting with local authorities, reviewing media reports and undertaking internet searches, we have collated information relating to best practice, in Ireland. This database is accessible at http://www.tesltd.ie/

The Litter Monitoring Body would like to hear about other examples of successful best practice known to the local authorities. These could then be included in the database allowing all other local authorities to access the information.

Anyone with relevant examples or corrections should contact **Laura Scanlan** or **Mairéad Hogan** at the Litter Monitoring Body, TES Consulting Engineers, Unit 4B/5 Blanchardstown

Corporate Park, Dublin 15; tel: 01 803 0401or e-mail at lmb@tesltd.ie.

When communicating the information, please include a brief description of the activity with contact details under the following headings:

♦ Local Authority;
♦ Description of anti litter initiative, including start date and whether it's a once off or ongoing activity;
♦ Impact Area, and
♦ Further Information (contact name, number etc).

A contact name and number will facilitate communication between local authority personnel engaged in anti-litter activities.

Some sample best practice activities are outlined below:

Inter Town and Inter Village League

Local Authority: **Cork County Council**
Full details of this competition were given in Information Update #3.

According to the County Council, since the competition inception five years ago, litter control standards have risen throughout the county. There is 16 towns and 66 villages participating in this competition, thus in total 82 towns and villages are currently participating in this event. Each year the number of participants increases as does the standards thus illustrating how successful this event is. Many of these villages are also participating in the Tidy Towns Competition. The local press coverage is important for this especially the local newspapers and the local radio station. It is not just rewarding from the community's point of view but it is also rewarding for the Council as the villages and towns are not just kept tidy during the competition but all year long. In addition, the price money is generally pumped back into community projects.

The competition has created a greater awareness among communities about the issue of litter and it has also given

communities involved a sense of pride in their area.

Further information may also be obtained from:

Ms. Mairead Lucey , County Hall, Cork County Council, Cork.
Tel 021 – 4285313.

Litter Action League

Local Authority: Carlow County Council

Description:
This is the first year of the Litter Action Litter League, which is organised and sponsored by both **Carlow UDC** and **Carlow County Council,** using the Anti Litter Awareness Grant received from the Department of the Environment and Local Government. The competition is divided into four categories: town/villages, streets, housing estates and schools.

The entry for the League, in its initial year has been very encouraging with twenty towns/villages, twelve schools, and eighteen street/housing estates participating.

Unlike other litter competitions the Litter Action League starts in November and continues until March, this ensures that the enthusiasm and motivation of the communities is sustained over the winter months.

Judging takes place weekly, with the participant groups paired in a match type format, the criteria for judging will be the presence or absence of litter. The local newspapers and radio station will feature the results of the matches weekly, together with a report on the match of the week. This report will include photos of towns/villages involved thus not just promoting anti-litter awareness in the town/villages but also promoting the town/villages themselves.

Other initiatives by Carlow County Council include:
Carlow County Council in partnership with local community groups throughout

the county has developed 22 Litter Management Action Plans. This initiative helps to focus the community groups and the local authority on the problems, objectives and actions required to solve the current litter problem. The partnership approach is essential for the fight against litter to succeed, as it is felt that the local authority working in isolation cannot tackle the problems effectively. However local pride, action and leadership supported by the local authority has been successful.

Carlow County Council has developed a Litter Roadshow, which visits the communities and schools throughout the county promoting litter awareness. The Roadshow contains a Powerpoint presentation and promotional literature on the effects of litter on the environment, tourism and our landscape. The presence of the roadshow at special events around the country i.e. Borris Fair and Health Awareness Day in Hacketstown has proved very popular and successful.

Further information may be obtained from:

Bernard Duff, Community and Enterprise Centre, Carlow.
Tel: 0503 36207

Litter Free Towns and Villages

Local Authority: Limerick County Council

Description:
Limerick County Council's Annual Garden Competition has been running for over fifteen years. There are eleven categories in the competition, which recognise individual and community effort. These are:

- Best Kept Housing Estate;
- Best Litter Free Town/Village;
- Best Open Space/Amenity Area;
- Best Kept Rural Roadside Garden;
- Best Kept Urban Roadside Garden;
- Best Kept Business Premises,
- Best Shopfront;

- Best Kept Primary School Grounds & Approaches;
- Best Kept Post Primary School Grounds & Approaches;
- "Best Environment Award"; and
- Best Kept Church Ground.

There are over 300 entries each year. Judging takes place in June and July. This Garden Competition is not just an issue of adjudicating on prizewinners in various categories and areas. It is also an opportunity for people, Tidy Towns Committees and Community Development Associations to get advice and feedback from the judges and the horticultural section on how to improve and develop their gardens towns/villages etc.

A prize giving ceremony takes place in October each year. Prizes are given to 1st and 2nd prizewinners in the 5 electoral areas in the County in each of the 11 categories mentioned above.

Litter Freephone

Local Authorities: Limerick County Council, Wicklow County Council and Meath County Council.

Description:
A freephone line has been set up in the above-mentioned three local authority areas. These lines are confidential, and allow members of the public to report incidents without being identified by the perpetrators.

Litter freephones enable people who may or may not wish to supply their name, to report litter sightings, which the County Councils can then act upon.

Further information may be obtained from:

Ms. Evelyn Whelan, Limerick County Council, County Buildings, O'Connell Street, Limerick.
Tel: 061 318477

Ms. Lorraine Gallagher, Wicklow County Council, County Offices, County Wicklow.
Tel: 0404 67992

Mr. Greg Duggan, County Hall, Navan, County Meath.
Tel: 046 21581

Pooper Scooper Scheme

Local Authority: Dun Laoighaire-Rathdown County Council, Limerick City Council and Ennis Town Council.

Description:
Blackrock Tidy Towns Committee have given their backing to the pooper scooper scheme which entails the provision of special bins at various locations. The doggie bins with their special deodorising blocks and heavy-duty polythene sacks will ensure that the disposal of dog waste will be carried out in as hygienic a manner as possible.

Limerick City Council is making available pooper scoopers to dog owners free of charge in local shops in Limerick. Also special bins are being provided and will be emptied by local authority staff in the course of cleansing duties.

Ennis Town Council is also giving away pooper scoopers free of charge through local veterinary clinics and the UDC offices.

All local authorities mentioned feel that the pooper scooper system is a valuable tool, which aids paths being kept litter free.

Further information may be obtained from:

Ms. Maura Murphy, Dunlaoighaire/Rathdown County Council, Co. Dublin.
Tel: 01 2054700.

Ms. Ursula Hynes, Limerick City Council, City Hall, Limerick.
Tel: 061 415799

Ms. Patricia Liddy, Ennis Town Council, New Road, Ennis County Clare.
Tel: 065 6828040

Local Authority News

Local Authority: Louth County Council, Dublin City Council, Mallow Town Council and Cork County Council.

Description:

Louth Leader II and Louth County Council have jointly funded the county's first beach cleaning machine. The machine attaches to a tractor and combs through the sand picking up litter.

Dublin City Council has purchased a £20,000 "Gum Buster"-- in an attempt to clean up Dublin. This machine heats the gum and then lifts it off the pavement. It can usually only be used between the hours of 3 am and 10 am as the areas where it is needed most tends to be the busy shopping areas. It is a very labour intensive and time consuming job, but an effective means of removing chewing gum from the pavements.

Mallow Town Council has purchased a motorised street sweeper costing £17,000. The new state of the art machine sucks up litter as well as cleaning the footpath.

The **Carrigaline** area Council Office are using custom made receptacles for chewing gum and cigarette butts in an effort to curb litter problems in the locality.

All local authorities mentioned are in agreement that such cleansing machinery has worked towards ensuring that their area is free of litter.

Further information may be obtained from:

Ms. Angela Muckian, Louth County Council, Courthouse, Dundalk, County Louth.
Tel: 042 9335457

Mr. Kevin O'Sullivan, Dublin City Council, Civic Offices, Wood Quay, Dublin 8.
Tel: 01 411 4243

Ms. Tess Kelleher, Mallow Town Council, County Council Offices, Annabella, Mallow, County Cork.
Tel: 061 318477

Pat O'Sullivan, Cork County Council, Church Rd., Carrigaline, County Cork.
Tel: 021 4371800

Anti Litter Campaign

Local Authority: Waterford County Council and City Council, Westmeath County Council, Carlow County Council and Town Council, Meath County Council, Ennis Town Council, Wicklow County Council, Bray Town Council and Louth local authorities.

Waterford County Council has established an "Anti Litter Working Group" based on the Agenda 21 model of partnership and participation. People from different sectors of the community meet regularly to discuss how to improve the litter situation in Waterford. Also the introduction of anti-litter banners is part of **Waterford City Council's** continuous anti-litter awareness programme. The messages on the banner range from "Waterford Lets Keep it Clean" to "Litter Louts Watch Out" and "Litter ~Fines £1,500 max".

The new banners are only one of several anti-litter projects being undertaken by the City Council. Other initiatives include the Hasbro Junior Litter Ranger Clubs, the Annual Environmental Awards, and the Environmental Programme for Schools.

Westmeath County Council has devised an innovative anti-litter measure with the announcement of the Litter Free Zone. The area is highlighted using banner type flags. Thirteen poles used for summer baskets have a specially designed triangular sign again highlighting the "Litter Free Zone".

Also as part of an anti-litter campaign, two anti-litter videos, one specifically aimed at primary school children have been produced. The main anti litter video entitled "Litter-Why on Earth do we do

it?" has been shown in a local shopping centre and in the Railway Station. The second video "Litter Warriors save the day" produced using school children, is shown in schools.

Carlow County Council are involved in a number of initiatives aimed at raising awareness in relation to litter pollution. Promotional material was distributed to schools, business etc. A competition was held for council personnel on what the Council can do to achieve a litter free county. The council also wrote to businesses advising them of their responsibilities under the Litter Pollution Act.

Carlow County Council in partnership with local community groups throughout the county have developed 22 Litter Management Action Plans. This initiative helps to focus the community groups and the local authority on the problems, objectives and actions required to solve the current litter problem. The partnership approach is essential for the fight against litter to succeed, as it is felt that the local authority working in isolation cannot tackle the problems effectively. However local pride, action and leadership supported by the local authority has been successful.

Carlow County Council has developed a Litter Roadshow, which visits the communities and schools throughout the county promoting litter awareness. The Roadshow contains a Powerpoint presentation and promotional literature on the effects of litter on the environment, tourism and our landscape. The presence of the roadshow at special events around the country i.e. Borris Fair and Health Awareness Day in Hacketstown has proved very popular and successful.

In addition Carlow UDC and Carlow County Council have launched in conjunction with local artist Ritchie Kavanagh an Anti-Litter song "Don't throw your litter on the ground". The song is aimed at school students and helps to create awareness of the litter problem, as well as outlining the £50 litter fine involved. Also Carlow local authorities

are developing a School Litter Warden Uniform/Bib, which will be designed to help create a sense of pride in County Carlow. Illustrations of Carlow Sporting Heroes will be printed on the bib, to help make them more attractive.

Meath County Council's Anti-Litter campaign featured Environmental Education Theatre. This involved "Down to Earth Theatre Company" visiting 22 schools, incorporating litter awareness in their play "Bin there, dump that".

Ennis Town Council has a number of initiatives aimed at raising awareness in relation to litter control, these include:
- A Best Kept Schools Competition,
- A litter quiz in conjunction with Clare FM was organised, in parallel with the launch of a new Litter Song.
- Anti-Litter Presentations are given to local schools by Town Council staff.

Wicklow County Council are also involved in an anti-litter campaign aimed at educating the public of the problems that litter can generate. An Environmental Quality Award has been developed as part of Wicklow's anti-litter campaign. The award will be given to community groups that meet necessary requirements. To be eligible a Litter Task Force must be established, which will assess the impact of litter on the local area. Following this each community will prepare a litter action plan based on achievable targets for tackling litter in their community.

Bray Town Council Bray Action against Litter Task Force was launched to combat the ongoing problem of litter and illegal dumping throughout the town. Bray Town Council established the Task Force in partnership with Bray and District Chamber of Commerce and Bray Tidy Towns. The campaign will see the removal of chewing gum by steam cleaning the streets from the Town Hall to the Dargle Bridge and Quinsboro Road. In addition sixty banners will be erected along the Main Street and Quinsboro

Road containing anti-litter messages. Bray Junior Council arranged a competition amongst secondary schools in Bray involving the collection of aluminium cans.

Louth local authorities have distributed posters for display in banks and fast food outlets. In addition litter alert signs have been placed at strategic locations throughout the county outlining that a litter alert programme is in operation and that offenders will be fined and prosecuted. A new awareness video entitled "Action Against Litter", launched in March 2000, will also be used by Council staff to supplement school talks.

Further information may be obtained from:

Mr. Liam Quinlan, Waterford County Council, County Offices, Dungarvan, County Waterford.
Tel: 058 42822

Ms. Patricia Gibney, Westmeath County Council, County Buildings, Mullingar, County Westmeath.
Tel: 044 84232

Mr. Bernard Duff, Community and Enterprise Centre, Carlow.
Tel: 0503 36207

Mr. Greg Duggan, Meath County Council, County Hall, Navan, County Meath.
Tel: 046 21581

Ms. Patricia Liddy, Ennis Town Council, New Road, Ennis County Clare.
Tel: 065 6828040

Ms. Lorraine Gallagher, Wicklow County Council, County Offices, Wicklow.
Tel: 0404 67324

Ms. Angela Muckian, Louth County Council, Courthouse, Dundalk, County Louth.
Tel: 042 9335457

5. IMPLEMENTATION OF THE NATIONAL LITTER MONITORING SYSTEM

The majority of local authorities should now have completed phase 1 of the system, i.e. the identification and mapping of the potential litter generators in their functional areas and currently be undertaking phase 2, i.e. the production of the Litter Potential Generation maps and carrying out the benchmark litter quantification and pollution surveys. Local authorities should return the survey results, using the templates (i.e. the Access and Excel databases), which TES has circulated to them, to TES.

PHASE ONE: SET-UP PHASE

Step	**Description**
1.	*Identify and classify all Potential Litter Generators.[2]*
2.	*Log x,y co-ordinates of Generators onto basic digital maps.[3]*
3.	*Produce the Litter Generation Potential Maps using the Litter Monitoring GIS Software.[4]*

PHASE TWO: BENCHMARK PHASE

Step	**Description**
4.	*Consult tables provided in Monitoring Manual to identify the number of surveys required.*
5.	*Identify (from the Litter Generation Potential Maps) suitable **High-Risk Survey Areas**[5].*
6.	*Identify (using the GIS Application and the Litter Generation Potential Maps) a number of **Random Survey Areas**[6].*
7.	*Choose a number of locations which are deemed to merit detailed observation (e.g. known problem areas).*
8.	*Carry out between four and 12 Benchmark Litter Quantification Surveys.*
9.	*Carry out a pre-set number of Benchmark Litter Pollution Surveys over the summer/autumn months.*
10.	*Enter Litter Survey Results into Microsoft Excel Spreadsheet[7].*
11.	*Return the results to the Litter Monitoring Body for central analysis and the production of national litter survey reports.*

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[2] This can be accomplished by visual surveys, existing lists, an Address Database or a combination of the above (see the Monitoring Manual-Part Two).

[3] This was covered in Phase 1 training of the Litter Monitoring GIS Software and further information can be accessed in the Litter Monitoring GIS Phase 1 (User Manual), issued to all local authorities by the LGCSB in May 2000.

[4] Training is currently ongoing in the LGCSB for this Phase of the Software. Further information can be accessed in the Litter Monitoring GIS Phase 2 (User Manual), issued to all local authorities in March 2001.

Litter Monitoring Body

[5] These locations, which represent the areas, which are most likely to be littered, are assessed during the Litter Pollution Surveys.

[6] These locations are surveyed during the Litter Pollution Surveys to ensure that representative coverage of each authority's area is obtained.

[6] This has been circulated to the authorities by the Monitoring Body as part of the Monitoring Manual.

6. LOCAL AUTHORITY CASE STUDIES

CAVAN COUNTY COUNCIL IMPLEMENTATION OF THE NATIONAL LITTER MONITORING SYSTEM

Statistics	
Area (hectares)	477,360
Population	52,944
Cavan Town Council population	5,000
Miles of road	1,800

Cavan is predominately a rural county, with only 16% of the population living in (and within the environs of) towns with a population of 1,500 or more.

It was agreed by the County Manager that the Environment Section of Cavan County Council would take responsibility for implementation of the system for both Cavan County Council and Cavan Town Council. The Senior Executive Officer assigned the Litter Warden and a number of students in summer employment to commence implementation of the system.

Phase 1 (Set-up Phase)
The completion of Phase One was achieved using both summer students and the Litter Wardens. Students also carried out visual surveys throughout the county and then entered the necessary information onto the potential litter generator forms. The students began the surveys on the 24/07/00 and finished on the 04/09/00. It took a total of six weeks to carry out the visual surveys. The total cost of implementing this section of the Litter pollution system to date is estimated to be approximately £5000.

Once all the information was collected, it was entered into the GIS software package provided by the LGCSB. There were 418 Potential Litter Generators identified, a number of illegal dumping sites were also identified. The following information was collated 161 pubs, 74 newsagents, 41 takeaways 28 supermarkets, 36 miscellaneous, 16 service stations, 16 bank ATMs, 9 where groups of people gather, 6 large car parks, 6 betting establishments, 4 derelict sites and buildings, 4 amusement arcades, 4 open air markets, 2 lay-bys, 2 major events including the Ulster Championship in July 2001, 3 secondary schools, 1 mart, 1 theatre, 1 bus station, 1 industrial estate, 1 shopping mall, 1 riverside walks and 1 nature trail. There was altogether 1,700 miles of road surveyed.

After marking the potential litter generators directly onto the maps in June 2001, they were then transferred onto the GIS database by staff in the County Council. No problems were experienced with the implementation of this phase of the system.

Phase 2 (Benchmark Phase)

The Litter Pollution Surveys were located in both hot spots and random locations by students supervised by the litter warden. There were altogether 84 Litter Pollution Surveys carried out. It was commented that the actual carrying out of the surveys created awareness among the local people. No problems were experienced during the Litter Monitoring Process. These results have been submitted to TES Consulting Engineers, the Litter Monitoring Body.

KILKENNY COUNTY COUNCIL - IMPLEMENTATION OF SYSTEM TO DATE

Statistics[8]

Area	2,640km² (797sq.miles)
Population	75,336
of which	
Kilkenny County Council	66,829
Kilkenny Municipal Borough	8,507
Miles of road covered (approximately)	2,400[9]

Phase 1 (Creation of Potential Litter Generator Database)

Kilkenny County Council agreed to implement the system for both Kilkenny County Council and Kilkenny City Council because Kilkenny County Council has greater mapping resources, MapInfo software licence and personnel to run the system. Kilkenny City Council contributed to the cost of implementing the system.

The system was administrated by the Assistant Engineer from the Waste Management Section. In addition to their other duties, a Graduate Environmental Assistant and a Technician in the environment section were assigned the responsibility of identifying and mapping each Potential Litter Generator within the county, along with students on the summer job scheme. Visual surveys were carried out in each of the DEDs in the county (including Kilkenny City) over a period of three months. The staff received the standard rate of travelling for this work. Generators were marked directly onto maps. For rural area, 6 inch Ordnance and Discovery maps were used and these were covered by car. Local knowledge in some cases was obtained from the Area Engineers. The assistance of the Litter Wardens was invaluable in identifying and mapping locations of the litter blackspots/fly-tipping areas throughout the city and county. The larger towns and Kilkenny City were covered on foot and the potential litter generators marked directly onto either 1:1,000 or 1:2,500 scale maps. The potential litter generator forms were also filled out at this stage. The generators were classified according to the potential litter generator classification lists. There were found to be 695 potential litter generators in Kilkenny County Council and Kilkenny City Council areas. The initial phase of the system cost approximately £4,000.

After marking the potential litter generators directly onto the maps, they were then transferred onto the GIS database. No problems were experienced with the implementation of this phase of the system apart from a few minor difficulties with the initial operation of the GIS software. The LGCSB and TES provided assistance and once these initial problems were solved the process ran smoothly. All the potential litter generators have now been entered onto the database. The data-inputting stage involved a period of approximately four weeks and cost in the region of £1,500.

Phase 2 (Benchmark Phase)

Kilkenny County Council are now in the process of implementing Phase 2 of the litter monitoring system, i.e. carrying out the litter quantification and litter pollution surveys and at present this is 75% completed.

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[8] Obtained From Census 1996, Volune1, Central Statistics Office.
[9] Approximate Figures obtained from Kilkenny County Council.

7. Frequently Asked Questions

General Information (Part One of Monitoring Manual, green section)

What is the National Litter Pollution Monitoring System?

The National Litter Pollution Monitoring System is a self-monitoring system, which may be used as an important decision making tool within local authorities. The main purpose of the Monitoring System is to enable the authorities to generate accurate and reliable statistics relating to litter pollution levels in their own functional areas.

What information will be gathered from litter monitoring?

- The severity and extent of litter pollution across the country;
- The manner in which levels of litter change from location to location, and over time;
- The most likely sources and causes of the litter; and
- The location of litter black-spots.

What are the stages involved in implementing the National Litter Pollution Monitoring System?

There are three phases involved in the implementation of the National Litter Pollution Monitoring System;

Set Up Phase
- Identify Potential Litter Generators;
- Input data from Visual Surveys into Litter GIS software;
- Plot the Potential Litter Generators onto digital maps; and
- Produce Litter Generation Potential Map using Litter Monitoring GIS software.

Benchmark Phase
- Consult Appendix Five and Appendix Six of the Monitoring Manual to identify the number of Litter Quantification Surveys and Litter Pollution Surveys required;
- From the Litter Generation Potential Map identify survey areas; 40% are to be performed in 'high risk' areas, 40% are chosen randomly using the GIS software and 20% are chosen by the local authority.
- Carry out surveys over the survey period which is May to September;
- Enter the results in the Litter Quantification Survey Results database (MS Excel) and the Litter Pollution Survey Results Database (MS Access); and
- Return the results to the Litter Monitoring Body.

Survey Phase
- On an annual basis repeat the steps detailed in the Benchmark Phase.

Where can I access information relating to the National Litter Pollution Monitoring System?

If you require assistance regarding the National Litter Pollution Monitoring System you can contact the Litter Monitoring Body at:

TES Consulting Engineers
Unit 4B/5
Blanchardstown Corporate Park
Blanchardstown
Dublin 15

Tel   01 8030401
Fax   01 8030410
Email   laura.scanlan@tesltd.ie

There is also a section dedicated to the National Litter Pollution Monitoring System on TES Consulting Engineers website

www.tesltd.ie

Set Up Phase

What is a Litter Generation Potential Map? (Part Three of Monitoring Manual blue section)

> **Litter Generation Potential Maps** are color-coded GIS maps, which identify clusters or 'hotspots' of premises, which are traditionally associated with litter pollution. These maps are created using specially designed GIS software. The maps will be used to choose survey areas for Litter Quantification Surveys and Litter Pollution Surveys. Not only will the maps be used for this purpose but they may also be used to map other important aspects of the Litter Management System including litter bin locations, cleansing and litter warden routes, premises which have been the subject of litter prosecutions, the location of areas which have scored particularly poor in Litter Pollution Surveys and the locations of Litter Control areas.

What is a Potential Litter Generator? (Part Two of Monitoring Manual, pink section)

> Potential Litter Generator is the collective term given to premises, sites or activities which are likely to give rise to litter pollution. Examples include fast-food outlets, derelict land, tourist attractions and secondary schools.

What are the different types of Potential Litter Generators?

> **Class 1** comprised of Generators, which are known or suspected to be **potentially highly polluting**;
> **Class 2** comprised of Generators, which present a considerable risk of potential litter pollution but where the pollution arising is likely to be less severe than that observed with Class 1 Generators. These are termed **potentially moderately polluting**; and
> **Class 3** comprised of **temporary, seasonal or sporadic Generators**.

How do I decide what class a Potential Litter Generator should be?

> There are three lists found within the Monitoring Manual (Part Two, Chapter One, *pink section*). Contained within each list are a number of categories of Potential Litter Generators. The surveyor should decide using these lists, which Class a Generator falls into. If the category of a particular generator is not listed it should be categorised as Miscellaneous and the surveyor should assign the Class on the potential that that generator has to create litter. If in doubt the surveyor may consult with the Litter Monitoring Body for clarification.
>
> It is important to note that the Class is the important factor, the assigning of individual Potential Litter Generators to a particular category is not as important as assigning the initial Class.

How do I identify the Potential Litter Generators within my functional area?

> There are a number of ways this can be done. Some local authorities have decided to purchase an address database, some have identified all the potential generators by Visual Surveys and some local authorities have used various lists such as rates lists etc to aid the identification of the Potential Litter Generators within the their functional areas.

What is the difference between a 'site' and a 'building'?

> A '**site**' is a Potential Generator, which may lead to litter, which cannot be directly linked to a specific permanent building or group of buildings. Examples include riverside walks, scenic locations, most litter blackspots and fly-tipping areas, litter-bins,

stretches of road, canal or river, and lay-bys.

A '**building'**, on the other hand, as the name suggests, refers to a structure, which may directly or indirectly lead to littering.

What is a multiply generator? (Part Two of Monitoring Manual, pink section)

Where more than one Generator is identified at a single location, it is recommended that the location be classified according to the most significant Generator in the grouping. For example, a building containing a newsagent (Class One), a pub (Class Two) and associated with petrol pumps (Class Two) would be recorded as a **Class One Generator.**

What is A Visual Survey?

A **visual survey** involves a surveyor logging litter generators on a map and recording the details on the Visual Survey Form. A detailed methodology is given in Section 1.6 of the Monitoring Manual.

Litter Quantification Surveys (Part Four of Monitoring Manual, green section)

What is a Litter Quantification Survey?

The **Litter Quantification Survey** is a monitoring tool involving a litter item counting exercise, which assesses the origin and type of litter pollution prevailing in a 50m stretch of an authority's area.

When and where do I conduct Litter Quantification Surveys?

It is important for the Litter Quantification Survey that an area with a large sample size is used which means that you chose an area, which contains a substantial amount of litter. Local knowledge will aid this decision. It is also recommended that you chose a

time as long after the last cleansing sweep as possible.

A detailed description of the methodology required for the Litter Quantification Survey is contained in Part Four of the Monitoring Manual.

How many Litter Quantification Surveys does each local authority have to do? (Appendix Five of Monitoring Manual lilac section)

Each local authority has been prescribed a minimum number of surveys, which are required. These are contained in Appendix Five of the Monitoring Manual.

Litter Pollution Surveys (Part Five of Monitoring Manual, yellow section)

What is a Litter Pollution Survey?

Litter Pollution Surveys are surveys where the presence or absence of litter pollution on a given day and at a given location is assessed by a visual inspection. It involves a visual inspection of a 50m stretch of footpath to determine the extent and severity of any litter pollution observed.

Where should I do the Litter Pollution Surveys?

Each local authority is asked to perform a minimum number of Litter Pollution Surveys within their functional area. You are asked to sample in the following areas;

- **'High Risk Areas'** These location are highlighted by the GIS as areas which have the greatest potential to create litter. 40% of Litter Pollution Surveys are performed in these areas. One should choose enough 'hot spots' to give a geographical spread of Litter Pollution Surveys. In other words if you have a number of 'hot spots' within you functional area, you should choose to perform surveys in a number of different clusters;
- **Random Survey Areas** These locations are surveyed during the

Litter Pollution Surveys to ensure that representative coverage of each authority's area is obtained. They are identified using a random selection tool developed as part of the LGCSB Litter Monitoring GIS Package. 40% of Litter Pollution Surveys are performed in random areas; and

- 20% of surveys are chosen at the discretion of the local authority. These may be known 'black spot' areas or maybe areas which may warrant examination due to altered litter abatement practices.

When should Litter Pollution Surveys be done?

The sampling period is from May to September on an annual basis. The surveys should be spread out evenly across the months. Furthermore one should spread the time of the surveys out in order to track changes in pollution levels from day to day and also at different time of the day. In other words surveys should be done on different days at weekends as well as weekdays if possible. Also the supervisor should ensure that the surveys are done at different times of the day.

Who should carry our litter surveys?

Litter Wardens have been chosen as the most appropriate personnel to carry out litter surveys. However the system has been designed to allow any person familiar with the survey methodologies to be able to perform litter-monitoring surveys. The only pre-requirement is that they familiarise themselves with methodologies described in the Monitoring Manual

Litter Monitoring GIS (LGCSB User and Training Manuals 1 & 2)

Who do I contact if I have any queries in relation to the Litter Monitoring GIS software?

The Local Authorities should contact Deirdre Galvin at the Local

Government Computer Services Board.

Email: dgalvin@lgcsb.ie
Tel: (01) 6097000

What software is needed before we can install Phase 1 of the system?

A minimum of MapInfo version 5.5 is needed before the Litter Monitoring GIS can be installed. MapInfo can be purchased from:

GAMMA
Tel: (01) 6620467

ESBI Computing
Tel: (01) 7038000

However MapInfo is not needed to set up the Data Entry module in phase 1.

Where do we obtain the OS (Ordnance Survey) maps?

In some cases the local authority may already have the OS maps in another department e.g. the Engineering Dept., if not they can be obtained from:

Digital Sales,
Ordnance Survey Ireland,
Phoenix Park, Dublin 8
Tel: (01) 8025 376.
Fax: (01) 8025 377.
Email: digitals@osi.ie

What scale OS maps should be used?

Preferably vector 1:1000 and vector 1:2500 should be used but in some cases local authorities have used raster 6-inch OS maps or the Discovery Series (1:50,000).

Will there be any further training courses?

Officially phase 1 training took place in summer 2000 and phase 2 training took place in April and May of this year. From then on training courses have taken place whenever there have been sufficient numbers to run a course. If a Local Authority wishes to go on a training course they should contact Deirdre

Galvin at the Local Government Services Board.

Email: dgalvin@lgcsb.ie
Tel: (01) 6097000

When the potential litter generators have been plotted for the entire county is it possible to select only those generators applicable to the UDC (Town Councils) in order to locate random survey areas?
　　Yes, the following steps should be taken.

Using Windows Explorer create a new folder called UDC.
Open the Litter GIS Module and select the DEDs within the functional area using the following icon: ▦ on the Litter GIS System toolbar.
Select the *File | Save Copy As* menu option on the MapInfo toolbar
Click on Selection and click on Save As.
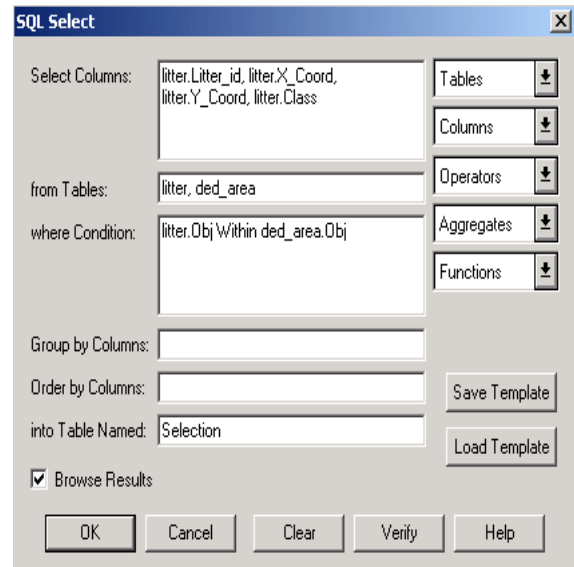Call the new file ded_area and click on Save.
Select the *File | Open Table* menu option on the MapInfo toolbar and open ded_area.
Select the *Query | Select* menu option on the MapInfo toolbar
Select records from the table ded_area.
Click off Browse Results and Click OK.

Select the *Query | SQL Select* menu option on the MapInfo toolbar.
The SQL Select window opens, select the options as shown below

Click OK.
Select the *File | Save Copy As* menu option on the MapInfo toolbar.
Call the new file Litter.
Select the *File | Configure System* menu option on the Litter GIS System toolbar.
Set up the location of the new DED file and the new litter object file.