



Comhshaol, Pobal agus Rialtas Áitiúil  
Environment, Community and Local Government



# THE NATIONAL LITTER POLLUTION MONITORING SYSTEM

## LITTER MONITORING BODY

### 2015 AUDIT REPORT

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## 1. Introduction

The National Litter Pollution Monitoring System (the System) enables local authorities to monitor changes in the nature and extent of litter pollution in their functional areas over time and to use this data to provide more effective litter management planning at a local level.

As a self-assessment mechanism, it is essential that local authorities properly implement the System and that their performance is audited by the Litter Monitoring Body (LMB) to ensure that the System is working as designed and to identify any problems with its key elements.

In February and March 2016, the LMB audited the implementation of the system at five local authorities, as applied in 2015:

1. Laois County Council;
2. Fingal County Council;
3. Waterford City and County Council;
4. Kerry County Council; and
5. Longford County Council.

The LMB also carried out a number of spot-check audits on local authorities, which included reviewing submitted survey forms and photographs.

The purpose of these audits is to determine how each local authority implements and operates the Litter Monitoring System.

During each audit, the key elements of the System are assessed, including:

- the identification and mapping of Potential Litter Generators;
- the carrying out of Litter Quantification and Litter Pollution Surveys including the location and timing of surveys;
- the number of Litter Quantification and Litter Pollution Surveys completed; and
- the collation/inputting of survey data into the relevant database for submission to the LMB.

Each of the above key elements was examined to ensure that each component of the System is working as designed and is being properly implemented by each local authority.

During the course of the audit, the LMB reviewed all documentation, verified photographs and interviewed local authority staff to identify problems encountered during System implementation and operation. The LMB also reviewed the circulation of information regarding the System in each of the five audited local authorities. The purpose of this was to ensure that Systems information issued by the LMB (i.e. manuals, Systems reports, including the Systems survey results etc.) over time has been circulated to all the relevant staff to ensure the proper implementation and operation of the System.

The audit allows the LMB to consult with those who are on the ground undertaking the litter surveys. This ensures that the LMB recognises if amendments are required to the System for the following years' surveys. This is discussed in more detail in Section 3 of this Report.



## 2. Findings

The LMB found that the five local authorities audited and those local authorities spot-checked were, for the most part, operating the System’s methodologies correctly in accordance with the Monitoring Manual. However, the audits identified a small number of areas where remedial action was required to ensure that the System operates as designed. Details of these incidents are provided below.

### 2.1 Litter Pollution Survey Methodology

- There is a need to ensure that all personnel carrying out the surveys review the Monitoring Manual (available at [www.litter.ie](http://www.litter.ie)) each year to refresh themselves on the methodology required.
- There is a need to ensure that all personnel carrying out the surveys are familiar with the area cleanliness rating photographs provided in the Monitoring Manual. It was evident during the audit process that most local authority employees involved in the system are familiar with the photographs with the majority of the surveyors assigning the correct area cleanliness ratings to the litter surveys.

During 2015 a small number of surveys were not assigned the correct area cleanliness rating. This was the case specifically in assigning an area as “unpolluted or litter free” (LPI 1) that should be considered “slightly polluted” (LPI 2). “Unpolluted or litter free” (LPI 1) means that there is no litter present within the survey stretch. Also a small number of surveys were incorrectly assigned an area cleanliness rating higher than it should of been e.g. an area may have been assigned “moderately polluted” (LPI 3) that should be considered “slightly polluted” (LPI 2).

It is suggested that the area cleanliness rating photographs should be circulated to all Litter Monitoring Officers before the commencement of the 2016 surveys. This set of photographs illustrates examples of area cleanliness ratings and is available on [www.litter.ie](http://www.litter.ie). In addition the LMB suggest for future year’s surveys, that local authorities continue to supply photographs to the LMB when submitting their results of Litter Pollution Surveys. The provision of photographs taken during a survey allows the

LMB to continually audit the System. At least one photograph is required of each survey location. It is recommended that digital cameras be provided for the surveyors when undertaking the surveys.

- It should be noted that there are two values for the Litter Pollution Index a) the presence or absence of Litter Indicator Items and b) the Area Cleanliness Rating; the combination of both derive the Litter Pollution Index (LPI). Therefore an incorrect judgement on the visibility of key litter indicator items will result in a modified Litter Pollution Index rating. It is important that local authority's judgement on the visibility of key litter indicator items is accurate.

### Note the Following:

Indicator items require an assessment of the presence or absence of a number of key litter indicator items. The surveyor is asked to judge 'how visible' these are within the survey stretch. The levels are graded from Visible on Close Inspection to Extremely Obvious.

The following criteria should be used:

**Visible on Close Inspection** - Objects should be assigned this rating if they are present within the survey stretch, but can be seen only when the surveyor is in very close proximity to the item of litter. In other words, if one can only distinguish the item of litter within one metre of it.

**Visible** - Objects should be assigned to this category if the litter items are visible within the survey stretch but not very obvious from outside the survey stretch.

**Obvious** - The indicator items should be assigned to this category if they are obviously visible within and from a distance of approximately 10 metres outside the survey stretch.

**Extremely Obvious** - This category should be marked if there are items of the particular litter indicator item present within the survey stretch and these are very visually intrusive from both within the survey stretch and at a considerable distance away from the survey stretch, approximately 10 metres or greater.

During the audits the LMB highlighted the importance of filling out the Conclusion/Comment section comprehensively to those involved in litter surveying. This option is useful as it enables surveyors to provide feedback regarding specific causes and possible solutions to the litter problem in the surveyed areas.

## 2.2 Litter Quantification Survey Methodology

- The most important item to note in relation to the litter quantification survey forms is that the method of counting **chewing gum** is correct – only newly deposited chewing gum should be included in the survey. New chewing gum is defined as being white in colour and 3D in shape.

In one case the LMB noted that all chewing gum present was being counted. In this case the results were raised with the relevant local authority who confirmed the correct number of 'new' chewing gum pieces present.

## 2.3 Survey Results

- It was noted that the Litter Pollution and Litter Quantification Survey results for all five local authorities audited were circulated within the local authority. It is recommended that all results and photographs are uploaded to the local authority computer network to ensure that all data can be readily accessible and retrievable by any individual if required. It is further recommended to store copies of results into sections, divided by survey location. This will easily allow specific survey locations to be analysed and compared against each other throughout the year.
- In most cases local authorities are using their results to inform litter management practices. It is recommended that each local authority gains the benefits of their survey work by using their annual results not only for future cleansing plans but also possibly for educational purposes in local schools or for future anti-litter initiatives to try and curb any year on year increase in a particular litter item. They could also be used to steer initiatives towards particular causative factors which have been identified in their results.

## 2.4 System Documentation

- It is apparent that much of the System’s documentation is not being disseminated to all of the relevant staff, in particular litter wardens who are carrying out the Litter Pollution and Litter Quantification Surveys. It is recommended that all local authorities disseminate the Results Report to all those involved in the System’s implementation.
- It is important that all those involved in litter monitoring in the local authority, in particular the litter wardens and senior management have access to [www.litter.ie](http://www.litter.ie). This website contains all relevant documentation relating to the System’s implementation.
- It is recommended that before the surveys are undertaken that each surveyor refresh themselves with the Monitoring Manual which is available at [www.litter.ie](http://www.litter.ie)
- It is recommended that before the surveys are undertaken that each surveyor refresh themselves with the area cleanliness rating photographs which are available at [www.litter.ie](http://www.litter.ie)

## 2.5 Staff Undertaking Surveys

- It is important that all surveyors should be properly trained in the System. During the 2015 surveys and audits it became clear that in some local authorities, due to staff turnover and restructuring of job descriptions, some staff undertaking the surveys were new to the System and may not have been previously provided training by the LMB. In these cases the litter wardens have been undertaking the surveys following internal instructions only. It is recommended that for the 2016 surveys, that all local authorities provide names of new personnel involved in the System to the LMB so that training and guidance be given to all surveyors undertaking the surveys to avoid confusion in the methodology and ensure accuracy in completing litter surveys. In addition the LMB will continue to be available throughout 2016 to provide guidance to each of the local authorities. Refer to [www.litter.ie](http://www.litter.ie) for the LMB contact details.

## 2.6 Litter GIS

The GIS system is not utilised by all local authorities to produce Potential Litter Generator maps in order to determine survey locations.

It is suggested that those local authorities that do not have the resources to support the GIS system should implement the 40:40:20 rule to provide the most objective or balanced picture of the extent of litter pollution in their local authority area. Survey locations are chosen based on the following:

- 40% of survey locations should be chosen in litter black spot areas i.e. “high risk” locations in towns or city centres where the concentration of potential litter sources is greatest;
- 40% of survey locations should be chosen in random potential litter generating areas. It may be useful to use a map of the local authority’s functional area and randomly select survey locations. It may also be useful to allow personnel not working in the litter department to select these random locations; and
- 20% of survey locations should be chosen by litter wardens, based on local knowledge of litter pollution.

It was evident from the audit, that surveys are being completed at different survey location types i.e. town centres, rural roads, approach roads etc. where possible. It is recommended that survey locations continue to be spread across a range of location types. This will give a more representative result for each local authority functional area.

## 2.7 Other issues raised

- During the audit process the immense time input required by this project in terms of data collection and recording by local authority staff was highlighted by all local authorities. It was requested that the project be modernised where possible, potentially using modern technology e.g. smart phones. However, it was also noted that not all local authority staff currently have smart phones.

Waterford City and County Council are using application technology for surveying and recording litter data. This has proven successful in providing

results to the 2015 National Litter Monitoring System and in significantly reducing their time input required.

- Dog fouling was identified as the major nuisance in terms of litter nationally. Identifying the litter source and successfully enforcing fines is also very difficult with regards to dog fouling. This litter item obtains a large number of public complaints in comparison to other litter items present in each local authority. It also requires a significant time commitment by local authority staff in terms of monitoring, following up on complaints and enforcing fines. During the audit process it was noted that a national approach or advertising campaign should be considered in tackling dog fouling.

### 3. Recommendations

The following are the key recommendations from the audits:

1. It is essential that all surveyors should be properly trained in the System. It is recommended that for the 2016 surveys, training and guidance be given by the LMB to all new surveyors undertaking the surveys to avoid confusion in the methodology and ensure accuracy in completing litter surveys. In addition the LMB will be available throughout 2016 to provide guidance to each of the local authorities. Refer to [www.litter.ie](http://www.litter.ie) for the LMB contact details.
2. It is recommended that the Litter Monitoring Officer (LMO) should ensure that only newly deposited pieces of chewing gum are counted in the litter quantification surveys.
3. It is recommended that litter not be described as 'Miscellaneous' whenever possible.
4. It is essential to ensure that each section of the survey form is completed in full; the Conclusion/Comment sections are particularly relevant. This option is valuable as it enables the LMB to determine causative factors. This option is also useful to the local authority as it enables surveyors to provide feedback regarding possible solutions to the litter problem in the surveyed areas.
5. It is recommended that digital cameras be provided for the surveyors when undertaking the surveys. At least one photograph is required of each Litter Pollution Survey location.
6. Where resources are available, local authorities should use the litter GIS system, to determine the survey locations for the annual round of Litter Pollution Surveys. The survey locations generated by the GIS System, using the 40:40:20 rule, are considered to give the most objective or balanced picture of the extent of litter pollution in each local authority area. While deviation from the above percentages will still provide local authorities with valid data, local authorities are required to adhere to those percentages as

far as practicable to obtain the most accurate picture of litter pollution in their areas. However, where this is not practical, survey locations should be chosen as detailed in Section 2.6 above.

7. Future surveys should continue to be spread across a range of location types i.e. town centres, rural roads, approach roads etc. This will give a more representative result for each local authority functional area.
8. It is recommended that local authorities undertake internal audits both before results are forwarded to the LMB and throughout the surveying period. The importance of internal audits was revealed this year as a number of surveys were not assigned the correct area cleanliness rating and also in one case the percentage of chewing gum reported included all gum present i.e. new and old gum pieces as opposed to the requirement of just new gum pieces.
9. It is suggested that the area cleanliness rating photographs should be circulated to all Litter Monitoring Officers before the commencement of this year's surveying. It is considered for future years surveys that local authorities continue to submit photographs with the Litter Pollution Surveys (LPS); this will allow the LMB to continually audit the System.
10. It is important that all results and photographs are uploaded to the local authority computer networks to ensure that all data can be readily accessible and retrievable by any individual if required.
11. It is recommended to store copies of results in sections, divided by survey location. This will easily allow specific survey locations to be analysed and compared against each other throughout the year.
12. Survey results should be disseminated to the cleansing teams (where these exist) and litter wardens, so that the results obtained can be analysed and incorporated into future cleansing plans.
13. Local authorities should gain the benefit of their survey work by using their annual results not only for future cleansing plans but also possibly for educational purposes to local schools or to address causative factors such as takeaways etc.



14. Note the LMB has compiled a memorandum outlining the most important points of the National Litter Pollution Monitoring System. This is available on [www.litter.ie](http://www.litter.ie). This memorandum includes the following information:

Litter Quantification Surveys:

- Surveys to be completed as long as possible after the last cleansing sweep;
- Surveys should be completed at different times of the day, on different days of the week and in different months of the year;
- Only newly deposited chewing gum should be included in the survey; and
- Fill out all sections of the survey form comprehensively.

Litter Pollution Surveys:

- Ensure the correct area cleanliness rating is assigned to a survey location, especially when assigning an area as “unpolluted or litter free” (LPI 1). “Unpolluted or litter free” (LPI 1) means that there is no litter present within the survey stretch. In addition, the LMB suggest for future year’s surveys, that local authorities continue to submit photographs with the Litter Pollution Surveys, to allow the LMB to continually audit the System. At least one photograph is required of each survey location.

15. The use of application technology to modernise the process of collecting and recording the litter results should be considered. This will need to be a national approach so that all local authorities are using the same methodology and software.

16. Dog fouling was identified as the major nuisance in terms of litter nationally. Identifying the litter source and successfully enforcing fines is also very difficult with regards to dog fouling. This litter item results in a large number of public complaints in comparison to other litter items present. It also requires a large time commitment from local authority staff in terms of monitoring, following up on complaints and enforcing fines. A national approach or advertising campaign should be considered in tackling dog fouling.

## 4. Conclusions

The LMB found that the five local authorities audited and those local authorities spot-checked were, for the most part, implementing the key elements of the National Litter Pollution Monitoring System correctly. Furthermore, the local authorities concerned are committed to undertaking the necessary actions to resolve the operational issues identified in this report as soon as possible. Overall, the five local authorities audited and those local authorities spot-checked are good models of the System's implementation. Their experiences, together with the recommendations in this report, can assist other local authorities to implement the System properly within their functional areas.

During the audit the LMB discussed the main points local authorities should keep in mind when surveying. A report on the audit was also prepared for all local authorities audited; this should ensure that any non-compliance with implementation of the System is rectified for future surveys.

This report should ensure that all local authorities will benefit from the findings of the System audits carried out to date, as it is not possible to audit System implementation/operation in every local authority.

## 5. Acknowledgements

The LMB wish to thank the staff of Laois County Council, Fingal County Council, Waterford City and County Council, Kerry County Council, Longford County Council and all of the spot-checked local authorities for their help and co-operation during the course of these audits.

