



TIDY Northern Ireland Northern Ireland Borough Cleanliness Survey[©]

Annual Survey Report: January - December 2008



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Foreword

It is a pleasure for me to present the 2008 TIDY Northern Ireland Borough Cleanliness Survey Report; my first as the new Chief Executive of TIDY Northern Ireland. I believe that this report provides a valuable indicator of the cleanliness of our streets, and lets both councils and the public know the nature of the problems we face in trying to achieve a cleaner, greener and healthier environment on streets across Northern Ireland.

Although the overall figures show that our streets are getting cleaner, we still have over one in ten streets failing to meet the required standards of cleanliness due to litter. For the first time in recent years the improvement in litter levels has stopped, with the amount of carelessly discarded waste remaining at the same level as 2007 - it is only the very low levels of detritus that helped the overall cleanliness score to improve slightly on the previous 12 month period.

It was shocking to find that dog fouling, present on one in every 20 transects, has more than doubled in the past year. Also of interest was the obvious lack of correlation between the number of bins in an area and litter levels. Many people simply do not use bins.

So, there is still a lot of work to be done and certainly no room for complacency. Ask the majority of the public and they will tell you they would like to walk on litter-free streets, and that can only happen with a change in the attitude of those who still think it is acceptable to dump their litter at their feet.

Councils work hard and spend a lot of rate payer's money keeping the litter levels to a minimum, and the fact detritus levels are to an acceptable standard on 96% of the areas surveyed is a tribute to their work, but there are many areas that need to be addressed if we are to drive home the anti-littering message.

Anti-litter campaigns, enforcement and litter education are all areas that councils need to address in a regular and consistent manner if we are to maximise the impact of the anti-littering message. These approaches have been proven to work in the past, and the consistent improvement in cleanliness levels in recent years suggests people are perhaps beginning to take heed of the message. However, we need all councils to appreciate the importance of measuring litter levels locally and nationally to provide information to the public about the effectiveness of their activities in tackling this issue and as a tool to assist in local decision making on how best to utilise the tens of millions of pounds spent annually on litter.

Sadly, despite some progress, TIDY Northern Ireland's dream of a litter free province is still some way away, and we will all need to work more closely together if we are to make real inroads into changing this aspect of our "couldn't care less" attitudes. Let's hope that the next 12 months brings better news.

Dr Ian Humphreys

Chief Executive

TIDY Northern Ireland

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Executive Summary

The results of the 2008 TIDY Northern Ireland Borough Cleanliness Survey show that the province's streets have, for the fourth consecutive year, shown an overall improvement in standards of cleanliness, although the recent trend of improvement in litter levels has levelled off.

There were 840 fifty metre 'transects' surveyed during 2008, covering eight different land use types. The results showed that the Cleanliness Pollution Index (CPI) was 7 (7% of streets failing to reach an acceptable level of cleanliness). The Litter Pollution Index (LPI) was 11, and the Detritus Pollution Index (DPI) was 4. Over the past three years the level of litter has shown an improvement year on year, but this year the litter levels remained unchanged from 2007. However, the last twelve months have shown a one percent change for the better in detritus levels, helping the overall cleanliness figures to shown a marginal improvement.

The most common type of litter on the streets of the province is traditionally cigarette related litter, and this trend continued in 2008 with over two thirds of streets polluted by cigarette butts. This figure rose to over 83% within town centres and peripheral retail developments. Old chewing gum deposits were the second most common form of litter, found on 58% of areas surveyed, while confectionery related litter was the third worst offender. While Dog Fouling was only found on 5% of transects, that still represented a significant increase from 2% during the previous twelve month period.

For the first time in the past four years town and city centres were found to be the cleanest areas of the province, with 98% of transects meeting or exceeding the minimum standards of cleanliness. A 96% pass rate put low density residential areas in second place, while the most polluted land use type was peripheral retail developments, with 13% failing. Recreational areas including parks and play areas were the second dirtiest areas, with 89% meeting the required standards.

Pedestrians and motorists were found to be the predominant cause of littering across all land use types, with pedestrians responsible for litter on 64% of areas surveyed, while motorists were found to have dropped litter from cars on 27% of transects. Postal workers were responsible for discarding elastic bands on 4% of the streets that were studied.

There appeared to be little direct correlation between the number of bins located within an area and the litter levels. The council with the poorest LPI was also recorded as having the highest number of litter bins, while recreational areas, which had more litter bins than any other land use type, had the second highest litter level.

While dog fouling is often regarded as one of the worst forms of littering, it was well down the list of litter types found on transects within the survey. Recreational areas and High density residential housing were the most common locations for dog fouling (7% of areas surveyed), whilst overall it was found on 5% of streets.

Based on the results of the 2008 survey and as a reflection of the need to attempt to improve current standards, TIDY Northern Ireland has set new targets for councils participating in the 2009 Borough Cleanliness Survey. They are:

Cleanliness Pollution Index	6%
Litter Pollution Index	9%
Detritus Pollution Index	3%

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1.0 INTRODUCTION AND BACKGROUND

Without definitive and easily understood figures about the standards relating to those aspects of the environment that matter most to residents, workers, visitors and investors, improvements are harder to achieve. Cleanliness surveying not only measures and records standards, it also diagnoses the sources and causes of existing and emerging problems - thereby helping to set the agenda for action and improvement.

This is the fourth annual survey report and follows on from the first three annual surveys completed in 2005, 2006 and 2007. The identity of each council has been kept confidential. Councils are referred to by a randomly allocated letter (A - K). This survey contains results from the councils that participated.

1.1 Survey Structure

The objective of the survey structure was to obtain a survey sample that was representative of the range of conditions that are to be found in each council area, and would provide accurate information to determine the current extent of the litter problem in Northern Ireland. Over the year each council undertook four surveys (one per quarter).

Within each council 40 different streets were assessed during each survey period, 160 different streets were assessed during a complete year of surveying. The surveyed transects were spread over 8 different land use types. Some land uses may have to be surveyed more frequently than others, and the size of the council district will determine how quickly the same streets will be surveyed again. Ensuring all streets within a council district have been surveyed will be an estimated attempt rather than strictly enforced criteria of the survey. Some streets may be unsurveyable, or may unavoidably be overlooked.

Land Use Types

The eight potential land use types for councils to select four per survey are:

- | | |
|---|---|
| <input type="checkbox"/> Town/Village Centre | <input type="checkbox"/> High Density Residential Areas |
| <input type="checkbox"/> Peripheral Retail Developments | <input type="checkbox"/> Low Density Residential Areas |
| <input type="checkbox"/> Rural Areas | <input type="checkbox"/> Recreational Areas |
| <input type="checkbox"/> Main Roads | <input type="checkbox"/> Other |

Litter Grading

The Litter (NI) Order 1994 states that litter is 'any refuse, filth, garbage or any other nauseous offensive or unsightly waste, or any waste which is likely to become nauseous, offensive or unsightly'. This accords with the popular interpretation that 'litter is waste in the wrong place'. For surveying a more detailed and accurate definition is needed. A seven-point grading scale was developed to allow surveyors to determine a more accurate assessment of cleanliness levels in their district. The seven-point scale has been used on a wide range of sites in the UK and elsewhere in Europe since 1993, and has proven itself to reflect standards more accurately from both service providers and customers' perspectives.

Detritus Grading

Detritus was assessed separately from litter, using a grading system based on that set out for litter. Detritus comprises dust, mud, soil, grit, gravel, stones, rotted leaf and vegetable residues, and fragments of twigs, glass, plastic and other finely divided materials. Due to the time it takes to gather, detritus is often a more reliable measure than litter present when gauging a council's performance and their compliance with cleanliness standards.

Types and Sources of Litter

Council surveyors noted the type of litter present on each transect surveyed from a predetermined list. They also assessed the most probable source of the litter. This information collates vital information on the problems existing in each council district and provides guidance on the type of anti-litter campaigns needed to change public attitudes and behaviour.

Litter and Dog Fouling Bins

The number of litter bins and whether they were overflowing was recorded if they were either present on the transect or within a ten metre radius of the transect. The number of dog fouling bins on the transect, and within ten metre radius, were also recorded by council surveyors.

1.2 Survey Controls

To ensure council grading (litter and detritus) was assigned equally in all council areas TIDY Northern Ireland factored control measures into the survey methodology. TIDY Northern Ireland conducted the surveying for at least one survey period of each participating council, and in every case found the results to be broadly consistent with previous council survey results. TIDY N.I. also conducted a complete desktop audit of each council as each quarter's results were returned. This included TIDY Northern Ireland auditing transects and land use selection.

2.0 RESULTS (January – December 2008)

The results each of the councils obtained in the survey are confidential and in this report each council is represented by a letter. These letters have been randomly allocated and only council officers are informed on the relevant council letter.

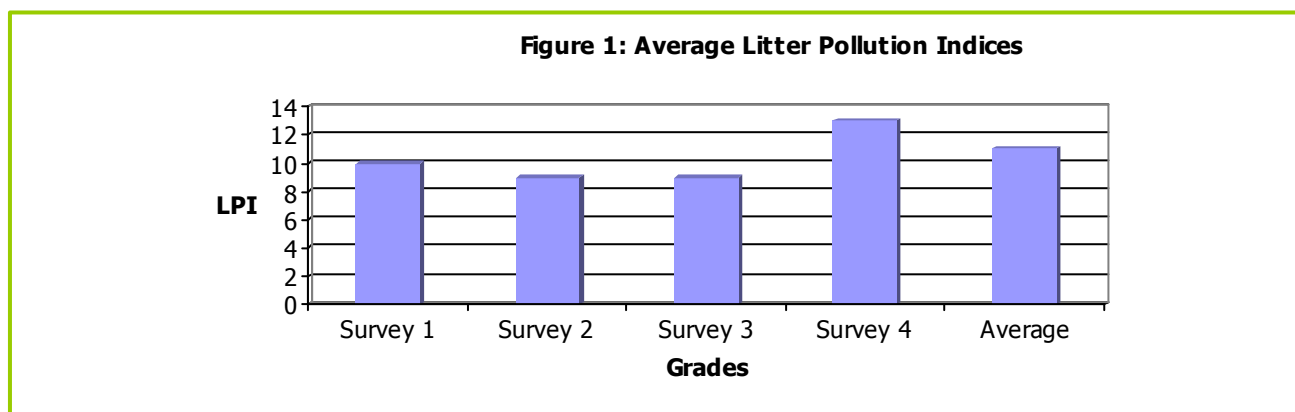
2.1 Litter Pollution Index

The methodology for the survey set a target for councils to achieve a Litter Pollution Index (LPI) of no more than 13. This means that councils should aim to have no more than 13% of the transects surveyed falling below a grade B for litter.

Table 1: Litter Pollution Index (January – December 2008)

Council	Litter Pollution Indices				Rolling Score (Average)
	Survey 1 (Jan - Mar 08)	Survey 2 (Apr - June 08)	Survey 3 (July - Sep 08)	Survey 4 (Oct - Dec 08)	
Council A	18	0	18	33	17
Council D	25	20	15	8	17
Council E	8	8	5	8	8
Council H	0				
Council J	8	10	3	8	7
Council K	0	5	5	10	5
Average	10	9	9	13	11

Figure 1 provides a comparison of the average Litter Pollution Index achieved during each survey.



Of the five councils who returned full results for the year, three achieved scores below the target figure of 13, with an overall average LPI of 11. This means that 11% of streets surveyed had levels of litter present that were deemed to be unacceptable in accordance with the standards set in the Code of Practice on Litter (1994). Council A and Council D failed to achieve the target, both returning a rolling score of 17. The other three councils returned an annual rolling score below the 13% LPI target, with each of their individual quarterly scores also within the preset limits. The period from October to December produced the highest levels of litter.

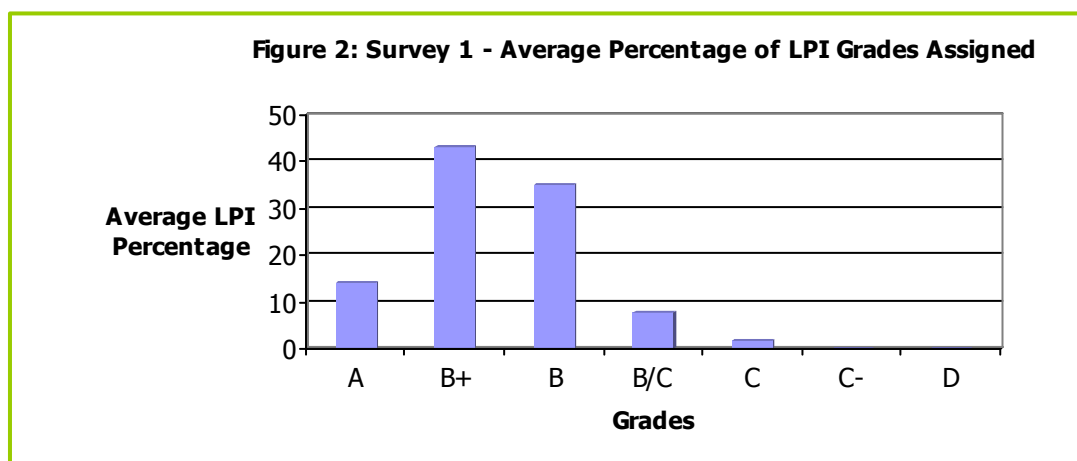
2.1.1 Litter Pollution Grades Survey 1 (January – March 2008)

In addition to providing each council with a LPI, the surveys recorded the variations in the assignment of cleanliness grades. Table 2 shows the percentage of cleanliness grades assigned by each council during survey 1. These grades indicate the cleanliness of the transects surveyed based on the amount of litter present. Litter includes dog fouling but excludes old chewing gum and detritus.

Table 2: Survey 1 - Litter Pollution Index Grades

Survey 1: Percentage of LPI Grades Assigned by Council Area							
Council	A	B+	B	B/C	C	C-	D
Council A	5	20	58	18	0	0	0
Council D	0	13	63	15	10	0	0
Council E	27	51	22	8	0	0	0
Council H	25	55	20	0	0	0	0
Council J	10	53	30	8	0	0	0
Council K	18	68	15	0	0	0	0
Average	14	43	35	8	2	0	0

Figure 2 shows the average grade distribution during the first survey.



The vast majority of the transects surveyed between January and March 2008 were graded B or above, with B+ being the most common grading. The transects adjudged to fall below a B Grade contribute to the LPI, as they are cited as failing to meet the required standards as stipulated in the Litter (NI) Order 1994. The majority of the transects that failed to meet the required standard fell into the B/C category, indicating that it would only require a small improvement in these areas to significantly boost the LPI pass mark. There were no grades below a C.

2.1.2 Litter Pollution Grades Survey 2 (April – June 2008)

Table 3 shows the percentage of cleanliness grades assigned by each council. These grades indicate the cleanliness of the transects surveyed based on the amount of litter present. Litter includes dog fouling but excludes old chewing gum and detritus.

Table 3: Survey 2 - Litter Pollution Index Grades

Survey 2: Percentage of LPI Grades Assigned by Council Area							
Council	A	B+	B	B/C	C	C-	D
Council A	0	60	40	0	0	0	0
Council D	0	23	58	10	10	0	0
Council E	33	40	20	3	0	5	0
Council J	23	48	20	10	0	0	0
Council K	13	73	10	3	3	0	0
Average	14	49	30	5	3	1	0

Figure 3 shows the average distribution of litter grades during the 2nd survey.

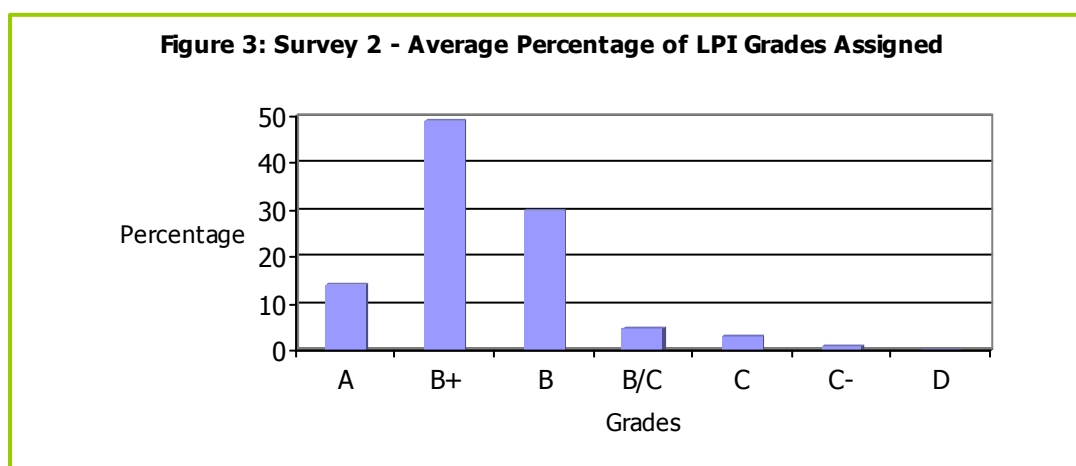


Table 3 and Figure 3 show the grade distribution for transects surveyed between April and June 2008. The overall trend of the second survey period was very similar to the year's first survey, with B+ grades the most common. Of the transects that failed to meet the required standards, a B/C grade was the most common.

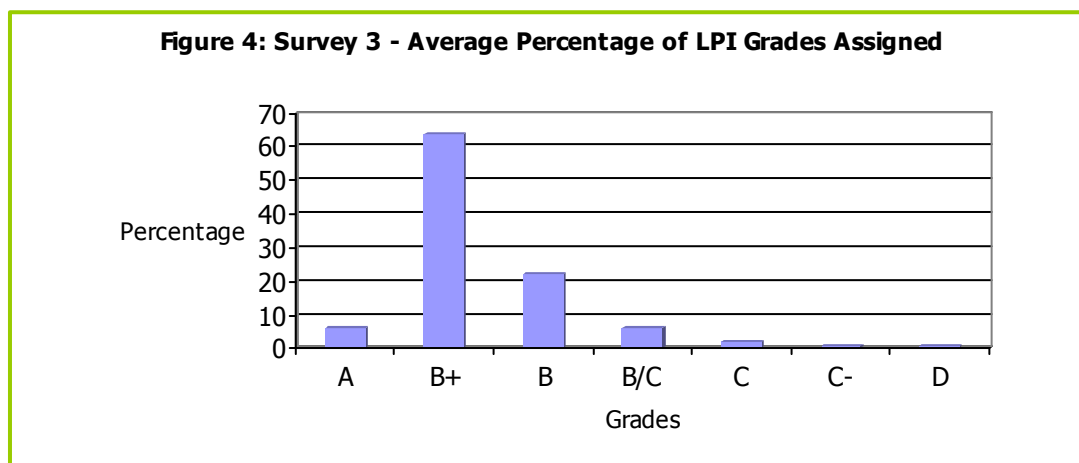
2.1.3 Litter Pollution Grades Survey 3 (July – September 2008)

Table 4 contains the results recorded by councils during the third survey.

Table 4: Survey 3 - Litter Pollution Index Grades

Survey 3: Percentage of LPI Grades Assigned by Council Area							
Council	A	B+	B	B/C	C	C-	D
Council A	5	63	15	8	5	3	3
Council D	3	50	33	15	0	0	0
Council E	8	65	23	3	3	0	0
Council J	10	70	18	3	0	0	0
Council K	3	70	23	3	3	0	0
Average	6	64	22	6	2	1	1

Figure 4 shows the average distribution of litter grades during the third survey



As in the previous survey the B+ grade was the most common in survey 3, with the B grade overtaking the A grade as the second most common.

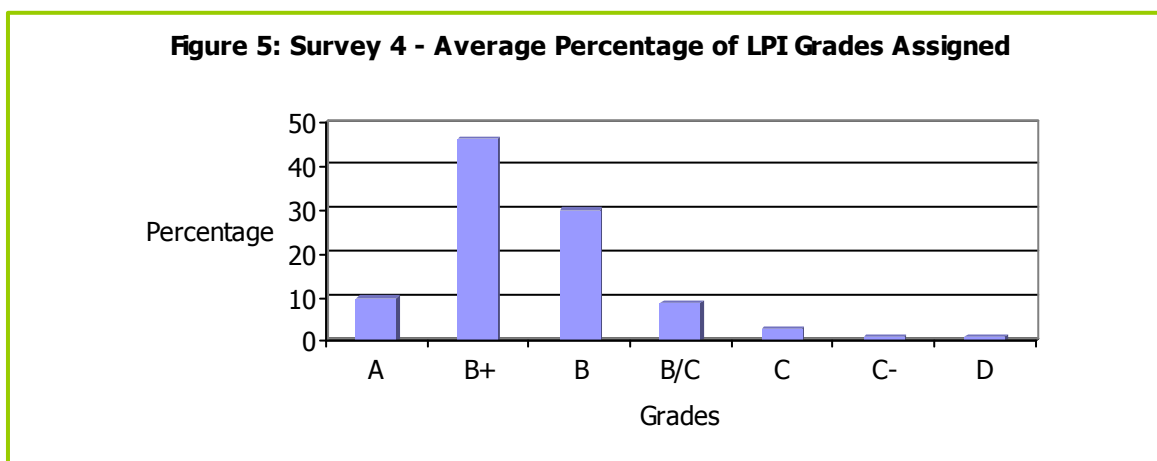
2.1.4 Litter Pollution Grades Survey 4 (October –December 2008)

Table 5 contains the results recorded by councils during the 4th survey.

Table 5: Survey 4 - Litter Pollution Index Grades

Survey 4: Percentage of LPI Grades Assigned by Council Area							
Council	A	B+	B	B/C	C	C-	D
Council A	3	50	15	23	3	5	3
Council D	5	8	80	5	3	0	0
Council E	28	50	13	5	5	0	0
Council J	5	63	23	5	3	0	0
Council K	10	60	20	8	3	0	0
Average	10	46	30	9	3	1	1

Figure 5 shows the distribution of litter grades during the 4th survey.



The final survey of the year once again yielded more B+ grades than any other, with Grade B and accounting for much of the remaining transects. This survey period produced the highest number of transects falling into the bottom two grading categories (C- and D).

2.2 Detritus Pollution Index

Recording detritus separately from litter provides more reliable information on each council street cleansing practice. While litter may indicate public behaviour, detritus indicates effective brushing by councils.

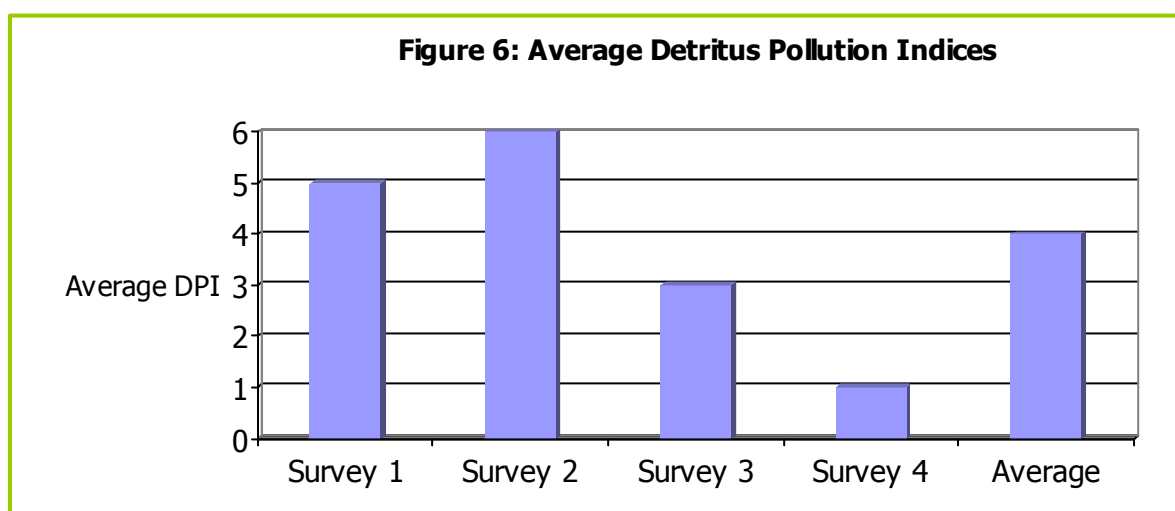
The methodology for the survey set a target for councils to achieve a Detritus Pollution Index (DPI) of no more than 11%. This means that councils should aim to have no more than 11% of the transects surveyed falling below a grade B for detritus. The grading structure was the same as that used to determine the LPI.

Table 6 shows the Detritus Pollution Index each council recorded during the 4 surveys.

Table 6: Detritus Pollution Index (January – December 2008)

Council	Detritus Pollution Indices				Rolling Score
	Survey 1 (Jan - Mar 08)	Survey 2 (Apr - June 08)	Survey 3 (July - Sep 08)	Survey 4 (Oct - Dec 08)	
Council A	8	0	5	0	3
Council D	15	20	3	3	10
Council E	0	0	2	2	2
Council H	0				
Council J	8	3	3	0	3
Council K	0	8	3	0	3
Average	5	6	3	1	4

Figure 6 shows the distribution of detritus grades during 2007.



As with the Litter Pollution Index, the average Detritus Pollution Index (DPI) for each survey period showed the average figure falling inside the preset target figure. Over the 12 month period the average DPI across all councils was 4%. This was significantly better than the average figure for LPI, which showed an 11% failure rate. Every council who submitted results achieved the target at the end of the year, although Council D fell outside the target figure in the first six months of the year. The survey period yielding the best results was October – December 2008.

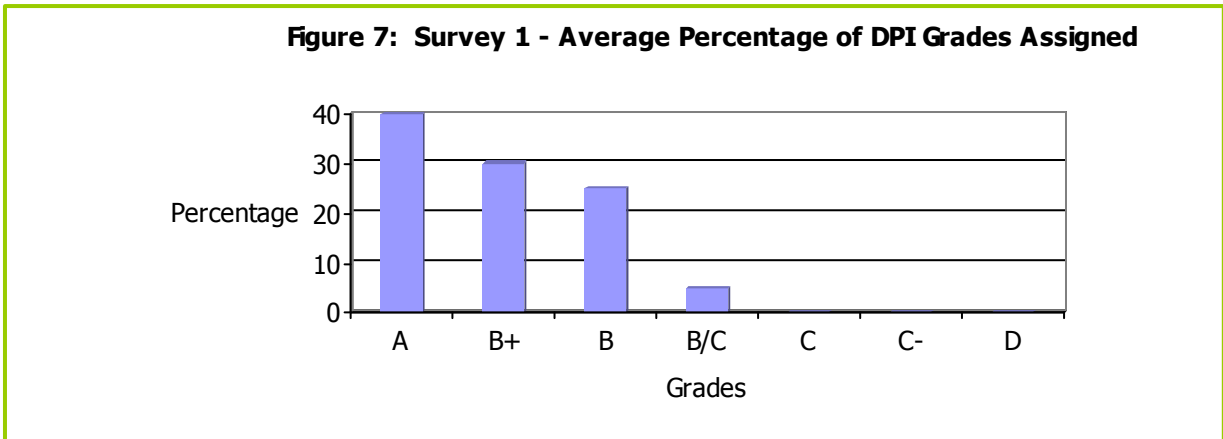
2.2.1 Detritus Pollution Grades Survey 1 (January – March 2008)

In addition to providing each council with a DPI, the survey recorded the variations in the assignment of detritus grades. Table 7 shows the percentage of detritus grades assigned by each council during survey 1. These grades indicate the cleanliness of the transects surveyed based solely on the amount of detritus present.

Table 7: Survey 1 - Detritus Pollution Index Grades

Survey 1: Percentage of DPI Grades Assigned by Council Area							
Council	A	B+	B	B/C	C	C-	D
Council A	10	15	68	8	0	0	0
Council D	8	30	48	15	0	0	0
Council E	41	35	11	0	0	0	0
Council H	40	55	5	0	0	0	0
Council J	40	40	13	8	0	0	0
Council K	98	3	5	0	0	0	0
Average	40	30	25	5	0	0	0

Figure 7 shows the distribution of detritus grades during the first survey.



The most common grade in survey 1 was grade A. No transects fell as low as a B/C grade in the year’s opening survey. In total 5% of transects failed to meet the standard of cleanliness for litter as set out in the Code of Practice on Litter (1994). Council D failed to meet the 11% DPI target, while three of the six councils recorded a 100% pass rate.

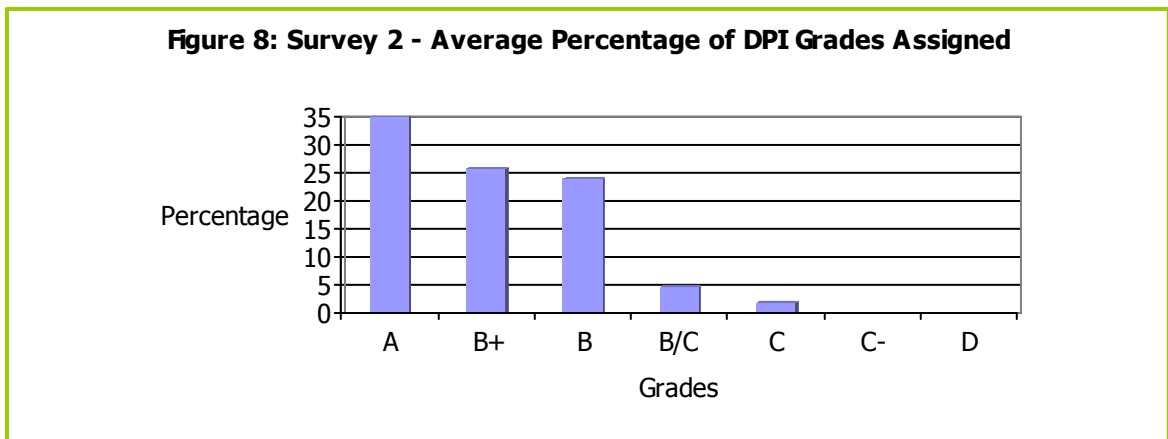
2.2.2 Detritus Pollution Grades Survey 2 (April – June 2008)

Table 8 shows the percentage of detritus grades assigned by each council during survey 2. These grades indicate the cleanliness of the transects surveyed based solely on the amount of detritus present. Detritus largely consists of organic materials that have decomposed so are not recognisable in their original state.

Table 8: Survey 2 - Detritus Pollution Index Grades

Survey 2: Percentage of DPI Grades Assigned by Council Area							
Council	A	B+	B	B/C	C	C-	D
Council A	0	43	58	0	0	0	0
Council D	3	20	35	15	5	0	0
Council E	33	38	5	0	0	0	0
Council J	48	28	23	3	0	0	0
Council K	90	3	0	5	3	0	0
Average	35	26	24	5	2	0	0

Figure 8 shows the distribution of detritus grades during the 2nd survey.



In Survey 2 the most commonly assigned grade was once again A. Transects during this survey period showed more evidence of detritus than during any other period of the year, with an average DPI of 6. There were no recorded grades below a C, with only Council D failing to meet the DPI target of 11%.

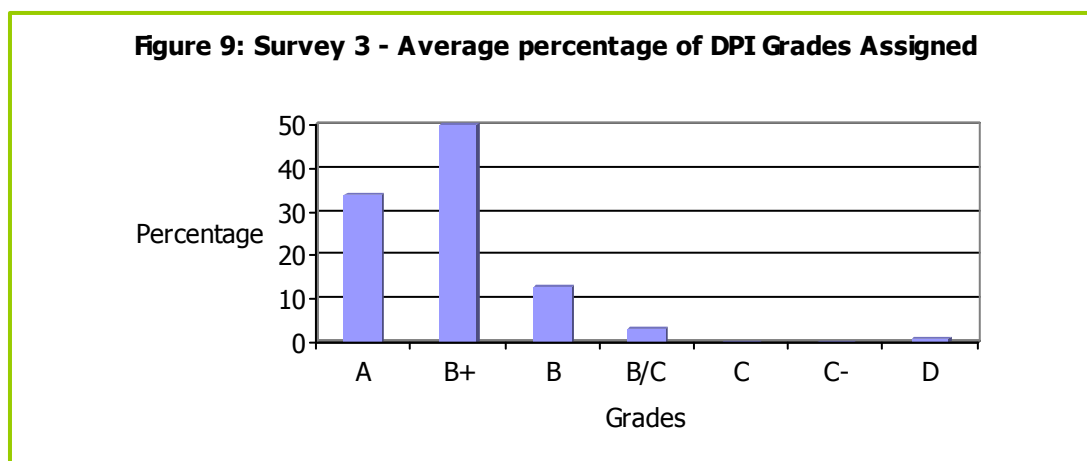
2.2.3 Detritus Pollution Grades Survey 3 (July – September 2008)

Table 9 contains the results recorded by councils during the third survey.

Table 9: Survey 3 - Detritus Pollution Index Grades

Survey 3: Percentage of DPI Grades Assigned by Council Area							
Council	A	B+	B	B/C	C	C-	D
Council A	25	50	20	3	0	0	3
Council D	28	63	8	3	0	0	0
Council E	38	45	13	5	0	0	0
Council J	45	40	13	3	0	0	0
Council K	35	50	13	3	0	0	0
Average	34	50	13	3	0	0	1

Figure 9 shows the distribution of detritus grades during the 3rd survey.



Half of all grades assigned in survey 3 were B+, with A the second most popular grade. There were 3 transects graded as D, which were the only occasions the lowest grade was assigned to transect detritus all year. All councils fell within the 11% DPI target.

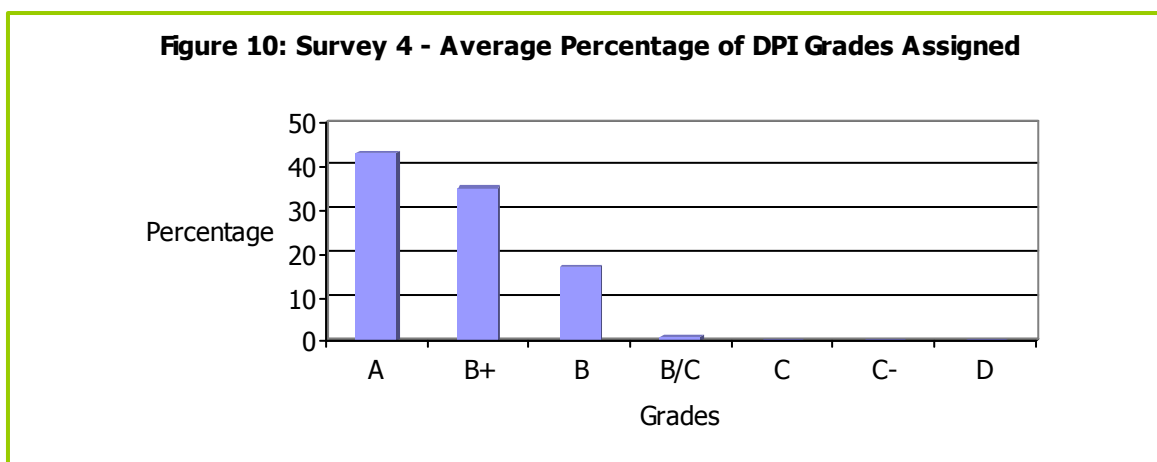
2.2.4 Detritus Pollution Grades Survey 4 (October – December 2008)

Table 10 contains the results recorded by councils during the fourth survey.

Table 10: Survey 4 - Detritus Pollution Index Grades

Survey 4: Percentage of DPI Grades Assigned by Council Area							
Council	A	B+	B	B/C	C	C-	D
Council A	33	60	8	0	0	0	0
Council D	3	15	58	3	0	0	0
Council E	53	38	5	0	0	0	0
Council J	33	53	13	0	0	0	0
Council K	93	8	0	0	0	0	0
Average	43	35	17	1	0	0	0

Figure 10 shows the distribution of detritus grades during the 4th survey.



Grade A was once again the most common of the survey period, and this quarter produced the best overall detritus results of the year. In total, only three transects failed to meet the required standards, with none receiving a grade worse than a B/C. Three councils recorded no failing transects.

2.3 Cleanliness Performance Indicator (CPI)

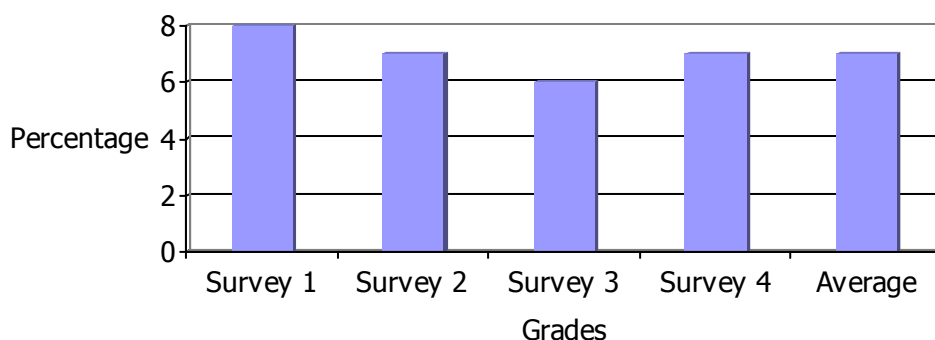
Table 11 shows the Cleanliness Performance Indicator results recorded by each council during each survey. The Cleanliness Performance Indicator is a combination of the Litter Pollution Index and the Detritus Pollution Index. It shows the influence LPI and DPI have on each other to achieve the CPI.

Table 11: Cleanliness Performance Indicator (January – December 2008)

Council	Cleanliness Pollution Indices				Rolling Score (Average)
	Survey 1 (Jan - Mar 08)	Survey 2 (Apr - June 08)	Survey 3 (July - Sep 08)	Survey 4 (Oct - Dec 08)	
Council A	13	0	11	16	10
Council D	20	20	9	5	13
Council E	4	4	5	4	4
Council H	0				
Council J	8	6	3	4	5
Council K	0	6	4	5	4
Average	8	7	6	7	7

As with Litter Pollution Index and Detritus Pollution Index, the methodology for the survey set a target for councils to achieve a Cleanliness Performance Indicator of 12. A CPI of 12 would mean that 12% of transects surveyed would have recorded below a grade B for litter and detritus.

Figure 11: Survey 1 - Average Cleanliness Pollution Indices



The overall results of the four surveys showed an average CPI of 7, well below the target figure of 12. Each individual survey also gave average results below the target figure. Survey 3 (July – September) gave the best CPI results. The rolling score of Council D fell outside the CPI target of 12, while both Councils A and D had two survey periods which failed to meet the target figure.

2.3.1 Cleanliness Performance Grades Survey 1 (January – March 2008)

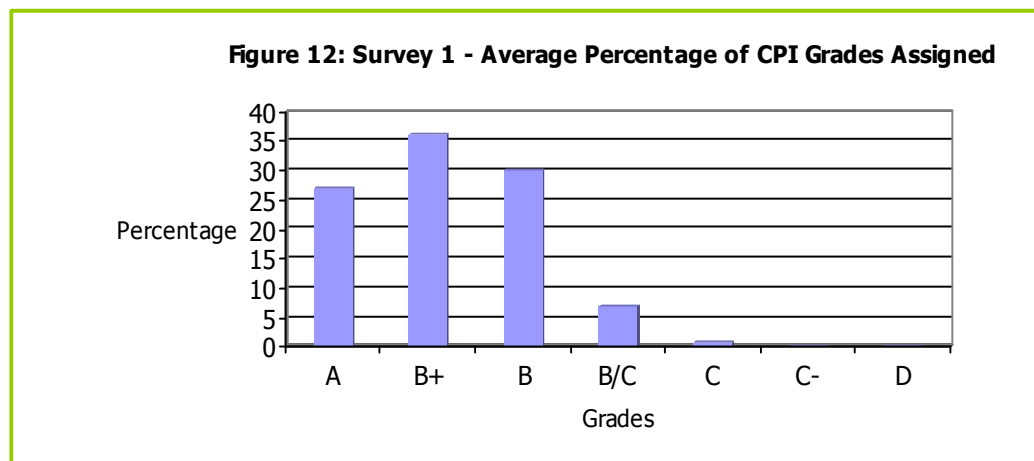
Each survey recorded a variation in Litter and detritus grades that gave rise to the Cleanliness Performance Indicator. Table 12 shows the percentage of cleanliness grades assigned by each council during survey 1. These grades indicate the cleanliness of the transect based on the amount of litter and detritus present.

Table 12: Survey 1 - Cleanliness Performance Indicator Grades

Survey 1: Percentage of CPI Grades Assigned by Council Area							
Council	A	B+	B	B/C	C	C-	D
Council A	8	18	63	13	0	0	0
Council D	4	21	55	15	5	0	0
Council E	34	43	16	4	0	0	0
Council H	33	55	13	0	0	0	0
Council J	25	46	21	8	0	0	0
Council K	58	35	10	0	0	0	0
Average	27	36	30	7	1	0	0

Grade A was the most common score in 2007's opening survey period. Only one D grade was recorded, with the majority of failing transects falling just below the pass mark with a B/C grade. All but one of the councils attained the required CPI of 15%, with council D returning results just 1% outside the preset standards.

Figure 12 shows the distribution of cleanliness grades during the 1st survey.



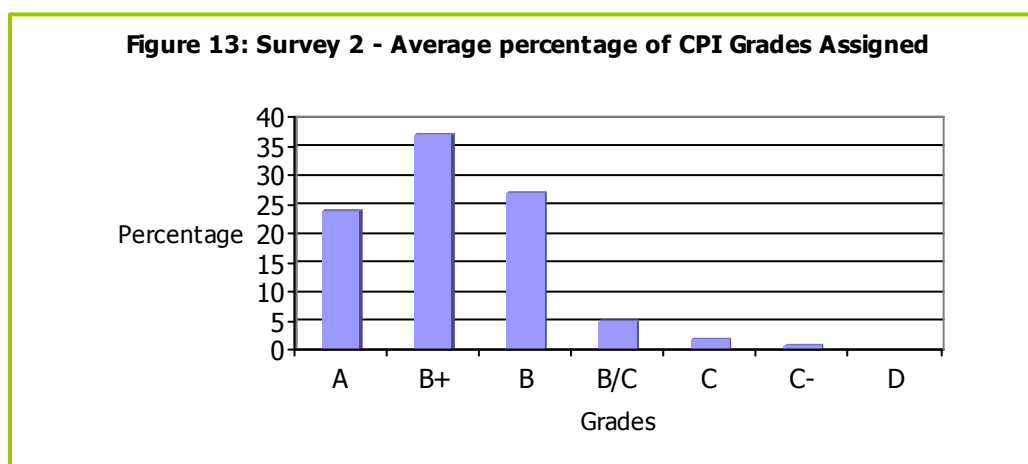
2.3.2 Cleanliness Performance Indicator Grades Survey 2 (April – June 2008)

Table 13 contains the results recorded by councils during the 2nd survey.

Table 13: Survey 2 - Cleanliness Performance Indicator Grades

Survey 2: Percentage of CPI Grades Assigned by Council Area							
Council	A	B+	B	B/C	C	C-	D
Council A	0	51	49	0	0	0	0
Council D	1	21	46	13	8	0	0
Council E	33	39	13	1	0	3	0
Council J	35	38	21	6	0	0	0
Council K	51	38	5	4	3	0	0
Average	24	37	27	5	2	1	0

Figure 13 shows the distribution of cleanliness grades during the 2nd survey.



B+ grade was the most common to be returned in survey 2. Council D was the only council who failed to make the target figure in this quarter.

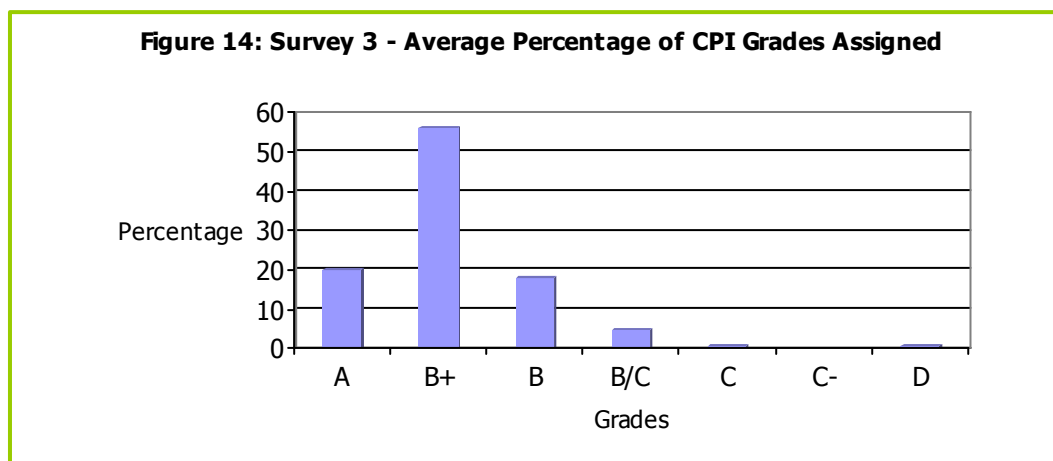
2.3.3 Cleanliness Performance Indicator Grades Survey 3 (July – September 2008)

Table 14 contains the results recorded by councils during the 3rd survey.

Table 14: Survey 3 - Cleanliness Performance Indicator Grades

Survey 3: Percentage of CPI Grades Assigned by Council Area							
Council	A	B+	B	B/C	C	C-	D
Council A	15	56	18	5	3	1	3
Council D	15	56	20	9	0	0	0
Council E	23	55	18	4	1	0	0
Council J	28	55	15	3	0	0	0
Council K	19	60	18	3	1	0	0
Average	20	56	18	5	1	0	1

Figure 14 shows the distribution of cleanliness grades during the 3rd survey.



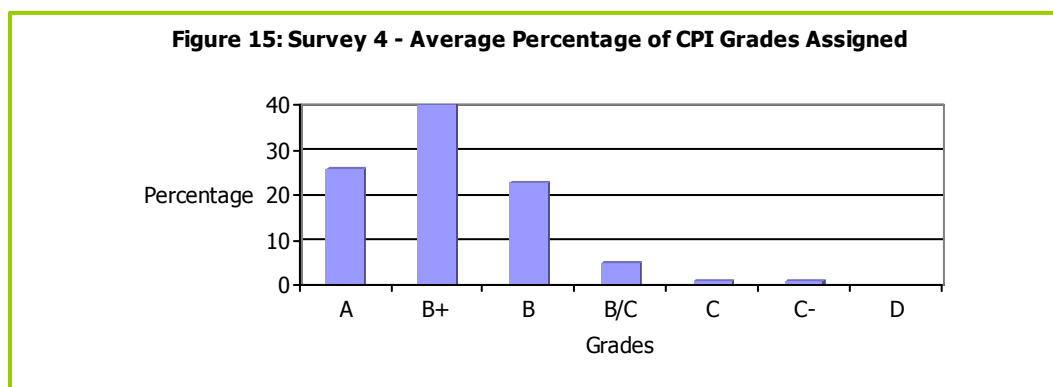
The third survey of the year produced the best cleanliness results, and was the only survey period in which all councils met the preset target. B+ grades again proved more common than any other, while of the failing transects the most common grade was B/C.

2.3.4 Cleanliness Performance Indicators Survey 4 (October – December 2008)

Table 15: Survey 4 – Cleanliness Performance Indicator (Cleanliness Grades)

Survey 4: Percentage of CPI Grades Assigned by Council Area							
Council	A	B+	B	B/C	C	C-	D
Council A	18	55	11	11	1	3	1
Council D	4	11	69	4	1	0	0
Council E	40	44	9	3	3	0	0
Council J	19	58	18	3	1	0	0
Council K	51	34	10	4	1	0	0
Average	26	40	23	5	1	1	0

Figure 15 shows the distribution of cleanliness grades during the 4th survey.



The trend of the previous three surveys was continued in Survey 4 with B+ being the most commonly awarded grade. Council A were the only council who failed to make the 11% target.

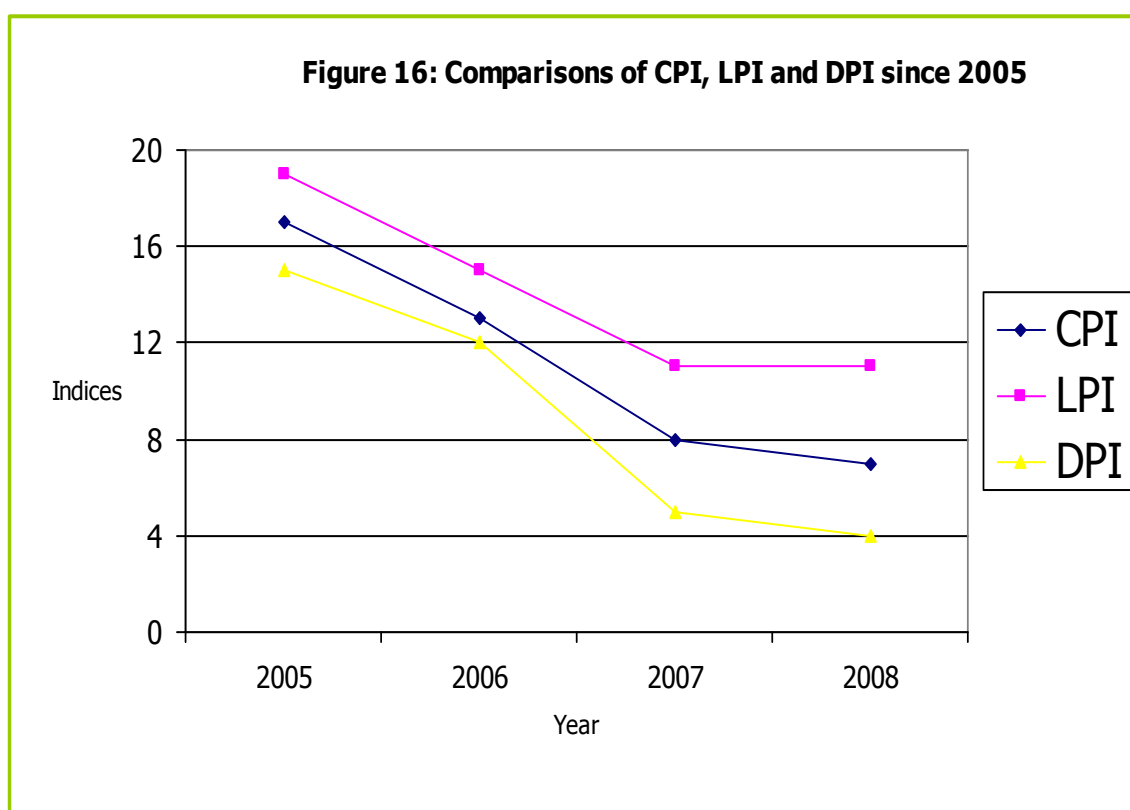
2.3.5 Cleanliness Levels Comparisons

The Borough Cleanliness Survey has been running in its present format since 2005. This enables a direct comparison of LPI, DPI and CPI trends over the past four years.

Table 16: LPI, DPI and CPI Results (2005-2008)

	2008	2007	2006	2005
Cleanliness Pollution Index	7	8	13	17
Litter Pollution Index	11	11	15	19
Detritus Pollution Index	4	5	12	15

Figure 16 shows the CPI, LPI and DPI since 2005



Since the introduction of the TIDY Northern Ireland Borough Cleanliness Survey, cleanliness levels among the participating councils have exhibited an improvement year on year. While overall cleanliness levels have again shown a slight improvement due to the detritus levels falling, this year, for the first time, the reduction in the Litter Pollution Index has levelled off and not improved on the previous twelve month period.

2.4 Distribution of Land Use Types

The methodology in the survey guidance manual gave councils a choice of 8 different land use types of which they had to select four to survey (10 transects per survey). The code for the land uses listed in table 16 are:

- | | |
|-----------------------------------|------------------------------|
| 1 - Town/City/Village Centre | 5 - High Density Residential |
| 2 - Peripheral Retail Development | 6 - Low Density Residential |
| 3 - Rural Area | 7 - Recreational Area |
| 4 - Main Road | 8 - Other |

Table 17: Distribution of Land Use Surveyed (January – December 2007)

	Land Use Type/Number of Transects Surveyed							
	1	2	3	4	5	6	7	8
Council A	21	19	0	30	20	18	32	20
Council D	23	24	20	21	27	25	20	0
Council E	32	4	24	19	25	26	29	1
Council H	7	0	9	7	6	10	1	0
Council J	26	9	22	22	28	27	26	0
Council K	40	1	16	34	33	36	0	0
TOTAL	149	57	91	133	139	142	108	21
Cleanliness PI	2	13	7	8	8	4	11	10
Litter PI	4	19	11	10	13	4	16	19
Detritus PI	1	7	3	6	4	3	6	0

Figure 17 shows the distribution of land use types assessed during the year.

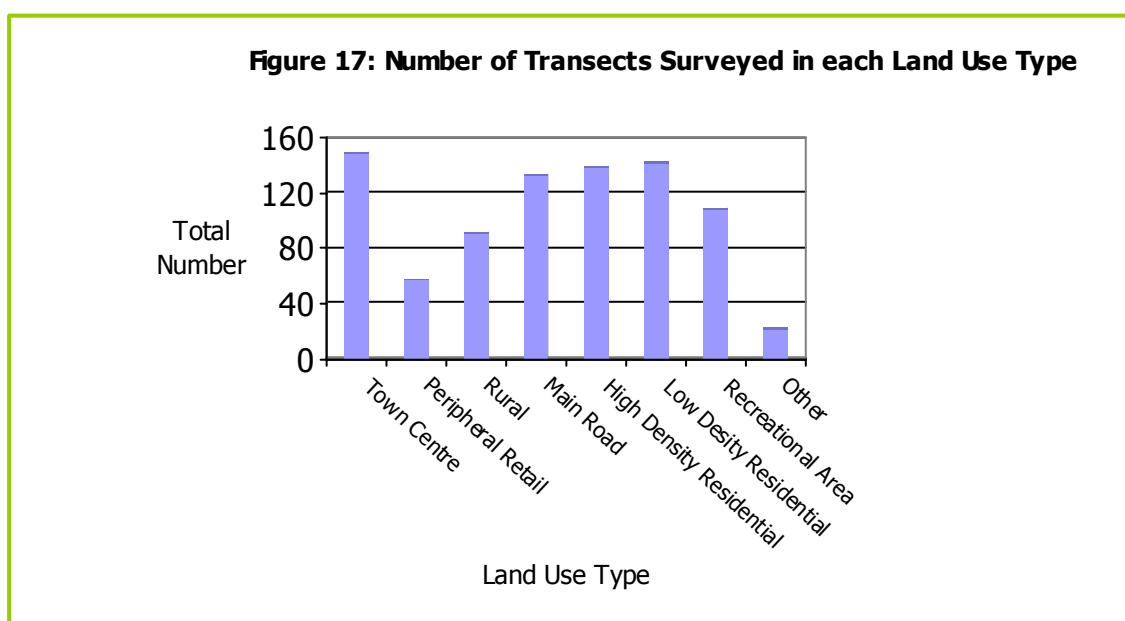
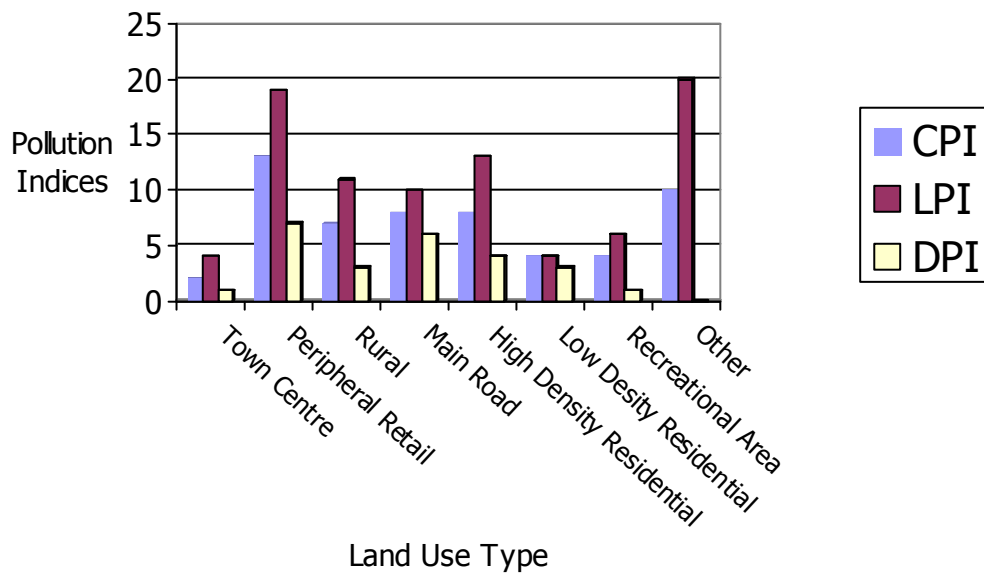


Figure 18: Pollution Indices in each Land Use Type

To achieve an even balance of results across the 8 land use types it is important that councils follow the guidelines set out in 'Guidance Manual 1.5'. This stipulates that where possible each land use type must be surveyed equally, with 10 transects in 4 land use types per survey. While the varying nature of the councils sometimes means it is not always possible to exactly fulfil these criteria, there were instances in the 2008 survey where councils could have followed these guidelines more accurately.

From the results returned, Peripheral Retail Developments (Land Use Type 2) produced the highest number of transects failing to meet the required CPI standards, while town & city centres (Land Use Type 1) scored better than any other area. The town centres had a 99% pass rate for detritus levels, while the 96% pass rate for litter levels put it on a par with Low Density Residential areas. Peripheral Retail Developments were bottom of the table for both litter and detritus levels.

Recreational areas, which include parks and children's play areas, produced the second highest failure rate with more than one in every six failing to meet acceptable litter levels.

There was a noticeable difference between the cleanliness of Low Density and High Density residential areas. While 13% of high density housing areas failed to meet litter requirements, the corresponding figure for low density housing was only 4%.

2.5 Types of Litter

The survey noted the types of litter identified on each transect surveyed. This information helps identify the litter on the streets that results in poorer grades being recorded. This information also helps both councils and TIDY Northern Ireland identify what littering issues need to be targeted via public campaigns to help alleviate the amount of litter observed on the streets across Northern Ireland. The information recorded during the survey has been used to report the types of litter on the streets in 2 ways. Firstly in 2.5.1 it has been reported by council district to identify the specific issues each council needs to mitigate against. In 2.5.2 the same data collected on types of litter has been report via land use type. This provides important information to identify if particular types of litter are associated with one land use type more than another. Campaign resources by councils and TIDY Northern Ireland can then be focused on these areas to achieve optimum results.

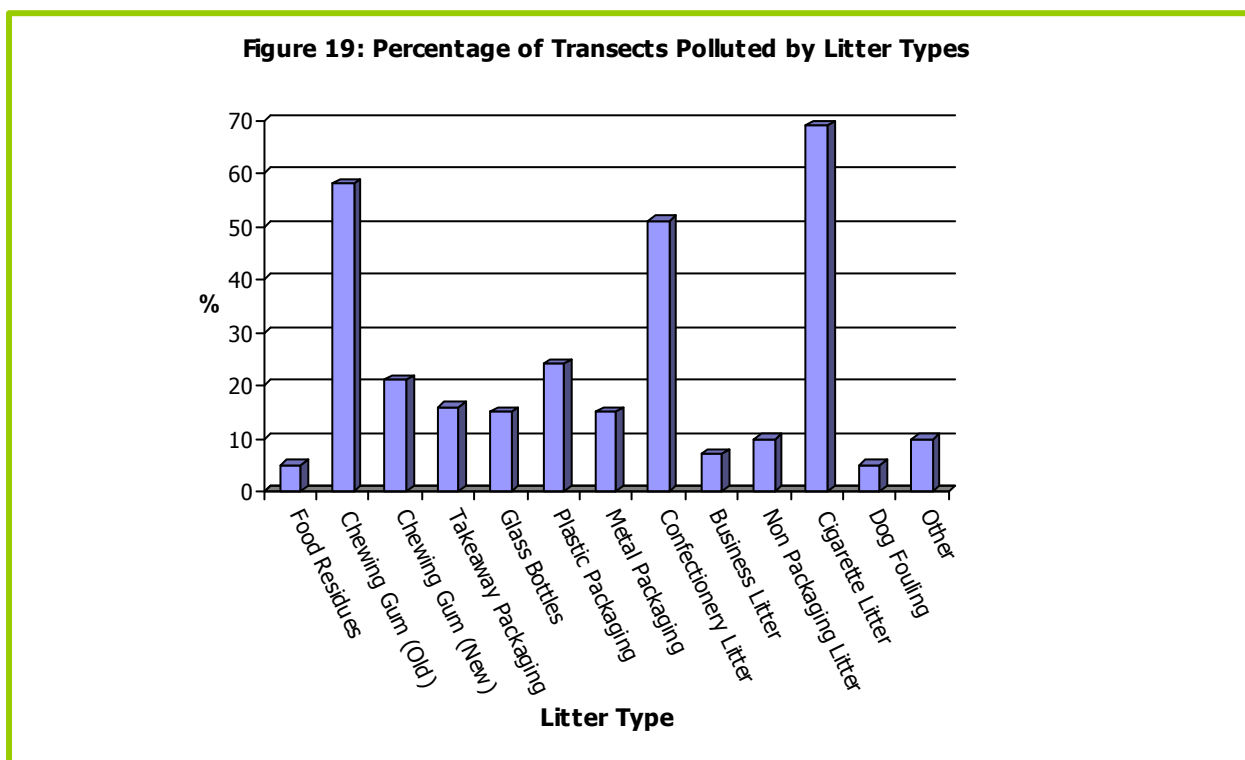
2.5.1 Frequency of Litter Types

Table 17 contains information on the types of litter as a percentage of total litter. It is broken down into survey quarters.

Table 18: Types of Litter Surveyed as Percentage of Transects Polluted (January – December 2008)

Types of Litter	Proportion of transects polluted (%)				Overall
	Survey 1	Survey 2	Survey 3	Survey 4	
A - Food Residues	7	5	3	5	5
B - Chewing Gum (Old)	52	49	69	61	58
C - Chewing Gum (New)	25	27	9	25	21
D - Takeaway Packaging	15	22	18	7	16
E - Glass Bottles	9	25	7	19	15
F - Plastic Packaging	17	27	22	28	24
G - Metal Packaging	17	18	7	17	15
H - Confectionery Litter	53	46	52	52	51
I - Business Litter	7	8	6	7	7
J- Non Packaging Litter	10	8	13	10	10
K - Cigarette Litter	70	50	82	75	69
L - Dog Fouling	3	3	5	7	5
M - Other	7	9	10	13	10

Figure 19 shows each litter type as a percentage of transects polluted.



litter types, although it has increased in the past twelve months from 2% to 5%.

2.5.2 Types of Litter by Land Use Type

In addition to gathering information on the types of litter present in each survey period, the data was analysed to provide information on the types of litter present across the different land use types. The codes of the land use types are:

- | | | |
|------------------------|----------------------------------|----------------------------|
| 1- Town/Village Centre | 2- Peripheral Retail Development | 3- Rural Areas |
| 4- Main Road | 5- High Density Residential | 6- Low Density Residential |
| 7- Recreational Area | 8- Other | |

Table 18 provides data on types of litter present in different land use types. This information helps both TIDY Northern Ireland and councils tackle particular littering issues more effectively. Table 20 shows where each type of litter most frequently occurs.

Table 19: Types of Litter Surveyed by Land Use Type (January – December 2008)

Types of Litter	Land use Types (% of transects polluted)							
	1	2	3	4	5	6	7	8
A - Food Residues	4	5	2	6	2	4	12	0
B - Chewing Gum (Old)	67	98	11	42	65	51	79	86
C - Chewing Gum (New)	24	30	3	18	25	15	41	14
D - Takeaway Packaging	11	23	25	21	16	6	11	33
E - Glass Bottles	14	19	15	14	9	8	24	33
F - Plastic Packaging	13	33	42	32	14	15	30	24
G - Metal Packaging	8	14	22	15	12	15	20	19
H - Confectionery Litter	58	61	44	48	58	41	51	48
I - Business Litter	7	12	3	2	12	8	2	24
J- Non Packaging Litter	13	11	8	12	10	6	8	19
K - Cigarette Litter	83	84	51	70	78	58	70	48
L - Dog Fouling	2	4	3	2	7	4	8	10
M - Other	7	9	3	14	11	14	7	5

Cigarette litter is prevalent across all land use types, with butts even found in more than half of the rural areas surveyed. This type of litter is particularly high in town centres (83% of areas surveyed) and peripheral retail areas (84%) where public buildings are most common. Chewing gum deposits are common in all land use types with the exception of rural areas, while confectionery litter is relatively frequent across all sectors.

Takeaway packaging is most common in rural areas, which would tend to place the blame at the hands of motorists who throw fast food items from vehicles.

Food residues and Glass bottles were found to be most common in recreational areas, suggesting people using parks and play areas for eating and drinking were not making good use of the litter bins provided.

Dog Fouling is most common in recreational areas and high density residential housing.

2.6 Sources of Litter

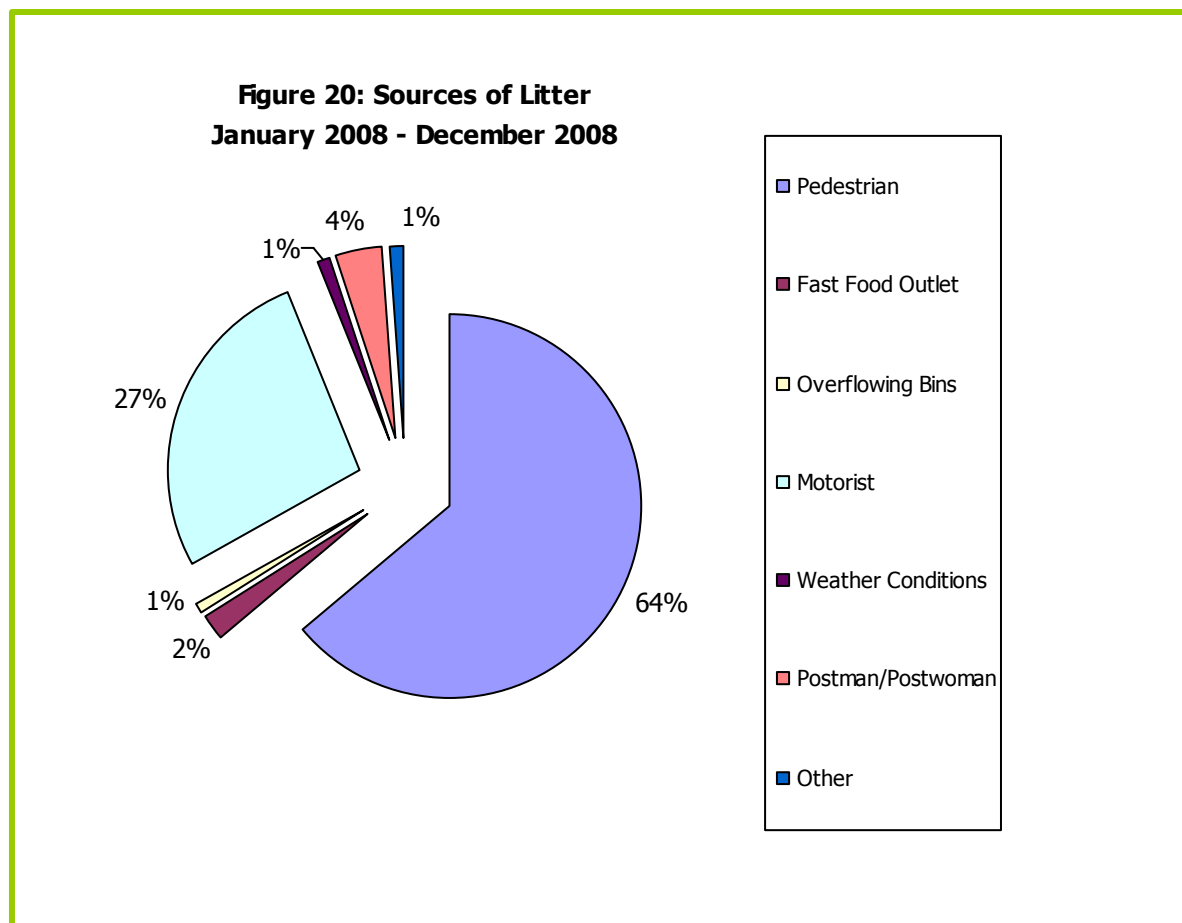
The survey noted the sources of litter identified on each transect surveyed. This information helps identify the reason for the amount of litter being present on a transect. This information also helps both councils and TIDY Northern Ireland identify what sections of the population need to be targeted via public campaigns to help alleviate the amount of litter observed on the streets across Northern Ireland. The information recorded during the survey has been used to report the sources of litter on the streets in 2 ways. Firstly in 2.6.1 it has been reported by survey quarter and secondly in 2.6.2 the same data collected on sources of litter has been reported via land use type.

2.6.1 Sources of Litter by Survey Number

Table 20: Sources of Litter (January – December 2008)

Sources of Litter	Survey 1	Survey 2	Survey 3	Survey 4	Average
Pedestrian	51	50	77	77	64
Fast Food Outlet	3	4	0	1	2
Overflowing Bins	0	4	0	0	1
Motorist	41	30	19	17	27
Weather Conditions	3	3	0	0	1
Postman/woman	2	5	3	6	4
Other	1	5	0	0	1

Figure 20 shows average distribution of sources of litter during 2008.



The biggest source of litter was the pedestrian, who was responsible for litter on almost two thirds of transects surveyed. The motorist was also a substantial contributor, dropping litter on 27% of transects. The litter dropped by postmen/women refers to the elastic bands used to hold together bundles of mail.

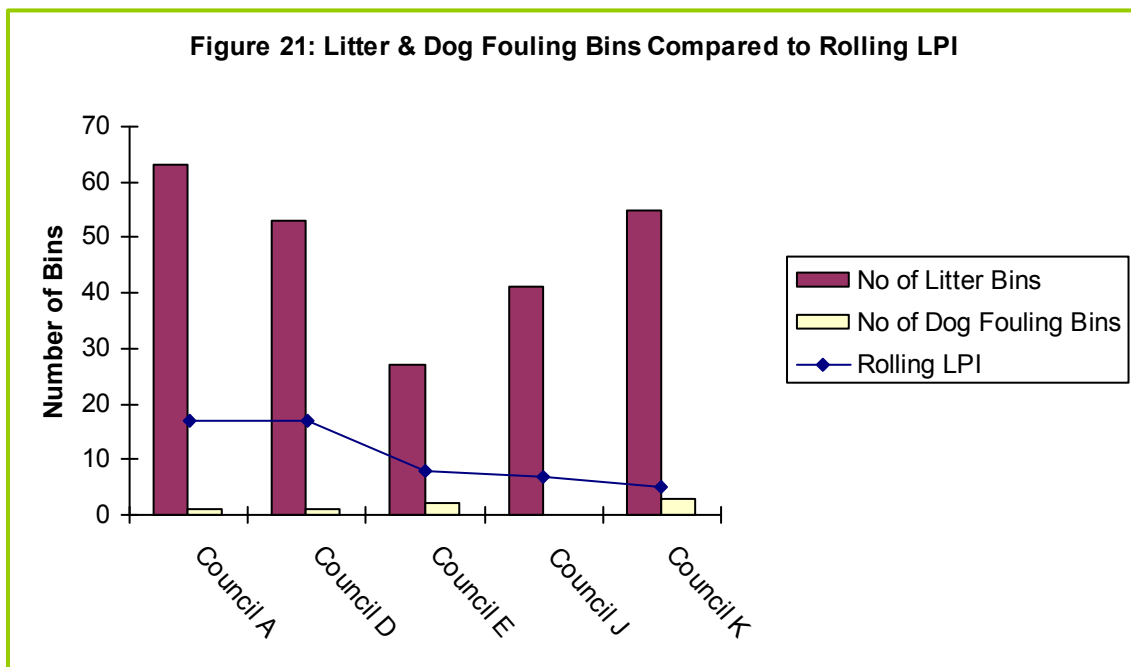
2.7 Bins (Litter and Dog Fouling)

Table 20 shows the number of litter bins and dog fouling bins. It also contains the number of litter bins overflowing in each council survey. The presence of bins (litter and dog fouling) were noted on the survey form either if they were present on the transect, or if they were in a 10 metre radius of it.

Table 21: Litter/Dog Fouling Bins by Council Area (January – December 2008)

	Number of Bins (January - December 2008)				
	Council A	Council D	Council E	Council J	Council K
Number of Litter Bins	63	53	27	41	55
Number of Overflowing Bins	1	2	1	2	2
Number of Dog Fouling Bins	1	1	2	0	3
% of Transects with Dog Fouling	9	4	2	1	6
Rolling LPI	17	17	8	7	5

Figure 21 shows the frequency of litter and dog fouling bins in comparison to the rolling LPI



There does not appear to be an obvious correlation between the number of either litter or dog fouling bins and the LPI and percentage of transects with dog fouling. The council with the highest Litter Pollution Index also had the highest number of bins on their transects.

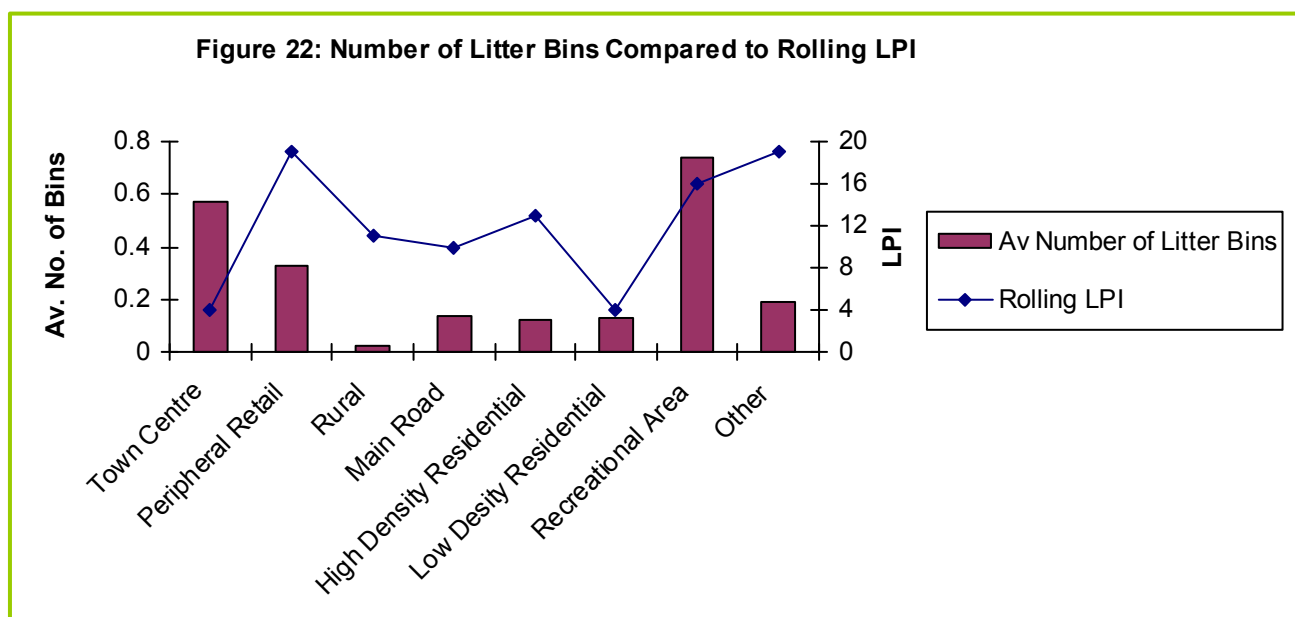
Table 22 shows the distribution of bins by land use type. The code of land use types are:

- 1- Town/Village Centre
- 2- Peripheral Retail Development
- 3- Rural Areas
- 4- Main Road
- 5- High Density Residential
- 6- Low Density Residential
- 7- Recreational Area
- 8- Other

Table 23: Litter/Dog Fouling Bins by Land Use Type (January – December 2008)

	Land Use Type/Number of Bins							
	1	2	3	4	5	6	7	8
Av. Number of Litter Bins per Transect	0.57	0.33	0.02	0.14	0.12	0.13	0.74	0.19
Number of Overflowing Bins	2	2	1	0	0	1	3	0
Number of Dog Fouling Bins	2	0	1	5	2	1	1	0
% of Transects with Dog Fouling	2	4	3	2	7	4	8	10
Rolling LPI	4	19	11	10	13	4	16	19

Figure 22 compares the number of litter and dog fouling bins over various land uses:



It was not surprising that recreational areas and town/village centres had the highest number of litter bins on transects surveyed, and it was pleasing to see that only a small number of these bins were recorded as overflowing. While it can be concluded that the relatively high number of bins on town centre transects helped to reduce the litter problem, low density housing areas maintained a low LPI because of the attitudes of the people present in the area rather than the availability of litter bins.

Recreational areas are often used by dog owners to walk their animals so it was no surprise that these areas produced a relatively high incidence of dog fouling. It was more surprising that the transects in these areas did not appear to have higher numbers of dog fouling bins, which could be seen as one method of reducing the frequency of the problem.

3.0 VALIDATION

3.1 Validation by TIDY Northern Ireland

TIDY Northern Ireland provided a training course at the start of the year for any council who wished to either retrain surveying staff or train new staff in the grading procedures. TIDY Northern Ireland also carried out at least one survey in each council area during the year. This was to ensure that the grading of transects was consistent through all the participating councils. All results were closely monitored throughout the year to ensure data was accurately transferred from survey forms to the spreadsheet analysis.

Minor problems with the allocation of cleanliness grades were observed during the validation process and these were quickly rectified to ensure all councils graded to the same standards. The majority of grade variations were only by half a grade and did not tend to differ between a transect being given a passing grade or a failing grade.

The majority of spreadsheets compared with the completed survey forms were completed accurately. There were some minor errors that normally did not impact on the overall Cleanliness Performance Indicator recorded.

4.0 CONCLUSION

This report gives the councils involved in the Borough Cleanliness Survey the opportunity to compare their performance on both litter and detritus, while remaining anonymous. The structure of this survey has meant council performances are comparable with each other, regardless of the size of the council. This comes from planning for the same number of transects surveyed, and approximately the same number of land uses being surveyed by each council.

Each council will also receive an individual analysis of the results from their own 2008 surveys, allowing them to use the Borough Cleanliness Survey not only as a comparison tool but also as stand-alone report which highlights the effectiveness of their own cleansing operations.

POLLUTION INDICES

The results indicate that within the participating council areas the streets are cleaner than they have been in recent years, as evidenced by a consistently reducing annual CPI figure. It is also evident however that there is still much work to be done, as several quarters within the year witnessed unacceptable levels of cleanliness.

One of the five councils who returned results for each quarter failed to meet TIDY Northern Ireland's preset standards for Cleanliness over the twelve month period. Council D returned an overall average CPI score of 13%, one percentage point outside the target figure. It was noticeable however that this council made dramatic improvements in the final six months of the year, having returned scores of 20% over the first two quarters. Council A fell outside the target figure on one occasion during the year, although their overall average was within the acceptable limits.

These two councils (Council A and Council B) failed to meet the annual preset target of 13% for Litter Pollution. Both areas fell within the target figure on only one of the four quarters, and both recorded an average failure rate of 17%. The figures for detritus were better than those for litter, and while Council D failed to meet the preset targets in each of the first two quarters they made dramatic improvements in the second half of the year, which brought their average DPI within the target limit.

LAND USE TYPES

For the third year in succession peripheral retail developments recorded the worst cleanliness results, although their 13% failure rate was still an improvement on the 2007 figures. Recreational areas returned the second poorest set of results, with over one in ten recording unacceptable standards of cleanliness.

In contrast, town and city centre locations proved to be the cleanest areas of the province. Ninety eight percent of these areas, which traditionally receive high levels of council attention, met or exceeded the required cleanliness standards despite the high concentration of people. This figure is a tribute to the effectiveness of the cleansing services in these areas. Areas of low density housing slipped to number two this year, having been deemed the cleanest land use type in the past two survey reports.

TYPES OF LITTER

Since the inception of the Borough Cleanliness Survey cigarette related litter has always been the number one litter type on our streets, and this year is no exception. It has been noticeable that the number of transects polluted by cigarette butts has increased from last year's survey, and this may well be tied in to the fact this is the first 12 month period of results since the introduction of the public smoking ban. The effect of the ban is also evident by the amount of cigarette litter present in areas dominated by public buildings, with both town/city centres and peripheral retail developments recording a significantly larger presence than other land use types.

Another high profile form of litter is old chewing gum deposits, and their frequency is second only to cigarette litter in the standings. Almost 100% of peripheral retail developments were recorded as having chewing gum stains, and the popularity of gum among a younger age group is perhaps a factor to explain why recreational areas recorded the second highest incidence.

SOURCES OF LITTER

Pedestrians were responsible for almost two thirds of the litter discarded on the streets, with motorists the other major contributor. In rural areas and on main roads it was the motorist that was mainly responsible for litter.

LITTER BINS

There appears to be no obvious correlation between the frequency of bins and the corresponding litter levels. Council A had the highest number of litter bins per transects, yet also recorded the highest litter levels. Similarly recreational areas had more bins than any other and use type, yet also recorded the highest LPI. These findings indicate a need to target anti-litter campaigns towards people's attitudes, and encourage them to use litter bins when they are present.

DOG FOULING

Dog fouling is often perceived to a more frequent problem than the borough cleanliness survey results indicate. While the incidences of dog fouling were among the less common forms of litter, the nature of the problem makes it an issue of importance to many. This year's figure marks a substantial increase on the 2007 figure, with the amount of transects recording at least one incidence of fouling rising from 2% to 5%. Not surprisingly recreational areas recorded the highest frequency, with high density residential areas also showing a relatively high reading.

5.0 RECOMMENDATIONS

1. Targets to meet

Results from the 2008 survey showed the annual average Cleanliness Pollution Index to be 7%, well inside the target of 12%. Revised targets for 2009 have been based on the average results achieved during 2008. The targets for 2009 are:

Cleanliness Performance Indicator – 6%

Litter Pollution Index – 9%

Detritus Pollution Index - 3%

These targets will be revised annually and based on the averages from the previous survey year.

2. New Structure for 2009 Borough Cleanliness Survey

The 2009 Borough Cleanliness Survey is undergoing several key changes. Central to the new survey is the carrying out of the grading procedure by TIDY Northern Ireland staff. Councils, working in conjunction with TIDY Northern Ireland, will provide a list of transects to be graded. This grading will then be carried out exclusively by TIDY Northern Ireland staff members. Councils will also be offered more options within the survey to ensure the program is adaptable to the specific needs of each council.

These changes have already been acknowledged as a step forward for the programme and 2009 will see an increase in the number of councils participating in the programme, which will increase its effectiveness as a comparison tool.

3. Review of Public Administration

The proposed changes resulting from the Governmental review of public administration and the amalgamation of the council areas will have a significant impact on the borough cleanliness surveys, in particular the size of areas covered by each council. It will be some time before these changes are introduced, but TIDY Northern Ireland and the councils should use this time to consider the implications of the new structure.

Appendix 1: TIDY Northern Ireland Borough Cleanliness Survey Form

Survey Number: 1 2 3 4 Time: _____
(Please circle)

Surveyors' Name (s): _____ Council: _____
(Surveyor from)

Town/Location Name: _____

Street Name: _____

From: _____ To: _____

Weather Conditions: _____

Survey Area Landuse Type:

- Please tick most appropriate for transect being surveyed

Town /Village Centre
 Peripheral Retail d'ment
 Rural Area
 Main Road
 High Density Residential
 Low Destiny Residential
 Recreational Area
 Other

Cleanliness Performance Indicator (CPI)

- Please circle separate grade for litter and detritus

Litter Pollution Index (LPI)						Detritus Pollution Index (DPI)							
A (3)	B+ (2.5)	B (2)	B/C (1.5)	C (1)	C- (0.5)	D (0)	A (3)	B+ (2.5)	B (2)	B/C (1.5)	C (1)	C- (0.5)	D (0)

Type of Litter on 50m survey Transect

- Tick if type of litter is present on transect

Litter Types* see guidance manual for more detail	Present
A - Food Residues	
B - Chewing Gum (old)	
C - Chewing Gum (New)	
D - Takeaway Packaging	
E - Glass Bottles	
F - Plastic Packaging (non takeaway e.g. bags, bottles, sheets)	
G - Metal Packaging (non takeaway e.g. cans, drums))	
H - Confectionery Litter	
I - Business Litter (Elastic bands, envelopes, adverts)	
J - Non Packaging Litter (flyers, newspapers, receipts, tickets)	
K - Cigarette Litter	
L - Dog Fouling	
M - Other	

Source of Litter

- Tick if source is present on transect

Source of Litter* see guidance manual	Present
N - Pedestrian/Individuals	
O - Fast food Outlet	
P - Overflowing Bins	
Q - Motorist	
R- Weather Conditions	
S- Post Men/Women	
T - Other	

Additional Comments:

Bins (Litter and Dog Fouling)

- Enter the number of bins within **10m radius** of transect

Bins (Litter and Dog Fouling)	Number
U- Number of Litter Bins on Transect	
V - Number of Overflowing (+75% full) litter bins	
W - Number of Dog Fouling Bins on Transect	