

Lochaber Environmental Group

Home Composting Behaviour in Lochaber



April 2003

Lochaber Compost Survey

Introduction:

Lochaber Environmental Group has been distributing compost bins throughout Lochaber since 2000. The group believes that composting is the single most effective method of recycling. It reduces household waste by up to a half, and removes biodegradable material from landfill sites where it would otherwise produce methane, a global warming gas, and leachate, a potential water pollutant. Composting is particularly suited to our situation in the Highlands with a scattered rural population, where most houses have a garden. Although the distribution of compost bins had been monitored, until 2002 no work had been carried out to determine the level of home composting already taking place.

This survey was undertaken to find out the number of people in Lochaber making compost, and the potential for encouraging more people to take up home composting. During 2002, Waste Aware Scotland also carried out a waste survey, which included questions on composting, interviewing 479 people Highland wide, of whom 45 people lived in Lochaber.

Method:

In August 2002, a questionnaire was sent to 300 people in Lochaber. The aims were to find the percentage of households making compost in the area, - and to collect data that would help with the future promotion of composting. The survey questions are listed in appendix 1. In order to ensure that a representative sample of housing types and locations were surveyed, the names were generated by selecting every 50th person on the electoral register, giving 295 names. 5 additional names were selected at random from the list. Questionnaires that were not returned were followed up with a telephone call or personal visit.

Results:

Of the 300 questionnaires sent out, 132 were initially returned. After follow up by telephone or in person, 272 surveys were obtained. In the remaining 28 cases the person had either moved away or died. These names can be removed from the data set without skewing the analysis. Thus the effective survey population was 272, giving a final response rate of 100% and an initial response to the postal survey of just under 49%.

The results are shown in Appendix 2. In some cases answers were not given to every question. Where this was the case, percentages have been calculated using the total number of answers for individual questions.

Analysis and Discussion of Results:

Level of composting in Lochaber:

27% of people in the survey are currently making compost at home. This is higher than the figure of 22% obtained by the Waste Aware Scotland survey for the whole of the Highlands, which is likely to reflect the rural nature of Lochaber compared to Inverness and the work of LEG in promoting composting. Of the remaining 73%, approximately 3.5% used to make compost but no longer do so.

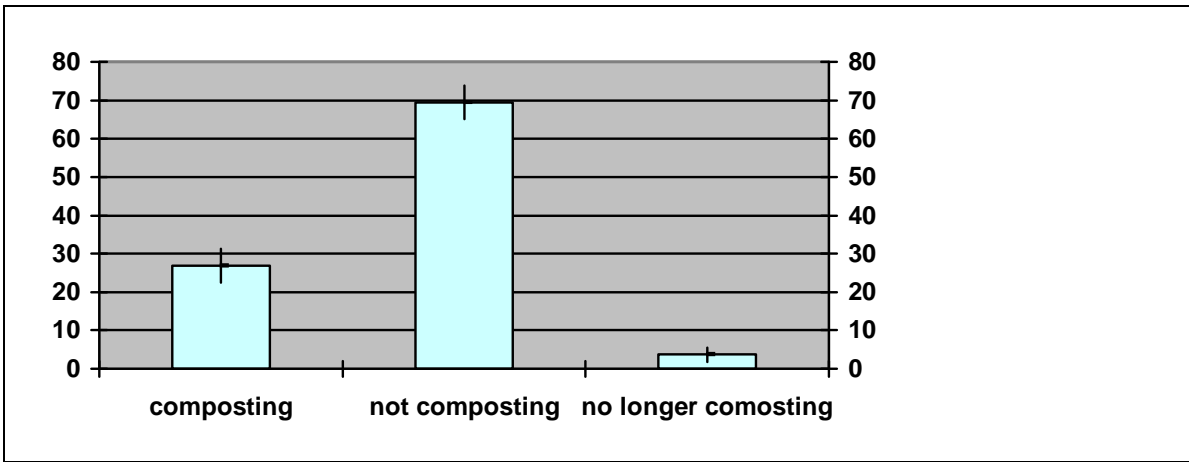


Figure 1: Percentage of people composting in Lochaber, showing 95 % confidence limits

Of the 10 people who have given up composting all were over 40 years old, and the majority (7) were over 60. Six gave reasons for giving up, two saying they were now too old, and a third citing a reduced growing area. The remaining problems raised were expense, time and smell/problems with neighbours.

Relationship between age and level of composting:

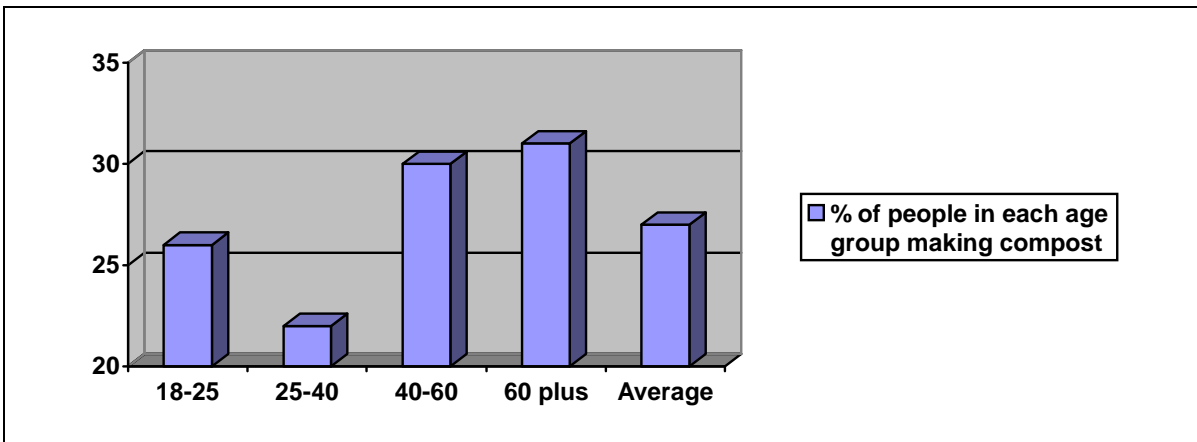


Figure 2: Percentage of people making compost within each age group

Composting is most common in people over 40. This may reflect the continuation of composting as a traditional practice in the older generations, or it may be that those over 40 are no longer raising young families and have more time for leisure activities such as gardening and composting. Of those under 40, people between 18 and 25 are more likely to compost than those between 25 and 40. This may reflect a growing environmental awareness amongst the younger generation.

Correlation Relationship between housing type and composting behaviour:

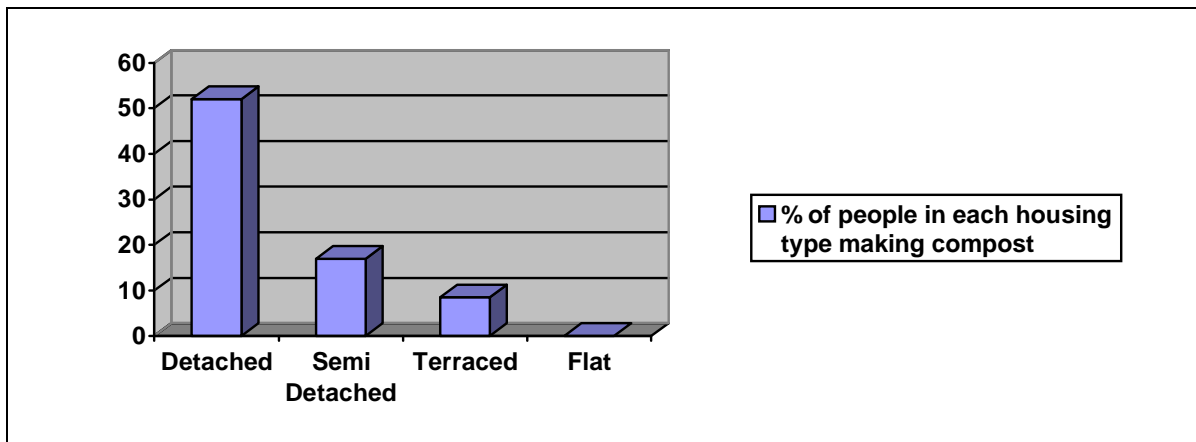


Figure 3: Percentage of people making compost within each house type

In Lochaber there is a strong correlation between housing type and composting behaviour, with 52% people living in detached properties making compost, but only 17% of those in semi detached properties and 8.5% in terraced houses making compost. Of the 23 people survey who live in flats, no one makes compost. Of all the people in the survey who do make compost, over 70% live in detached houses.

Relationship between composting and owning a garden:

Over 90% of people living in Lochaber have a garden. In the survey group, as expected, none of the people without a garden made compost. Calculating the percentage of composters from those who do have a garden raises the rate of composting in Lochaber from 27 to 30%.

In the Highlands as a whole, the Waste Aware Scotland survey found that 84% of the people surveyed had gardens (compared to 91% in Lochaber). Of these 27% compost at home (compared to 30% in Lochaber). Thus taking into account only those that have a garden, the difference between the level of composting in the Highlands as a whole and in Lochaber drops from 5 to 3%. Thus the 3% increase in composting in Lochaber above the average for the Highlands may be attributed to the effect of compost promotion by LEG. Compost promotions have taken place in other parts of the Highlands, particularly by Strathspey Waste Action Network, and these areas would be expected to have composting rates above the Highland average, but also to raise that average.

Material composted:

Over 75% of composters are composting both kitchen and garden waste. 23% are composting just garden waste, whilst just one person of the 272 was composting just kitchen waste.

Relationship between time of year and compost behaviour:

The number of people composting all year and the number just composted their garden waste in the summer affects the overall diversion of material from landfill achieved by composting. The survey found that just 10% of composters only add material during the summer, and all of those are composting solely garden waste. However, the remaining 13% of composters who only

tackle garden waste, do compost all year round. All those composting just kitchen waste or both kitchen and garden waste also compost all year round.

Length of time composting:

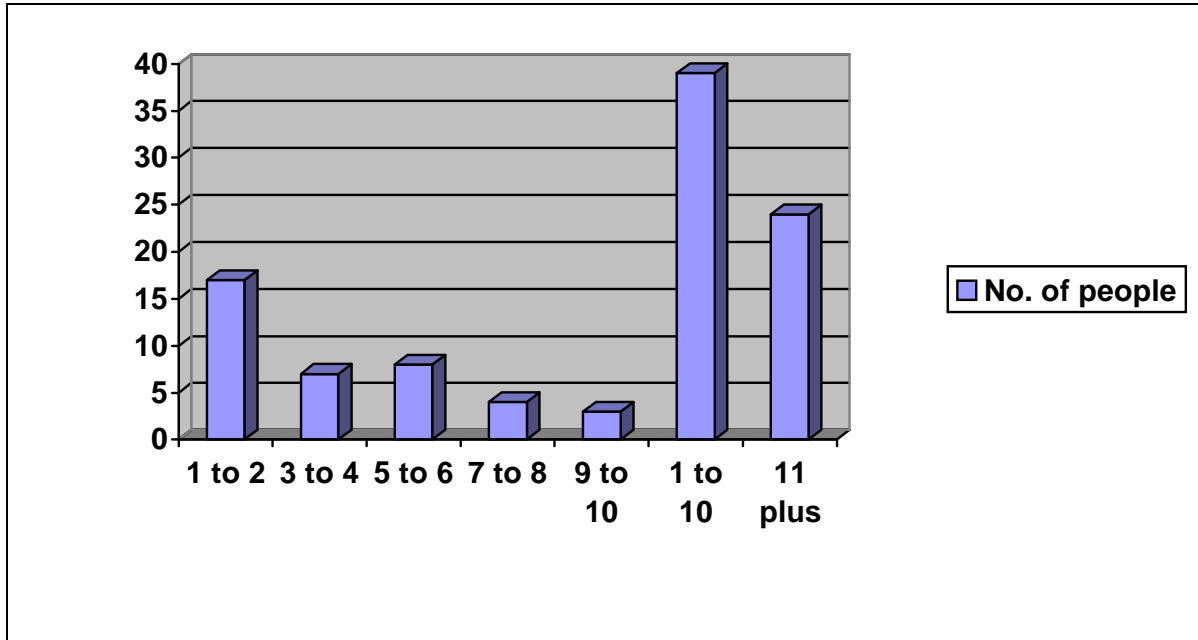


Figure 4: Number of years composting.

In this question, people were asked to give the approximate length of time that they had been composting. Since answers are approximate and rely on memory, the results should be viewed with this in mind. However, it is likely that the data will be good enough to reliably show trends.

A solid core of people have been making compost for 10 or more years, and are likely to continue to make compost. However this number is outweighed by the number of people who have taken up composting in the last 10 years. Of these, the majority have taken up composting in the last 3 years, correlating with the length of time that LEG has been actively promoting composting. It seems likely that the increased uptake of composting is due to the subsidised compost bins distributed by LEG, as well as increased awareness about composting and environmental issues generated at a local level by LEG, and nationally by a number of organisations.

Comparison of composting methods:

The most common single method of composting was using a plastic bin. However, the number of people buying bins is outweighed by the number who have not purchased a bin, but are using either an open heap or a homemade bin.

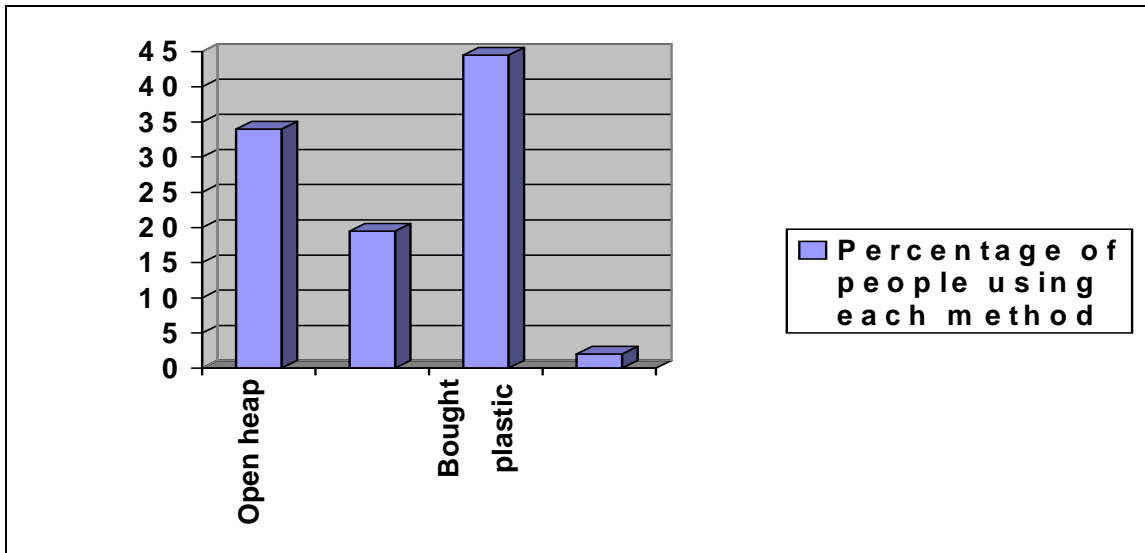


Figure 5: Methods of composting

Satisfaction with method of composting:

Overall 83 % of those who answered this question were happy with their composting method. A comparison was also drawn between the composting method used and whether the composter was happy with their method of composting.

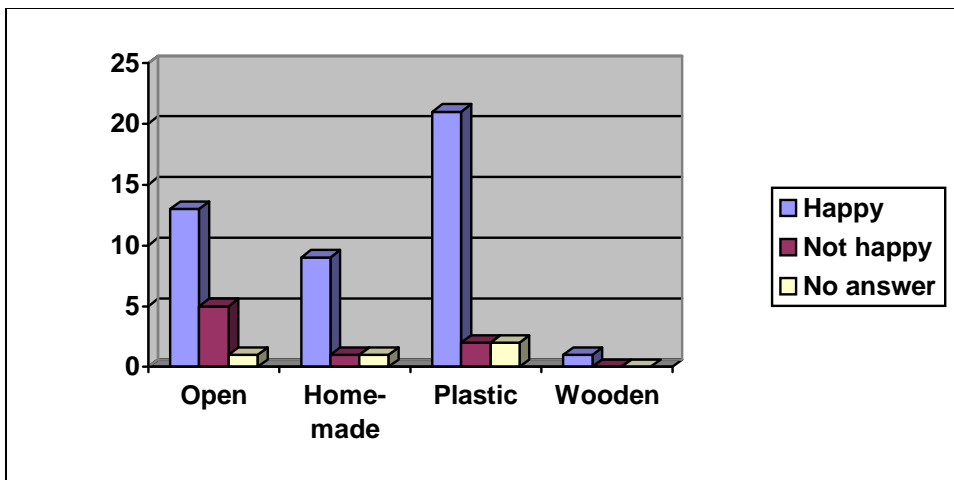


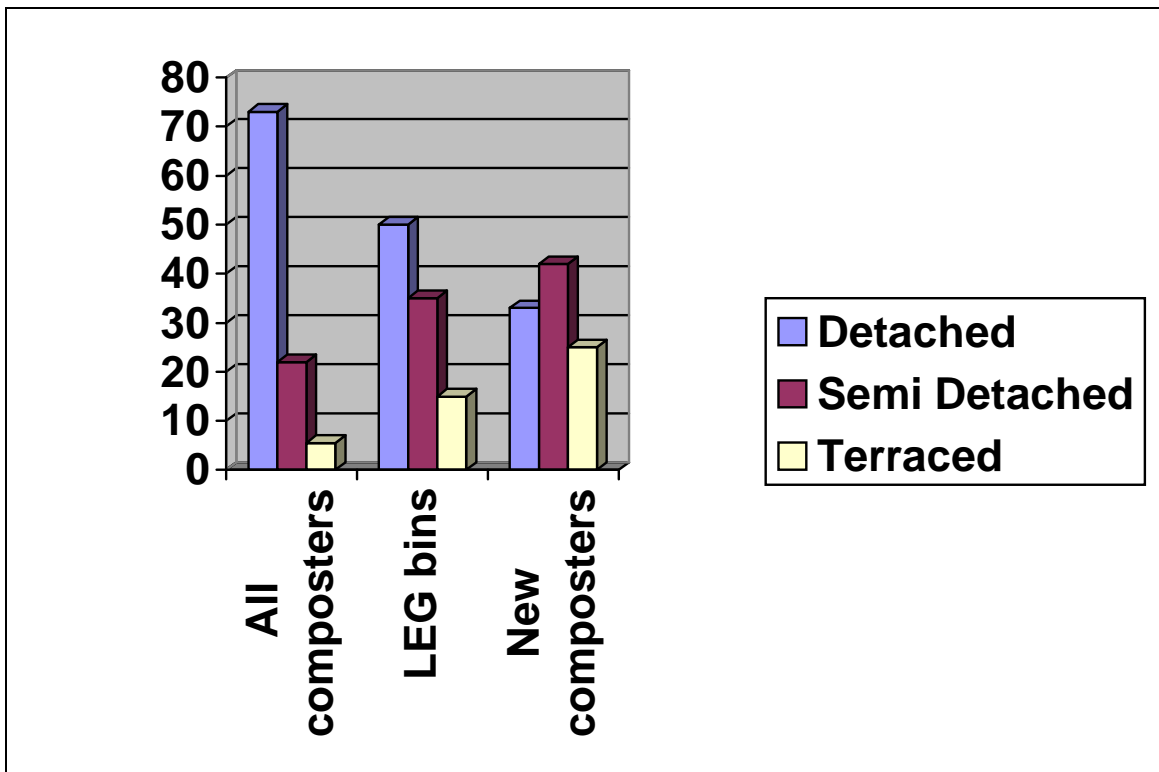
Figure7: Number of people satisfied with their composting method.

Open heaps were reported to be the least satisfactory compost method, with all types of compost bins whether home-made or bought, wooden or plastic, rating above 90% in terms of satisfaction.

Number of people with subsidised bins:

Of the 25 people who were using plastic bins, 80% had obtained their bin from LEG. Of these people, 60% were not composting before they received their bin.

Market share of composting by housing type:



Most people who compost live in detached houses. In fact, 73% of all composting locally is carried out by those who live in detached houses (or put another way, 52% of people who live in detached properties practice composting).

Of those who compost using subsidised compost bins, only half live in detached housing, the other 50% living in semi-detached or terraced housing. Thus compost bins appear to make composting more attractive to those in smaller properties.

Looking at those who were not previously composting, and took up composting as a result of being offered a subsidised compost bin, an even higher proportion of the total number live in terraced or semi detached housing, this group for the first time outweighing those in detached housing.

Indeed, from table 14, it can be seen that of those living in detached houses only 8% are making compost as a result of receiving a subsidised compost bin. For those from a semi detached house this proportion rises to 44% and of the composters living in terraced housing, 75% are composting as a result of receiving a subsidised bin. Thus promoting composting through the use of subsidised bins appears to be encouraging greater uptake from groups of people who were less likely to be composting previously.

Reasons for not composting:

As shown in table 17, the three most common reasons for not composting were that the person did not garden, that they were not interested in composting, and that they were too busy. Of the

130 answers, lack of knowledge and facilities were identified by less than 10% as a reason for not composting.

Potential for increased composting:

As shown in table 18, over half of those not composting who responded said that nothing would persuade them to take up composting. However, 26% of the 82 respondents (21 individuals) indicated they might be willing to composting in future given a better understanding of composting or the facilities to carry it out. That more people indicated that the provision of knowledge and facilities might persuade them to compost, than those that identified these things as a barrier, may indicate that people who had not previously considered composting would be persuaded by information and facilities.

Nearly 32% of those surveyed requested more information about composting (Table 19). Interestingly the proportion of people requesting further information was evenly split between those already composting and those not composting. Of those requesting further information, most wanted general advice rather than specific information (see table 20)

Further comments are recorded at the end of Appendix 2.

Discussion:

Diversion from Landfill:

In 2001, LEG carried out a survey to assess the amount of material each household with a compost bin diverted from landfill. Results showed that each household composted 573kg in a year, of which 210kg was kitchen peelings and 363kg was garden waste.

52% of these people already composted before purchasing a bin from LEG. Some households used more than one compost bin, or a compost bin plus an open heap or home-made bin. In some cases people who had previously only composted garden waste started composting kitchen waste once they had purchased a bin from LEG.

In the three years between April 2000 and March 2003, LEG has distributed 1019 bins to 745 households and 14 schools. Assuming that each household composts 573kg a year, the 745 households which have a compost bin through LEG will compost approx 427 Tonnes of material every year.

If 48% of these people were not composting previously, this represents 205 Tonnes of new diversion, of which approx 75T is kitchen material and 130T is garden material.

Once a household has changed their behaviour and is committed to composting, this diversion can be expected year on year. In fact in this survey, one participant said that they had been composting for 80 years.

Long term effectiveness:

There has been some debate as to whether people who start composting using a home compost bin will continue to compost once the novelty has worn off or problems arise. To help ensure a degree of commitment at the start of the process, LEG feel that it is important that a charge is made for compost bins. Thereafter the group aims to offer ongoing support to composters.

In this study of 272 households, 89 were actively composting and 10 said that they had previously made compost, but were no longer doing so. This represents a drop out rate of 10.1% over time.

Generally people were happier with their compost bins than with composting in open heaps thus distributing compost bins may help encourage those who already make compost to continue.

Conclusion:

Composting is a traditional practice in rural Lochaber, with 27% of households making compost. If this practice is allowed to die out as the population ages, the Council will have a significant increase in arisings to deal with, estimated at over 5,000 Tonnes per annum for Lochaber alone.

The majority of composters live in detached houses. There is potential to increase the level of home composting particularly by targeting those who live in semi detached and terraced housing and by the provision of information and compost bins.

By March 2003, 1 in 12 households in Lochaber (8.5% of the population) had a compost bin from LEG. The use of these bins will lead to an additional 205 Tonnes of material being composted every year, taking into account previous composting behaviour. This represents approx 2% of the total household waste landfilled in Lochaber (Given as 10,500T in the 2001 SEPA assessment). With a low drop out rate over time, of approx 10%, much of this diversion can be expected year on year.

For every 900 households in Lochaber (10% of the total), which could be persuaded to take up composting, a diversion of 500 tonnes from landfill could be achieved year on year. This is approx 3.6% of the total for Lochaber. This is particularly significant because once householders have embraced composting as part of their day-to-day lives, no additional central resources are required.

Money spent on subsidising home composting bin distribution and ongoing education and support, can thus be shown to have a significant effect on the amount of biodegradable material being dumped in landfill sites.

Appendix 1: **Compost Questionnaire**

- 1. Are you 18-25 25-40 40-60 60 plus
- 2. Is your house Detached Semi detached Terraced Flat Other
- 3. Do you have a garden? Yes No
- 4. Do you compost at home? Yes No Not any more

If no please go to question 12.

- 5. Do you compost Kitchen material Garden material Both
- 6. Approx how long have you been composting years
- 7. Do you compost in the Summer Winter Both
- 8. How do you compost? Open heap Plastic Compost bin Tumbler Home made bin
- 9. Are you happy with your method of composting? Yes No
- 10. Do you have a subsidised home compost bin from LEG/the Council? Yes No

If no please go to question 14.

- 11. Did you compost before you got the subsidised bin? Yes No

Please go to question 14.

- 12. Please tell us why you don't compost.....
- 13. Is there anything that would help persuade you to take up composting?
-
- 14. Would you like more information about home composting? Yes No
- 15. What sort of information would be most useful for you?.....
- 16. Please add any further comments you wish to make.....
-

Many thanks for taking the time to fill in this questionnaire. Your help is greatly appreciated.

Appendix 2:

Table 1: Level of composting from the survey.

Compost at home	Yes	No	Not any more
Number	73	189	10
Percentage	26.8	69.5	3.7

Table 2: Relationship between age and level of composting:

Age	Number in group	Composting	Not composting	No longer composting	% within age range making compost
18-25	19	5	14	-	26
25-40	60	13	47	-	22
40-60	92	28	61	3	30
60 plus	84	26	52	6	31
Unknown	17	1	15	1	
Total	272	73	189	10	27

Table 3: Relationship between housing type and composting behaviour.

Housing Type	Number in group	Composting	Not composting	No longer composting	% within housing type making compost
Detached	104	53	49	3	52
Semi detached	93	16	73	4	17
Terrace	47	4	41	2	8.5
Flat	22	-	22	1	0
Unknown	4	-	4	-	0
Total	272	73	189	10	27

Table 4: Relationship between composting behaviour and having a garden.

	Number in group	Composting	Not composting	No longer composting	% making compost
Garden	246	73	164	9	30
No garden	24	-	23	1	0
Unknown	2	-	2	-	0
Total	272	73	189	10	27

Table 5: Material composted

Material composted	Kitchen material only	Garden material only	Both	No answer
Number	1	16	52	4
Percentage composting*	1.5	23	75.5	

* excluding those who did not answer this question

Table 6: Length of time composting

Time composting in years	1-2	3-4	5-6	7-8	9-10	11-20	21-30	31-40	80	unknown
Number	17	7	8	4	3	11	8	4	1	9
Percentage*	27	11	13	6	5	17	13	6	2	

Table 7: Time of year composting carried out

Time of Year	Summer	Winter	Both	No answer
Number	7	-	60	6
Percentage*	10	-	90	

Table 8: Relationship between material composted and time of year.

Time of Year	Summer	All year	All year	All year
Waste type	Garden	Garden	Kitchen	Both
Number	7	9	1	52
Percentage*	10	13	1.5	75.5

Table 9: Method of composting

How	Open heap	Plastic bin	Tumbler	Home made bin	Wooden bin	No answer
Number	19	25	0	11	1	17
Percentage*	34	44.5	0	19.5	2	

Table 10: Satisfaction with composting method

Method of composting	Happy	Not happy	No answer
Number	54	11	8
Percentage*	83	17	

Table 11: Comparison of composting method and degree of satisfaction

Composting method	Number using method	Happy with method	Not happy	No answer	% happy with method
Open heap	19	13	5	1	72
Home made	11	9	1	1	90
Plastic	25	21	2	2	91
Wooden	1	1	-	-	100
Unknown	17	10	3	4	

Table 12: Composters using subsidised bin from LEG

Subsidised bin	Yes	No
Number	20	5
Percentage	80	20

Table 13: Comparison of housing type and use of a subsidised bin.

Housing Type	Composters using all methods		Composters using LEG bins	
	Number in group	% composting by house type	Number in group	% composting by house type
Detached	53	73	10	50
Semi detached	16	22	7	35
Terrace	4	5	3	15
Total	73	100	20	100

Table 14: Composting behaviour prior to receiving bin.

Compost before subsidised bin	Yes	No
Number	8	12
Percentage	40	60

Table 15: Relationship between housing type and those taking up composting using a subsidised compost bin

Housing Type	Composters using all methods		Composters using LEG bins		Not composting before subsidised bin	
	Number	Proportion by house type (%)	Number	Proportion by house type (%)	Number	Proportion by house type (%)
Detached	53	73	10	50	4	33
Semi detached	16	22	7	35	5	42
Terrace	4	5.5	3	15	3	25
Total	73	100	20	100	12	100

Table 16:

Housing Type	Total Number Composting	% within housing type making compost	Number composting with LEG bins	% of composters using LEG bins	Number using LEG bins and new to composting	% introduced to compost through LEG bin
Detached	53	52	10	19	4	8
Semi detached	16	17	7	44	5	31
Terrace	4	8.5	3	75	3	75
Total	73	27	20		12	

Table 17: Barriers identified by non-home composters (where more than one reason has been given the responses have been recorded separately).

Barrier	Number	Percentage
Don't garden	22	17
Not interested	14	11
Too busy/no time	14	11
Too old/unable	9	7
No facilities/costs	9	7
Never considered	8	6
No space	7	5
No use for compost	6	5
No garden	6	5
Too much trouble/apathy/lazy	5	4
Not enough waste/feed to animals/throw over hedge	5	4
Never got round to it	5	4
Compost smells/hygiene/untidy	4	3
Not sure/no reason	4	3
Not my house/always moving/lives away	4	3
Recently built house/new garden	3	2
Don't know how	3	2
Council does gardening/private gardener	2	1

Table 18: Responses to the question ‘Is there anything that would help persuade you to take up composting?’

	Number	Percentage
Nothing	45	55
Information/greater understanding	13	16
A bin	8	10
Not sure	3	4
Time	3	4
Money	3	4
Suitable garden/own house	3	4
If compulsory	2	2
Health	1	1
Council incentive	1	1

Table 19: Number of people requesting more information.

More information	Yes	No	% requesting more info
Composting already	23	50	32
Not composting	1	9	10
No longer composting	62	127	33
Total	86	186	32

Table 20: Answers to ‘What sort of info would be most useful?’

General	22
What to compost	9
Benefits/why compost	2
Bin design/cost/availability	3

Further Comments recorded on survey form (where more than one person made the same comments the number appears after the comma).

Would like to buy a bin, 3
 Getting a bin for Christmas!
 Would compost if could afford a bin/May decide to compost if council provided bins, 2
 Thinking about starting to compost,
 Would like to compost but don't know how/Would take interest if more info, 2
 Do recycle other things, 4,
 Council should do more 2,
 Interested in recycling – would like a doorstep collection
 Would separate green waste for council collection
 Has a friend who composts and is amazed how little is in her bin
 Puts tea bags on roses
 Leftovers fed to hens
 Grass cuttings thrown over hedge/put in pile, 3
 Next door neighbour takes grass cuttings and composts them
 Ill health prevents composting, 2
 Too much junk mail
 Good idea but not interested
 Not interested due to long work hours