Final Report National Brown Bin Awareness Pilot Scheme in Sligo City





Sligo County Council

Roinn Cumarsáide, Gníomhaithe ar son na hAeráide & Comhshaoil Department of Communications, Climate Action & Environment



Composting & Anaerobic Digestion Association of Ireland

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Acknowledgements

The authors gratefully acknowledge the input into this project by:

Siobhan Gillen, Matthew Byrne, Pete Murtagh, Margaret Dunleavy, David McGovern, Rachel Finan – Sligo County Council.

Percy Foster - Cré, Tony Breton - Novamont, Philip Nugent - Department of Communication, Climate Action and Environment, Billy Fitzgerald-Institute of Technology Sligo, Martin Eves –Envirogrind, Barry Gallagher - Greenstar and Campbell Finnie/Bernard Flathery - Barna Recycling.

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1. Executive summary

Sligo County Council coordinated the national Pilot Scheme of the Brown Bin programme in Sligo City between July 2014 and March 2015. The Project was jointly funded by Sligo County Council, the Department of Communications, Climate Action and the Environment, Cré – Composting and Anaerobic Digestion Association of Ireland, and Novamont.

The aim of the Project was to see how a range of educational and collection tools, such as the use of Brown Bin Waste Management Advisors and the provision of kitchen caddies to householders, could improve the capture and quality of food waste in the Brown Bin. The goal was to demonstrate the positive impact, which relatively low-cost measures can have on the performance of the system.

On foot of the findings of this Project, it is anticipated that the best practices identified in Sligo City will form a model which other towns could adopt.

The Pilot Scheme involved the following elements:

- The hiring of three interns under the JobBridge Internship Scheme. The interns went door-todoor to some 6,000 householders in Sligo City, providing Information on how to use the Brown Bin;
- The national Information leaflet developed by <u>www.brownbin.ie</u> was tailored to the local situation in Sligo City.
- A launch event was conducted at Institute of Technology Sligo's car park on a Saturday when the farmers market was in progress. The launch event included free compost give-away to the public.
- A waste characterisation study was conducted before the interns started the education programme and again at the end of the programme. This helped determine the impact of the programme.
- The waste collection routes in Sligo City were divided into three Areas. Two Areas given different types of kitchen caddies and compostable liners, and a group which would not have a kitchen caddy or compostable liner. This was used to assess the impact on the provision of a kitchen caddy and compostable liners to improve the capture rate of food waste.

Main Findings

There were a significant number of households without Brown Bins in Sligo City and prior to the awareness work their use was very low among those households which had Brown Bins.

The provision of an education programme of door-to-door education, a kitchen caddy and compostable bags to households resulted in:

- The participation and capture of organic waste at least doubling on average in Areas which received awareness Information compared with those which did not;
- A reduction in the level of contamination in Brown Bins from 18% to 1%; and
- Prior to awareness, the residual waste contained on average 39% organic waste, which was reduced to an average of 29% after the awareness programme.

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Table 1: Summary of key findings

Parameter	Sligo City	Area A Awareness + solid caddies + 52 compostable liners	Area B Awareness	Area C Awareness + vented caddies + 52 compostable liners
Households which do not have a Brown Bin collection but should	24%	17%	26%	27%
Change in participation	+25%	+51%	+8%	+16%
Capture of organic waste from participating households Kg/ household/week	3.01	2.93	2.44	3.25
Overall capture of organic waste after awareness from all households	+0.95 Kg/ household/ week +59%	+1.6 Kg/ household/ week +76%	+0.36 Kg/ household/ week +45%	+0.77 Kg/ household/ week +47%
% contamination in Brown Bin before	18%	23%	20%	14%
% contamination in Brown Bin after	2.5%	1%	6%	3%
% change of contamination	-86%	-96%	-70%	-79%
Reduction of organics in residual bin After Trial		-6%	-11%	-10%

Bin presentation/participation

On average, participation at least doubled in Areas which received awareness information compared with those which did not.

All Sligo households which claimed to be signed up to a Brown Bin service and actually using their bin before the awareness work was just 37%. After the awareness initiative, the recorded presentation for the whole of Sligo City increased to 70% with the greatest increase (25% to 87%) being recorded in Area A.

Comparing those households which received awareness and tools for separating food waste in the kitchen with those which received some limited awareness (Area B) further demonstrates the impact of the work. Combined, recorded participation in Areas A and C increased from 38% to 77% whereas in Area B there was little change with participation changing from 33% to 43%. There was some uplift in Area B due to the communication work.

Capture of organic waste

On average, prior to the awareness programme Sligo was collecting 2.86 kg /household/week waste in the Brown Bins of which 17% was contamination. Thus, the quantity of organic waste suitable for organic recycling was 2.37 kg /household/week.

On average per week, prior to the awareness programme, every Brown Bin presented in Sligo contained 0.49 kg of contamination.

There was a marked difference in performance between those Areas which received awareness and tools to separate food waste in the kitchen.

Considering the households which were signed up to a Brown Bin, prior to the awareness programme, Area C, which had the highest user rate, had the highest capture of organic waste at 1.19 Kg. This increased significantly to 2.24 Kg post-awareness. In Area B, which had the lowest rates of participation, the rate of capture of organic waste also increased but to a lesser extent, rising from 0.57 Kg to 1.06 Kg. Area A showed the greatest increase in use of Brown Bins. This was reflected in the significant improvement in performance in the Area, with the level of organic waste in the Brown Bins of those signed up increasing greatly from 0.62 Kg to 2.55 Kg.

On average, participation and capture at least doubled in Areas which received awareness compared with those which did not.

Level of contamination

The level of contamination in the Brown Bin at the start of the Project was high in each Area, ranging from 14% to 23% with plastic being the main contaminant.

After the awareness programme, Area B has the highest level of contamination of 6%, compared with the Areas A+C (which got caddies and compostable bags) which were at 1% and 3% respectively.

A year later after this Project was finished; Area A was investigated and it was determined that the contamination level was still at a low level of just 3%.

Overall awareness had significantly positive effect on contamination.

Recommendations

- The provision of a door-to-door education programme might not be feasible for some waste collectors. However, the study has shown that the provision alone of just a kitchen caddy, compostable bags and Information leaflets will result in dramatic increases in the quantity and quality of Brown Bin material collected.
- To continue to monitor presentation and tonnage trends continually. Therefore, it is proposed that the collectors be requested to submit monthly reports on the tonnages collected and number of bins lifted for each waste stream.
- The Pilot Scheme in Sligo to act as a model for Brown Bin education schemes which can be adopted by other towns.
- It is recommended that if a Local Authority were going to do an education programme, this should be conducted in partnership with all the local waste collectors. It is important that all the waste collectors give a full commitment to the programme as without it, the programme will not be successful.
- The recommendations should be followed in the publication *Best practice guide of door-to-door Brown Bin Education in Ireland,* on which this Project was also based.

2. Background

The European Union (Household Food Waste and Bio-waste) Regulations 2015, (initial legislation introduced in April 2013) build on the commercial food waste regulations introduced in 2009 and are designed to promote the segregation and recovery of household food waste, in line with the national policy and the Waste Framework Directive objectives of maximising the resource which can be extracted from waste and minimising the disposal of waste.

The Regulations impose obligations on both householders and waste collectors. Householders are obliged to segregate their food waste, and make it available for separate collection. Alternatively householders may compost the food waste at home; or bring it themselves to authorised treatment facilities (such as civic amenity sites, composting or anaerobic digestion sites).

National statistics and Cré membership feedback have not reported expected increases in tonnage collected of Brown Bin material since the implementation of the household food and bio-waste Regulations. Additionally all Cré members processing Brown Bin material have reported increasing contamination of Brown Bin material with non-compostable material, of plastics in particular. It is vital that contamination is kept to a minimum in order for composting to meet the requirements of the National Compost Standard IS441.

The successful implementation of the new Household Food Waste Regulations is integral to the future stability of the biological treatment industry.

A report was conducted in 2013 entitled Review of Best International Practice on How to Educate Households on Using the Brown Bin Correctly.

The report found that focused education of households to use the Brown Bin properly will lead to its success and also control contamination. One of the key recommendations of the report was for a national Pilot Scheme programme of 'Brown Bin Waste Management Advisors' which would educate householders on how to use the Brown Bin system.

This report also highlighted the importance of CCC – *Clean Comfortable Compact* – to the success of a Brown Bin Scheme. The report states that *'Clean means the use of paper or compostable bags in the kitchen caddy.'* This is convenient, because only the bags were presented for kerbside collection. Little kitchen caddies/buckets do not need a lot of space in the kitchen which meets the requirement for a compact system.

The sector and the Government wanted to Pilot Scheme a Brown Bin Waste Management Advisors programme in Ireland. Such a programme would educate households on how to use the Brown Bin correctly and avoid Brown Bin contamination.

The key objective of the trial conducted in Sligo is to assess if households are given the correct education tools (leaflets, kitchen caddy and compostable bags) if the participation rate, quantity and quality of brown bin material improves.

2.1 Sligo

In order to improve the way in which waste was managed in Sligo, as well as addressing the requirements of the European Union Household Food Waste and Bio-Waste Regulations and the Landfill Directive, Sligo County Council put forward a number of changes so as to comply with this legislation and tighten up on waste management efficiency in the County of Sligo.

The Sligo County Council Waste Management Bye-Laws 2013 were adopted at the November 2013 Sligo County Council meeting and involved a three-month phasing-in period to allow waste collectors and members of the public, time to put the necessary measures in place.

There were a number of issues which needed to be addressed in regard to the way waste was managed in Sligo. Prior to the adoption of these Bye-Laws, households were able to purchase pre-paid bags/tags from their local shops for recyclable and general waste collection. This practice meant that it was very difficult to ascertain what percentage of household waste was actually going into the correct disposal stream versus what may have been illegally disposed of or even burned.

Based on quarterly returns from all waste collectors operating in the County of Sligo, up to 53% of households were unaccounted for. Therefore, strict measures were needed to be put in place to tighten up on the way in which waste was managed and to ensure all households were accounted for.

Sligo County Council Waste Management Bye-Laws 2013 designated 18 Areas in Sligo as third-bin Areas which supported the Household Food Waste Regulations in achieving its objectives.

Sligo County Council's involvement in the Project helped householders manage their waste in Sligo in accordance with the Waste Management Bye-Laws 2013.

2.2 Educational concept overview

When initially developing the education Project concept, it had been assumed that the householders had already been provided with kitchen caddies and had access to compostable bags. However, following investigations by Cré, it was found that despite their relatively low capital cost (approximately €2) and importance in achieving high performance of the Scheme, there are only two waste collection companies of approximately 70 in Ireland which provided kitchen caddies or compostable bags. The two collector firms which provided caddies and compostable bags did not operate in Sligo.

In the United Kingdom, the Waste and Resources Action Programme (WRAP) has published a number of reports on introducing food waste collections and they consider that the provision of suitable tools such as kitchen caddies and compostable liners is a prerequisite for success.

There are two waste collectors, Barna Recycling and Greenstar, operating in Sligo City. One collector provides a 120-litre wheeled bin the other collector provides a 25-litre caddy.

The main aim of the National Brown Bin Pilot Scheme was to provide households with different educational packages and tools and evaluating how effective each was.

The National Brown Bin Pilot Scheme in Sligo involved providing some householders with the following education and tools:

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- A teaser leaflet delivered by a leaflet dropping company a few weeks before the door-to-door education commenced.
- A 7-litre kitchen caddy with a sticker on it on what types of food wastes can go into the caddy.
- A roll of compostable bags was provided as well as an instruction leaflet on how to use the Brown Bin service.
- Door-to-door education by the Waste Management Advisors who would provide additional leaflets and in some cases another roll of compostable bags.

3. Methodology

Methodology Overview

The following is a summary of the key steps and components of the Project:

- 1. Discussion and planning with local waste collectors, Local Authority officers and local composting plant.
- 2. Establishment of a steering committee.
- 3. Establishment of data for the amount of organics in the residual bin, recycling bin and in the Brown Bin together with levels of contamination in the Brown Bin. This analysis was conducted before and after the awareness campaign.
- 4. Establishment of data on the number of bins presented by householders and the corresponding weight. This analysis was conducted before and after the awareness campaign.
- 5. A teaser leaflet on how to use the Brown Bin was distributed by a leaflet distribution company prior to the start of the awareness campaign.
- 6. A detailed Information leaflet was given to each household in Sligo City. This leaflet was developed by the national programme <u>www.brownbin.ie</u> and was tailored for local contact details in Sligo.
- 7. Procuring solid-sided and vented-sided kitchen caddies.
- 8. Putting a sticker on what goes into a Brown Bin on the lids of the kitchen caddies and then distributing them to the relevant households.
- 9. Hiring three interns to undertake the operational roles in the Project which included:
 - Developing communication tools;
 - Providing door-to-door Brown Bin advice;
- 10. Organising a launch/compost give-away event in the car park of the Sligo Institute of Technology during a Saturday Farmers' Market.
- 11. Publications in local newspapers.
- 12. Radio interviews.
- 13. Participation in the Tidy Towns waste expo event.

Pilot Scheme Design

In Sligo City, there are approximately 8,000 households. These households were the focus of the Pilot Scheme. Households in Sligo City were divided roughly into three Areas (A, B and C) based on waste collection routes (See **Figure 1**).

Table 1 gives an overview of the Pilot Scheme.

- Area A was provided with solid side kitchen caddies, roll of compostable bags, teaser leaflet and Information leaflet and an awareness talk.
- Area B received awareness work only. Due to time constraints, just half of this Area received an awareness talk while the remainder received only a teaser leaflet.
- Area C was provided with vented-side kitchen caddies, roll of compostable bags, teaser leaflet, anInformation leaflet, and an awareness talk.

Before the education programme began, a waste characterisation survey and bin presentation survey was conducted.

At the end of the trial, the waste characterisation study and bin presentation survey was conducted to determine the impact of the trial.



Figure 1 – Overview of the three areas

City area	Number of households	Educational tools provided	Bin presentation number	Bin presentation weight	Waste
А	2,300	 Solid-sided kitchen caddy Compostable bags Instruction leaflet Teaser leaflet Door-to-door education 	Before and after Pilot Scheme	Before and after Pilot Scheme	Before and After Pilot Scheme
В	1,720	Teaser leafletDoor-to-door education	Before and after Pilot Scheme	Before and after Pilot Scheme	Before and After Pilot Scheme
С	3,480	 Vented-sided kitchen caddy Compostable bags Instruction leaflet Teaser leaflet Door-to-door education 	Before and after Pilot Scheme	Before and after Pilot Scheme	Before and After Pilot Scheme

Table 2 - Overview of the main pilot scheme design



Figure 2: Solid Sided Caddy



Figure 3: Vented Caddy



Figure 4: Roll of Compostable Bags

3.1 Communication and education

The three interns, named below, were employed for nine months as Waste Management Advisors, under the JobBridge Internship Scheme:





Margaret Dunleavy

David McGovern



Rachel Finan

The interns undertook the operational roles in the Project including:

- Developing communication tools;
- Providing door-to-door Brown Bin advice;
- Survey of householders; and
- Bin presentation and waste characterisation

Further to the Review of best International Practice on How to Educate Households on Using the Brown Bin report, it was noted that 'The key to the success of a Brown Bin system is the use of Brown Bin Advisors. They help encourage participation and motivate people to use the Brown Bin system. They achieve this through face-to-face contact with householders, explaining how to use the system and answering any questions, problems or complaints which the householder may have.'

In-house training was delivered by Cré, Novamont and Sligo County Council to ensure that all interns were fully educated on waste management practice and in order to provide the required awareness work to all households in the Pilot Scheme Project Area.

During the employment of these interns, in-house meetings took place on a fortnightly basis. Doorto-door work completed in the fortnight prior to the meeting was highlighted and discussed with the Pilot Scheme Project Team. Waste Management Advisors were given a target of reaching 70% of 100 households assigned over a weekly period. A weekly reporting template was completed and submitted on a weekly basis (see Appendix). Following the completion of each estate, Waste Management Advisors were required to complete an 'Estate Completion Report' (see Appendix). Both of these reports were submitted to the Project Manager in order to track the progress made and to ensure that the Project stayed on schedule.

Waste Management Advisors were given work mobile phones (under Health and Safety Regulations). The interns were required to text their Supervisor before and after door-to-door work to ensure the safety of each Advisor while on site. Waste Management Advisors were also furnished with tablets in order to carry out surveys of each household. The Information Technology Department of Sligo County Council developed a software package for these tablets to allow for the input of data while on site which will upload to an internal database. Unfortunately, this particular form of taking surveys was unsuccessful. These tablets proved to be extremely time consuming, not user-friendly and highly temperamental with regard to Wi-Fi connection.

Following a short spell of trying this out, it was agreed to revert to paper surveys and to manually upload the Information received on a central database at the office. By using the paper surveys, it also allowed additional Information to be recorded and notes to be taken. It was quicker and allowed the Waste Management Advisors more time to reach their weekly targets. The paper-survey used is outlined in the Appendix. Calling cards were left at households when nobody was at home. Details are outlined in the Appendix.

3.2 Bin presentation/waste characterisation

Bin presentation

As part of the Project, Waste Presentation Surveys were carried out on all Areas before and after the provision of educational tools/awareness campaign. This was a six-week survey in each Area counting the number and type of waste bins presented for collection.

The procedure in carrying out these surveys was to drive around all estates within the relevant Area being surveyed, on the designated kerbside collection days for each waste collector. While doing so, the number of bins presented for kerbside collection were recorded for each waste stream presented.

Waste characterisation

The draft and published Environmental Protection Agency Household Waste Characterisation Manuals and the Association for Organic Recycling 2012 protocol to measure contamination in bio wastes were considered in preparing the procedures below. In addition, personnel communication took place with the steering committee for the National Brown Bin Pilot Scheme Programme and Colm Gibson of the Clean Technology Centre.

The following was carried out to determine a sample for waste characterisation:

- Some nine samples from Greenstar's collection routes (Area A, B and C) were collected over a two-week period. Waste from the nine different loads was stockpiled at the collector's facility – recyclables for nine days, landfill and organic for two days. Greenstar collect landfill and organics on same week and recycling on the alternate week.
- 2. Some fifteen samples from Barna's collection routes (Area A, B and C) were collected over a two-week period. Waste from fifteen different loads was stockpiled at Greenstar's facility. Barna collected recycling and organic on the same week and landfill on the alternate week.
- 3. Samples of at least 150 kg were obtained for each waste receptacle type, for each Area for each collector.

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4. Results and discussion

4.1 Communication and education

Sligo City was divided into three Areas. **Table 3** below outlines the communication and education work done in the three Areas.

Education/ Tools	Area A	Area B	Area C
Door-to-door	Spoke with 70% of occupied households	Spoke with 33% of occupied households	Spoke with 70% of occupied households
Leaflets	100% mail drop of educational material	100% mail drop of educational material	100% mail drop of educational material
Tools	Solid 7 litre caddies plus compostable bags provided	No caddies No compostable bags provided	Vented 7 Litre caddies plus compostable bags provided

Table 3: Overview of education/ communications done in the three Areas.

4.2 Household waste management

During the door-to-door education, Sligo County Council used it as an opportunity to survey householders on how they were managing their waste. The results of the survey are outlined below in **Table 4.**

 Table 4: Survey responses: Household management of waste

Disposal System	Area A % of households surveyed	Area B % of households surveyed	Area C % of households surveyed
1. Bin kerbside (residual) collection	1%	3%	2%
2. Bin kerbside (residual + dry- recycling) collection	26%	24%	25%
 Bin kerbside (residual + dry- recycling + organic recycling) collection 	62%	47%	55%
Bring facility users	6%	14%	8%
Bin-sharing customers	2%	5%	6%
Other	3%	7%	4%
Total	100%	100%	100%
Home composters	17	16	11

The 'Other' section refers to householders which did not know which service they had, refused to say or had an alternative method. The numbers for households with home-composters are given separately as they were reported additionally to the standard services.

4.3 Bin presentation – residual bin, dry-recycling bin and Brown Bin

The surveys were carried out on all Areas prior to the door-to-door awareness campaign in order to determine the number of bins presented for kerbside collection before any awareness Information was provided. As expected, all Areas had quite a high level of use of residual waste bins, recycling bins were used less than they should have been and use of the Brown Bins was extremely low.

Following the completion of door-to-door awareness campaign on each Area, a further six-week Waste Presentation Survey was carried out in order to determine whether or not the awareness campaign was successful.

The results of the main bin presentation surveys are given below in **Table 5**. The numbers presented in this **Table** are the absolute values recorded over the two six-week presentation surveys and do not take into account the collective or individual results of those obtained through the face-to-face surveys.

Area A	Number of Households	Before	After
		Number of bins	
Residual	2,300	1,549	1,684
Dry-recyclables		1,328	1,799
Brown Bin		359	1,235
Area B			
Residual	1,720	743	945
Dry-recyclables		810	991
Brown Bin		267	353
Area C			
Residual	3,480	2,617	2,361
Dry-recyclables		2,582	2,423
Brown Bin		884	1,293

Table 5: Number of Bins presented before and after

Following the awareness campaign, there was a significant increase in the presentation of Brown Bins in all Areas. The highest Areas were A and C. The lowest increase was in Area B.

The same trends for the dry-recyclables bins and residual bins in terms of bin presentation.

The number of dry-recyclables bins presented for collection increased by 35.5 % in Area A, by 22% in Area B and decreased marginally by 6% in Area C.

The number of residual bins in Area A increased by 8.7% and in Area B by 27.2% and decreased by 9.8% in Area C.

It was expected that the Project would show a decrease in the number of residual bins presented and weight of bin. However, the increases were attributed to the fact the contamination which was previously in the Brown Bin was now being put in the residual bins or dry-recyclable bins. The awareness of the Council doing this Project and asking people how they managed their waste also contributed to people using a waste collection service instead of possibly burning waste illegally.

4.4 Brown Bin presentation

The data shown in **Table 5** above gives a general overview of the presentation rates in Sligo City. However, it does not take into account the results of the householder survey. The householder survey identified a number of factors which should be taken into account and in turn enable a critical review of **Table 5's** data. Combining the two sets of data enables the reporting of the performance according to different categories of households:

- Households which have signed up to a Brown Bin service
- Total households which should be signed up to a Brown Bin service, *i.e.* all those which were not home-composting, delivery waste to a recycling centre or were legitimately bin-sharing as well as those signed up.

Householders signed up to Brown Bin service

Figure 5 below shows that for all Sligo households which claimed to be signed up to a Brown Bin service. Those actually using their bin before the awareness work accounted for just 37%. After the awareness initiative, the recorded presentation for the whole of Sligo City increased to 70% with the greatest increase (25% to 87%) being recorded in Area A.





Comparing those households which received awareness and tools for separating food waste in the kitchen to those which received some limited awareness further demonstrates the impact of the work. Combined, recorded participation in Areas A and C increased from 38% to 77% whereas in Area B there was little change with participation changing from 33% to 43% – probably due to the limited awareness conducted in the Area.

In order to understand better householder awareness and the use of the Brown Bin, the absolute figures shown in **Table 5** above should be considered in terms of the data from the face-to-face surveys, the total number of households in each Area and the situation with regard to the Food Waste Regulations. Households may comply with the Regulations through means other than the Brown Bin, *e.g.* home composting, bin-sharing, taking food waste directly to the recycling centre.

Figure 6 data below has been derived from the **Figure 5** data minus those which were homecomposting or bin-sharing. **Figure 6** below also shows the bin presentation rates for Sligo in relation to the number of households which should be receiving and using a Brown Bin service before and after the awareness work.

In addition, it shows the breakdown between those Areas which received higher levels of awareness raising and the free support tools (A and C) and that with a lower level of awareness and no support tools (B).

Households which should be signed up to Brown Bin service



Households which should be signed up to Brown Bin service

Figure 6: Brown Bin presentation rate of households which should be signed up for the service

Overall, **Figure 6** shows that in Sligo, of the households which should have a Brown Bin (*i.e.* all those were not home composting, bin-sharing or taking organic waste to a central point), 76% reported to be signed up for one and there were no significant differences in take up rates between the three Areas (blue spots).

Figure 6 also shows that prior to the awareness programme, overall presentation of Brown Bins was low at just 28% (blue bars). Following the awareness work, the use of the Brown Bin across all households in Sligo increased to 53% (orange bars). Of the three Areas, Area A showed the greatest increase with participation increasing by 51%, Area C by 16% and Area B by 8%. Comparing the Areas which received the full awareness programme with those which received less Information and no kitchen caddies or liners, the chart shows that on average where the full awareness programme was delivered, 59% of households which used their Brown Bins (up 30% points) compared with 32% of households in the Area which received the lower level, up just 8%

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4.5 Organic waste analysis

4.5.1 Brown Bin organic waste analysis

Prior to the awareness work, samples and analyses were undertaken to ascertain the quantity of organic waste in the three bins as well as the level of contamination in the Brown Bins. The process was repeated after the awareness work was completed in each Area. **Table 6** below give the results of this intensive work in regards to the three categories of households identified: those using (presenting) their Brown Bins, those signed up for a Brown Bin service and those households which should have had a Brown Bin.

Weight data is presented as kilogrammes per household per week as this enables a better strategic understanding and future planning of targeted actions in other Areas of the country. It also enables comparison with data from other countries particularly from the United Kingdom where significant research has been undertaken.

In addition, by presenting the difference between total weight and weight of just organics (organic waste plus contamination) **Table 6** shows the level of contamination before the Pilot Scheme and the impact of addressing contamination during the awareness programme.

The difference between the three categories (presenting, signed up and should have Brown Bins) of households shows the potential for improvement in the use of Brown Bins. The data for those presenting their Brown Bins reflects those which were already using their Brown Bins and the data post-awareness is the 'best case' for organic waste diversion.

	Before awareness					
		Sligo	Α	В	С	Average
						A+C
	Households presenting their Brown Bin		Kg / h	ouseho	old / we	ek
	Capture (organics + contamination)	2.86	3.16	2.18	2.94	3.00
Before	Capture organics (minus contamination)	2.37	2.43	1.75	2.53	2.50
	Capture (organics + contamination)	3.09	2.96	2.60	3.35	3.16
After	Capture organics (minus contamination)	3.01	2.93	2.44	3.25	3.09
	Households with Brown Bin service					
	Capture (organics + contamination)	1.05	0.80	0.72	1.38	1.13
Before	Capture organics (minus contamination)	0.87	0.62	0.57	1.19	0.94
	Capture (organics + contamination)	2.17	2.57	1.13	2.31	2.37
After	Capture organics (minus contamination)	2.11	2.55	1.06	2.24	2.37
	Households which should have a Brown Bin					
	Capture (organics + contamination)	0.80	0.66	0.53	1.01	0.87
Before	Capture organics (minus contamination)	0.66	0.51	0.42	0.87	0.73
	Capture (organics + contamination)	1.65	2.13	0.83	1.69	1.86
After	Capture organics (minus contamination)	1.61	2.11	0.78	1.64	1.82

Table 6: Capture of organic waste in Brown Bins before and after awareness programme

* - highest value in **bold**

On average, prior to the awareness programme Sligo was collecting 2.86 kg /household/week of waste in the Brown Bins of which 17% was contamination. Thus, the quantity of organic waste suitable for organic recycling was 2.37 kg /household/week. Households in Areas A and C were presenting similar amounts of total waste (3.16, 2.94) with those in Area B presenting significantly less (2.18) in their Brown Bins. Contamination was very high and ranged from 23% in Area A to 20% in B to 14% in Area C (for more details see section 4.6 below). On average per week, prior to the awareness programme, every Brown Bin presented in Sligo contained 0.49 kg of contamination.

When the weight data was applied to the households which were signed up to a Brown Bin and those which should have had a Brown Bin, the impact of the low levels of participation became very clear. As expected, in all three Areas there was a reduction in the capture of waste in the Brown Bin when those which had a Brown Bin and those which should have had a Brown Bin were considered. The average amount of total waste captured in household Brown Bins fell from 2.86 kg /household/ week to 0.80 kg /household/week across the City.

After the awareness programme, the total quantity of waste presented by households in Sligo increased to 3.09 kg /household/week. Again, the difference between households presenting their Brown Bins and households which should have had a Brown Bin, and be using it, was significant at -1.44 kg /household/week.

This **Table 6** also shows the marked difference in performance between those Areas which received awareness and tools to separate food waste in the kitchen.

Households in Area A, which received solid kitchen caddies, Mater-Bi® compostable liners and education showed a significant change in behaviour. Prior to the initiative, households presenting their Brown Bins in Area A had the highest level of waste at 3.16 Kg. However, this included 0.73 Kg of contamination. After the awareness programme, the level of total waste in the Brown Bins of those presenting fell to 2.96 Kg but there was a significant fall in contamination to just 0.03 Kg. This meant that the organic waste suitable for recycling increased from 2.43 to 2.93 Kg.

Households in Area B which received relatively little awareness showed a slight change in behaviour in Brown Bin usage. Total waste presented in Area B increased from 2.18 Kg to 2.60 Kg which contained 0.16 Kg of contamination.

Households in Area C which received vented caddies, Mater-Bi® compostable liners and education and presented their Brown Bins, initially placed 2.96 Kg of waste in their Brown Bins per week containing 0.41 Kg of contamination after the awareness the total waste increased to 3.35 Kg of which 0.1 Kg was contamination which was the highest level of organic waste presented by users of the three systems across Sligo.

Considering the households which were signed up to a Brown Bin, prior to the awareness programme Area C, which had the highest user rate, these had the highest capture of organic waste at 1.19 Kg. This weight increased significantly to 2.24 Kg post-awareness. Area B, which had the lowest rates of participation the rate of capture of organic waste, also increased but to a lesser extent, going from 0.57 Kg to 1.06 Kg. Area A showed the greatest increase in use of Brown Bins. This was reflected in the significant improvement in performance in the Area, with the level of organic waste in the Brown Bins of those signed up increasing greatly from 0.62 Kg to 2.55 Kg.

A similar trend was shown when the data was applied to all households which should have a brown in, with Area B being the lowest performing resulting in 0.78 Kg of organic waste compared with 1.64 Kg in Area C and 2.11 Kg in Area A.

4.5.2 Impact of awareness

Figure 7 below shows the overall impact of the awareness work on participation and capture of organic waste for all households which should be signed up to a Brown Bin service. It clearly shows that the awareness had the greatest impact in Area A with both participation and capture increasing significantly. Area B, which had a similar baseline to Area A, showed a much lower level of upward change, and in Area C the increase was between that seen in A and C albeit from a higher starting point. On average, participation and capture doubled at least in Areas which received awareness compared with those which did not.



Figure 7: Overall impact of awareness in Sligo, by Area and awareness type

4.6 Contamination

The contamination of the Brown Bins by plastics, metals and other packaging was investigated during the Project. **Table 8** gives the contamination levels found in Sligo City Areas A, B and C and A + C.

	Area A	Area B	Area C	Sligo	A+C
% Contamination in Brown Bin – before	23	20	14	18	17
% Contamination in Brown Bin – after	1	6	3	2.5	2
Contamination in Brown Bin – % change	-96	-70	-79	-86	-88

Table 8: Contamination found in Brown Bins

At the start of the Project, Area A had the highest level of contamination at 23%, while Area C had the lowest at 14%. After the awareness programme and distribution of kitchen caddies and compostable liners was completed, overall contamination had fallen by 86% to 2.5% with the greatest level of contamination (6%) being found in Area B which itself had seen a drop of 70%. Further details on the contamination can be found in section 4.6.

A year later after this Project was finished, one of the interns, Rachel Finan, completed her degree thesis on a similar Project. She went back to Area A to investigate contamination levels a year later, during which period there had been no further education. She determined that the contamination level was still at a low level of just 3%.

4.7 Waste characterisation

In order to investigate fully the impact of the awareness work and provision of kitchen sorting equipment, significant effort was placed into undertaking the waste characterisation of the three Areas before and after the interaction with the householders. **Table 9** below shows the level of contamination (non-target material) in each bin with a specific focus on organic waste.

	Area A		Area B		Area C	
Brown Bin	Before	After	Before	After	Before	After
Plastics contamination	8	1	7	4	8	2
Total contamination	23	1	20	6	14	3
Dry-recycling Bin						
Organic waste	4	4	3	7	5	5
Total contamination	17	24	28	32	28	20
Residual Bin						
Organic waste	41	35	39	28	36	26

Table 9: Levels of contamination and organic waste in the three bins in each Area

The level of contamination in the Brown Bin at the start of the Project was high in each Area, ranging from 14% to 23% with plastics being the main contaminant. After the awareness work, contamination dropped to negligible levels in Areas A and C but was still at 6% in Area B.

Contamination of the dry-recycling bin was surprisingly high (17%-28%) across the Areas and Project and the level of organic waste stayed static in Areas A (4%) and C (5%) but increased in Area B to 7%. Organic waste fell in the residual bin in each Area, namely, by 6% in Area A, by 11% in Area B and by 10% in Area C.



Further details of the contamination found in the Brown Bins are given in **Figure 8** below.

Figure 8: Detailed waste characterisation of Brown Bin

4.8 Feedback from householders

Key points in discussion with the residents

During the face-to-face awareness-raising discussions and the survey a number of points were raised by householders which may be considered as barrier or limitations to the success of the local Brown Bin Schemes. The following bullet-points are the direct feedback provided by the survey team:

- Householders say they had no food waste or they fed it to the dogs or pigs (which is a banned activity) or even burn it. Prior to the delivery of Information on food waste, some householders said they did not know what they could put in the food waste bin, in particular plate scrapings and raw meat.
- Some people, in particular the elderly, noted that the 25-litre food waste bin was too heavy when filled. It was suggested these might have wheels in the future.
- Regarding the size of food waste bin, some of those using a 120-litre bin stated that it was too big and those using the 25-litre that it was too small.
- A number of householders said they were facing delays in their delivery of new bins or that they were being told they did not need to have a Brown Bin due to their location.
- The cost of the waste collection service was perceived to be too high and, due to the pay by lift system, there was a lack of incentivisation to separate organic waste into the Brown Bin.
- A few householders stated they thought the waste collectors were mixing the wastes they had segregated which had reduced their confidence in the system.

Feedback from householders on educational tools

Of the households surveyed and which had used the caddy, some 76%-80% found the kitchen caddy beneficial.

Caddy type	Beneficial	Not beneficial
7-litre solid-sided kitchen caddy	80%	20%
7 litre vented-sided kitchen caddy	76%	24%

Online survey

One waste collector emailed an online survey to their customers. **Figures 8 to 10** are the results of the survey. **Figures 8 and 9** shows that people found the Brown Bin system easy to use, that compostable bags made it easier to use and that they should be provided by the waste collector.



Figure 8: My experiences using a Brown Bin are...

To What Extent do you Agree with the Following Statements



Figure 9: To what extent do you agree with the following statements?



Which of the following most encouraged you to recycle food waste using the brown bin?

Figure 10: Which of the following most encouraged you to recycle food waste using the Brown Bin?

Figure 10 above shows an interesting trend that the provision of a kitchen caddy and compostable would encourage people the most to recycling food waste using a Brown Bin and the door-to-door visit to their home would be the least favoured option.

General comments trends from the online survey feedback:

- I did not receive a caller but I think the caddies and bags might encourage me to use the Brown Bin.
- I think it would be much better if collected weekly rather than fortnightly. It would encourage me to use it more.
- If the Scheme were to continue, I believe the bags should be provided as part of the service, free of charge. This would encourage more people to use them, including myself. I do not know where to get more and if I run out, the kitchen caddy becomes useless because of the vented/ slit design meaning food and juices will run out of the caddy. Can the bags be provided as part of the service, without any additional cost?

4.9 Comparison of contamination in Brown Bin collection systems

Each of the waste collectors operated different Brown Bin systems. One collects food waste only using 25-litre containers and the other collects food and garden waste in a 120-litre bin.

From the results of this Project, the following observations were below:

- The collection system with the 120-litre bin has the highest amount of contamination and garden waste
- The 25-litre outside-caddy had low contamination levels but some householders needed a second caddy or an increase frequency of collection.
- The 25-litre caddy had a higher capture of organic waste compared with the other collection system.
- On average across the three Areas in Sligo City, the 25-litre collection system resulted in a higher decrease of organics left in the residual bins after the awareness campaign of -18%, compared with 1.6% in the other collection system.

After Before After **Before** Before After В % **Type of Collection** 7% 25-litre food waste only 6% 1% 6% 2% 3% 37% 9% 120-litre food and garden waste 45% 1% 24% 3%

Table 10: The % of contamination in Brown Bin system before and after awareness



Figure 11: Left refers to food waste from 20-litre collection system. Right refers to a co-mingled food and garden Brown Bin system.

4.10 General feedback

The main challenge encountered by the Waste Management Advisors in the Pilot Scheme programme in Sligo City was with the waste collectors. The issues encountered in the household replies were:

- Brown Bins often not collected on collection day;
- Continuous price increases;
- Cost of bins does not encourage segregation;
- Fortnightly collection of the Brown Bin not frequent enough
- No food waste collection at the Civic Amenity site for those which do not want to avail of kerbside collection;
- Poor customer service for both waste collectors;
- Size of bin a problem (Too Big v Too Small); and
- Very long waiting period to receive the Brown Bin.

5. Conclusions

Main conclusions:

There were a significant number of households without a Brown Bin in Sligo City and of those households which have a Brown Bin, prior to the awareness work, their use was very low.

The provision of the door-to-door education programme providing a kitchen caddy and compostable bags to households resulted in:

- On average, participation and capture of organic waste at least doubled in Areas which received awareness and Information compared with those which did not.
- A reduction in the level of contamination in Brown Bins from 18% to 1%
- Prior to awareness residual waste contained on average 39% organic waste this reduced to an average of 29% after the awareness programme.

Parameter	Sligo	Area A Awareness + solid caddies + 52 compostable liners	Area B Awareness	Area C Awareness + vented caddies + 52 compostable liners
Households which do not have a Brown Bin collection but should	24%	17%	26%	27%
Change in participation	+25%	+51%	+8%	+16%
Capture of organic waste from participating households Kg/ household/week	3.01	2.93	2.44	3.25
Overall capture of organic waste after awareness from all households	+0.95 Kg/ household/week +59%	+1.6 Kg/ household/week +76%	+0.36 Kg/ household/ week +45%	+0.77 Kg/ household/ week +47%
% Contamination in Brown Bin	18%	23%	20%	14%
% Contamination in Brown Bin After	2.5%	1%	6%	3%
% Change of Contamination	-86	-96	-70	-79
Reduction of organics in residual bin After Trial		-6%	-11%	-10%

Table 11: Summary of key findings

Bin presentation/ participation

On average, participation at least doubled in Areas which received awareness compared with those which did not.

All Sligo households which claimed to be signed up to a Brown Bin service and actually used their bin before the awareness work was just 37%. After the awareness initiative, the recorded presentation for the whole of Sligo City increased to 70% with the greatest increase (25% to 87%) being recorded in Area A.

Comparing those households, which received awareness and tools for separating food waste in the kitchen with those which received some limited awareness (Area B), further demonstrates the impact of the work. The combined, recorded participation in Areas A and C increased from 38% to 77% whereas in Area B there was little change with participation changing from 33% to 43%. There was some uplift in Area B due to the communication work.

Capture of organic material

On average, prior to the awareness programme Sligo was collecting 2.86 kg /household/week of waste in the Brown Bins of which 17% was contamination. Thus, the quantity of organic waste suitable for organic recycling was 2.37 kg /household/week.

On average per week, prior to the awareness programme, every Brown Bin presented in Sligo contained 0.49 kg of contamination.

There was a marked difference in performance between those Areas which received awareness and tools to separate food waste in the kitchen.

Considering the households which were signed up to a Brown Bin, prior to the awareness programme Area C, which had the highest user rate, had the highest capture of organic waste at 1.19 Kg. This increased significantly to 2.24 Kg post-awareness. In Area B, which had the lowest rates of participation the rate of capture of organic waste also increased but to a lesser extent, going from 0.57 Kg to 1.06 Kg. Area A showed the greatest increase in use of Brown Bins. This was reflected in the significant improvement in performance in the Area, with the level of organic waste in the Brown Bins of those signed up increasing greatly from 0.62 Kg to 2.55 Kg.

On average, participation and capture at least doubled in Areas which received awareness compared with those which did not.

Level of contamination

The level of contamination in the Brown Bin at the start of the Project was high in each Area, ranging from 23% to 14% with plastic being the main contaminant.

After the awareness programme, Area B had the highest level of contamination of 6%, compared with the Areas A+C (which got caddies and compostable bags) which were at 1% and 3% respectively.

A year later after this Project was finished; Area A was investigated and it was determined that the contamination level was still at a low level of just 3%.

Overall awareness had significantly positive effect on contamination

Other observations:

Leaflets

The provision of teaser leaflets and the printing of what should go into a Brown Bin or a compostable bag appeared to be of little benefit in raising awareness with householders.

Survey

The feedback of an online survey showed an interesting trend in that the provision of a kitchen caddy and compostable would encourage people the most to recycling food waste using a Brown Bin and the door-to-door visit to their home would be the least favoured option to encourage them.

Dry-recyclable and residual bin

The number of dry-recyclables bins presented for collection increased by 35.5 % in Area A, by 22% in Area B and decreased marginally by 6% in Area C.

The number of residual bins in Area A increased by 8.7% and in Area B by 27.2% and decreased by 9.8% in Area C.

It had been expected the Project would show a decrease in the number of residual bins presented and in the weight of bin. However, the increases were attributed to the fact that the contamination, which had been in the Brown Bin, was now being put in the residual bins or dry-recyclable bins. The awareness of the Council doing this Project and asking people how they managed their waste also contributed to people using a waste collection service instead of their possible burning waste illegally.

Waste collection

Negative impact on the collection companies

• Because of the low number of households using the Brown Bin, it makes waste collection more expensive. If there were more people using the Brown Bin, it would offer greater efficiencies for waste collection companies.

Negative impact on householders

- The large numbers of households not signed-up drives up price by increasing collection inefficiencies;
- The low use of the Brown Bins by those which have signed up to the service means a high percentage of households were paying for something they were not using.

6. Recommendations

- The provision of a door-to-door education programme might not be feasible for some waste collectors. However, the study has shown that the provision alone of just a kitchen caddy, compostable bags and an Information leaflets will result in dramatic increases the quantity and quality of Brown Bin material collected.
- To continue to monitor presentation and tonnage trends continually. It is therefore proposed that the collectors be requested to submit monthly reports on the tonnages collected and number of bins lifted for each waste stream.
- The Pilot Scheme in Sligo City to act as a model for a Brown Bin education Schemes which can be adopted by other towns.
- It is recommended that if a Local Authority were to do an education programme, this should be conducted in partnership with all the local waste collectors. It is important that all the waste collectors give a full commitment to the programme as without it, the programme will not be successful.
- The recommendations should be followed in the publication which was also done based on this Best practice guide of door-to-door Brown Bin education in Ireland Project.

Advice for waste collectors

A Brown Bin collection service needs a 100% commitment from the waste collector in order for any awareness programme to be successful.

If education were to be conducted by a Local Authority, there should be regular meetings with the waste collection companies operating in the Area to ensure the education provided reflects the service which will be provided by the waste collector.

To facilitate better uptake of the Brown Bin service, the following points should be born in mind by the waste collector when establishing and maintaining a Brown Bin collection service:

- To use good labels for the three bins. Do not label the Brown Bin the 'Compost bin' as this was confusing. Householders think the bin was for home-composting and hold onto it for months. Furthermore, they will not put uncooked meats into it.
- The sticker on the caddy is vital as it tells people what the caddy is for and what to put into it. Some people were confusing the 7-litre indoor kitchen caddy as the bin which should be presented for collection. The sticker on the kitchen caddy should also state that it is not the one for collection.
- To ensure that people on a food-waste-only collection have the option of getting an additional bin for food waste if their existing Brown Bin were not sufficient. All waste collection staff should be consistent with the message they give to their customers otherwise, confusion and complaints arise.

- The size, location and occupancy of a dwelling can influence the amount of food waste presented. A fortnightly collection of a 25-litre caddy may not be the solution for all households. Collectors should consider other options such as increased frequency of collection, provision of additional bins, bags for garden waste, *etc.* Collectors providing a food waste only collection should also provide a separate garden waste collection. The Brown Bin should not be the same colour as the general waste bin as this confuses the householder, particularly when the bins were collected on the same day.
- To ensure prompt delivery of bins, especially if running a promotional or awareness event. In order to be efficient and reduce the number of complaints, collectors should aim to provide a Brown Bin to all their customers in an Area at the same time via a blanket drop of Brown Bins as opposed to delivering bins as requested on an individual basis.
- To use the <u>www.brownbin.ie</u> resources in order to deliver a consistent message.
- To introduce a regime for inspecting and rejecting contaminated bins. Rejection stickers/tags should be placed on contaminated bins and the reason for rejecting the bin identified on the label/tag.

1. Appendix

Compostable Bags

Novamont, a bio-plastics company based in the UK are worked closely with Sligo County Council in the delivery of this Project. Tony Breton, is the contact person and is also a member of the Pilot Programme Steering Committee. Tony has worked closely with Sligo County Council during the training phase with the Waste Management Advisors in the preparation of the awareness campaign. Novamont greatly contributed to the project by providing a 9 month supply (72) of certified compostable caddy bags for 6,000 households to Sligo County Council.

The compostable bags for inclusion with each of the caddies for households in Areas A & C.

The image below is the print screen of what appeared on the compostable bags.



Brown Bin Stickers

Information leaflets and brown bin stickers have been developed by brownbin.ie, but tailored by Sligo County Council and Cré, in order to suit the situation in Sligo City. Turners Printing Company in Longford printed the stickers, information and teaser leaflets.

All caddies had a brown bin sticker attached to the front outlining the do's and don'ts of items allowed in the brown bin. The following is a print screen of the agreed sticker used:



Information Leaflet

Also included in the caddies was a six page information leaflet outlining:

- Changes in legislation
- How to use the outside brown bin, kitchen caddy and compostable bags
- An itemised list (including picture images) of what can be placed in the brown bin
- An itemised list (including picture images) of what cannot go in the brown bin
- A detailed picture image outlining each step involved in the disposal of food waste

This information leaflet was distributed to households in Areas A & C only (Areas provided with a kitchen caddy). The following is a print screen image of how this information leaflet appeared:





Teaser leaflets

Teaser leaflets were distributed to all households in the selected areas two weeks prior to the delivery of kitchen caddies and contents. This teaser leaflet were a condensed information leaflet on the brown bin system in Sligo.

The company chosen for the distribution of teaser leaflets was 'All Homes, Unit 8, The Enterprise Centre, Park West, Dublin 12

Teaser leaflet used in Areas A & C:





IF IN DOUBT PHONE AND FIND OUT

Teaser leaflet used for Area B:





Photos

Launch Event



The launch of the Pilot Project was held at I.T. Sligo on Saturday 19th July 2014 during the Farmers Market from 10am until 1pm.

Envirogrind, (members of the Pilot Project Steering Committee), delivered 10cubic metres of compost for this free compost giveaway event.

The event proved to be a great success with well in excess of 150 people availing of free compost to bring home to their gardens.

There were plenty of questions from members of the public mainly in regard to the food waste bin, the new waste management system and also some questions on garden composting. It was a great opportunity to be able to showcase to people, the advantage of ensuring food waste is segregated properly rather than disposing to landfill.











Common Questions asked during door-to-door interviews

- Q. Do I have to put my food waste into a brown bin?
- A. Yes.

Q. Tinfoil contaminated with food – which bin does it go into?

A. Tinfoil contaminated with food should go into the general refuse bin and not the dry recyclables bin.

Q. Which bin can clothes go into?

- A. A clothes bank at a civic amenity centre
- Q. Can you put raw food into the brown bin?
- A. Yes.

Q. I only produce a small amount of food waste; can I put it in the general waste bin?

A. No, as food waste to landfill is banned. By putting it in the brown bin, it will be composted and a useful product will be produced.

Q. Where can more compostable bags be purchased and what price?

A. You can get them in your local supermarket.

Q. We don't have any food waste, I don't need a brown bin.

A. You will need a brown bin, as you will generate food waste when you have dinner parties/kid parties and other functions.

Q. How much will the brown bin cost?

A. Contact your waste collector. But pay by weight is coming and your brown bin and recycling bin will be cheaper than the general waste bin.

C 1:	<u> </u>	• ••	C III:	C	
Slido	County	Council	Calling	Card	Example





Waste Management Bye-Laws 2013

I called to you again today to provide you with an opportunity to discuss the changeover from the old waste collection system to the new 3 bin system as contained in the Sligo County Council Waste Management Bye-Laws 2013.

URGENT - Action Required

Under the new Bye Laws you are obligated to manage your household waste as follows:-

- Register with a permitted waste collector for the provision of 3 waste receptacles to ensure waste is segregated into the following 3 types:-(i) <u>Foodwaste</u> (ii) Recycling (iii) General Waste
- b) Alternatively you can bring your household waste to a Civic Amenity site/Transfer Station for disposal. Receipts must be maintained for a minimum of 3 years for this option of waste disposal.

Please contact me on <u>mobile_Q87</u> 2077979 or landline (071) 9111465 to confirm if you are already operating in compliance with the above or alternatively to highlight any difficulty you may be having in trying to do so.

Name

Date

Generic Calling Card Template

INSERT LOGO AND NAME	Household Food Waste and Biowaste Regulations 2015
----------------------	--

I called to you today to provide you an opportunity to discuss the changeover from the old waste collection system to the new three bin system as required by the European Union (Household Food Waste and Bio-waste) Regulations 2015.

URGENT ACTION REQUIRED

Under the Regulations you are obligated to segregate food waste and use a brown bin collection service by your waste collector.

You are required to manage your household waste as follows;

Segregate your waste into at least,

(i) Foodwaste and biowaste, (ii) recyclables (iii) residual

Ensure that these three waste streams are dealt with by any combination of the following three methods:

- a. Collected by an authorised waste collector.
- b. Brought, by you, to an authorised facility (Civic Amenity Site, Transfer Station, landfill, composting or anaerobic digestion facility (you must retain receipts provided to you from these facilities)
- c. Deal with the waste on the site on which it was produced by home composting

Please contact me on my mobile xxxxxxxx to confirm if you are already operating in compliance with the above or alternatively to highlight any difficulty you may be having in trying to do so.

Name & Date

Door to Door Interview Form

Name:					
Address:					
Contact No:					
No. Occupants in Ho	ousehold:				
How are you disposi	ng of your waste?				
WASTE COLLECTOR 1	WASTE COLECTOR 2	TRANSFER S	TATION/CIVIC AM	ENITY SITE	OTHER
Are you availing of a	3-bin kerbside collectio	on system	Yes	No	N/A
If 'NO' then are they	awaiting brown bin del	livery or have	yet to order?		
Are you a Bin-Sharin	g Customer?				
Do you use a home o	composter?				
Awareness Talk provi	ided to householder	Yes	No		

Completion of Estate Form Template

Waste Advisor: _____

Date: _____

Item:	Comment:
Name of Estate:	
Number of HH assigned (from office)	
Number of actual HH on estate/road:	
Number of vacant properties:	
Number of HH spoken to:	
Number of HH awaiting Brown bin (if householder has ordered)	Waste Collector Name: Waste Collector Name
Number of HH actually using the brown bin:	
Total Number of Occupants in Estate:	
Number of households availing of kerbside collection:	
Number of households not availing of kerbside collection but disposing of waste at Civic Amenity Sites/ Transfer Station:	
Number of Bin Sharing Households:	
Details of Bin Sharing Households	
(i.e. House No's):	
Number of Holiday Homes:	
Details of Holiday Home Occupants:	
General Feedback & Types of Questions being asked:	
Number of Awkward/Negative Households and Feedback on Same:	
AOB that you feel necessary to highlight	

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Summary Report of 7 Day Activities

Report to be submitted at weekly in-house meetings

Description	Formula	Result
Start date to finish date (these will usually be meeting dates)		
Number of houses in your area that you examined (including vacant) in last 7 days	×	
Number of vacant houses	Y	
Number of occupied houses (min target of 100)	X-Y	
Number of houses where you spoke with occupants (min target of 70)	Z	
Percentage of occupied houses that you spoke with	(Z/X-Y *100) %	



What goes into the three bins – example literature

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PROHIBITION OF WASTE DISPOSAL BY BURNING

The term 'Backyard Burning' is applied to the uncontrolled burning of waste. Unfortunately this type of waste disposal is frequently being carried out in backyards and in gardens. The term also refers to the burning of any waste in open fires, ranges and other solid fuel appliances or in the open. This form of waste disposal is expressly prohibited and if prosecuted carries high fines and/or imprisonment.



Much of the dioxins created and released into the air through backyard burning settle on plants. This form of waste disposal is guite common in rural farming areas where dioxin emissions can more easily be deposited on animal feed crops and grazing lands. These dioxins then accumulate in the fats of dairy cows, beef, poultry and swine, making human consumption. of these harmful chemicals difficult to avoid.



Dioxins are classified as persistent, bioaccumulative and toxic pollutants otherwise known as PBTs. PBTs are highly toxic, longlasting substances that can build up in the food chain in levels that are harmful to human and ecosystem life. Persistent means they remain in the environment for extended periods of time. Bioaccumulative means their concentration.

levels increase as they move up the food chain. As a consequence, the top of the food chain. tends to have the highest dioxin concentrations in their bodies i.e. humans. Dioxins are not the only pollutants released from this form of waste disposal, other pollutants such as particle pollution, polycyclic aromatic hydrocarbons, volatile organic compounds, carbon monoxide and hexachlorobenzene are all released from backyard burning. Many dangerous health conditions can be caused by inhaling or ingesting even small amounts of these pollutants. Small children, the elderly, or people with preexisting respiratory conditions can be especially vulnerable to some of these pollutants.

Backyard burners are clearly unaware of the harm they are causing themselves, their neighbours and the wider community. Anyone who witnesses backyard burning in their locality is asked to contact and report this activity to the Environment Section of Sligo County Council immediately.

It may be considered to be a free and easy way to get rid of waste, but in the long run, the number of harmful dioxins and toxic pollutants being released into the air we breath are highly increasing cases of asthma, bronchitis, various cancers and cardiac arrhythmia.



www.sligococo.ie

Brown Bin Instruction leaflet

Based on the Feedback from the Pilot the Brownbin.ie instruction leaflet was redesigned



What food waste can I recycle?

You can put any of the following materials into your brown bin:

- RAW OR COOKED FOOD
- MEAT, POULTRY & FISH, INCLUDING BONES
- Leftover food from your plates and dishes
- Fruit & vegetables
- Tea bags, coffee grinds & paper filters
- Breads, cakes & biscuits
- Rice, pasta & cereals
- Dairy products (cheese, butter, yoghurt)
- ✓ Soups & sauces
- Eggs, egg shells & cardboard egg boxes
- Food soiled paper napkins, paper towels
- Newspaper (when used for wrapping food waste)
- Out of date food with packaging removed (no glass/plastic)

Grass clippings and small twigs can also be added to your large brown bin.

NO THANKS!

Please DO NOT put any of the following materials into your brown bin

- × Plastic bags/bottles
- X Packaging of any sort
- × Nappies
- 🗶 Glass
- ✗ Stones/soil
- X Metal cans/wire
- X Cardboard
- X Ashes, coal or cinders
- X Pet faeces or litter
- X Cooking oils









IF IN DOUBT PHONE AND FIND OUT contact your waste collection company

Row do I use my kitchen caddy?



Compostable Bags /

Paper Bags

Step 1.

ONLY use compostable bags with the seedling logo / paper bags.

Step 2.

The kitchen caddy is for use in the kitchen.

Not for collection at kerbside



Step 3.

Line your caddy with compostable bags and fill it with food waste



🖉 Frequently asked questions

I already compost food waste at home, can I still do this?

Yes you can. Your home composting bin can still be used for uncooked vegetables and fruit peelings. However you cannot place raw meat/cooked meats into your home composter.

You can use your brown bin for all types of food waste, **INCLUDING RAW/COOKED** FOODS OR MEATS.

But remember, you cannot place food waste into your general waste bin.

Why should you use the brown bin?

- It saves money because you become more aware of the food you waste and is cheaper to use than your waste bin.
- Recycling food waste is the Law.
- It's better for the environment because you are avoiding sending food waste to a landfill where it produces harmful greenhouse gases.
- It produces a high quality compost.

Can I use plastic bin bags in my brown bin?

No. Plastic bags are made from petrochemical plastics that do not break down during composting and contaminate the process. Please remember that if plastic is found in your brown bin, your bin will not be emptied and a contamination tag will be placed on your bin to inform you of this. You may also be liable to an on the spot fine from your local authority.

Will the brown bin cost me more money?

The new brown bin system should not cost more money providing correct segregation of waste is taking place. Under By-laws and National Waste Policy, your waste collector must encourage recycling by offering a lesser charge for collecting your brown bin than your general waste bin.

The most expensive waste stream of all is general waste (landfill waste). There is a Government levy on waste going to landfill, therefore by putting food waste instead into your brown bin, you are avoiding this levy and saving money.

Can I put my food waste into my general waste bin?

You are no longer allowed by Irish law to put food waste into your general waste bin.

If you have any queries contact your waste collector or visit the national information website for more details:





- Only use the special compostable bags that have the seedling logo to line your caddy.
- Keep your kitchen caddy where it's easily accessible or under your kitchen bench.
- Keep you caddy clean by rinsing with water and wiping with kitchen towel.
- Empty your kitchen caddy every 2-3 days to avoid odours.
- Your food waste is collected and brought to a large composting site where high quality compost is produced which is used in landscaping, in gardens and on agricultural land. It is important that you do not put any glass, metal or plastic into your brown bin as it will make the material more difficult to compost and will lower the quality of the compost produced.
- If you have any queries about the scheme contact your waste collector.

