

“Your Business is Food; don’t throw it away” Northern Ireland Pilot



WRAP Northern Ireland worked in collaboration with Environmental Health Officers from Derry City and Strabane District Council and Mid and East Antrim Borough Council to pilot the use of “Your Business is Food; don’t throw it away” food waste prevention campaign with Hospitality and Food Service Businesses

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Glossary

Edible food waste. This is food waste that could have been avoided e.g. food that has gone out of date, food that has not been stored correctly and allowed to spoil.

Inedible waste. This is food waste that can't be prevented as it is not normally eaten e.g. bones, peelings, egg shells, tea bags, coffee grinds etc.

Spoilage waste. This is food waste that arises from food that has not been stored properly or has been damaged e.g. bruised or damaged fruit and vegetables, out of date items, items that have not been date labelled so that it is unclear as to whether it is safe to use.

Preparation waste. This is food waste that arises out of the preparation process. This includes meat or fish trimmings, overproduction of menu items etc.

Plate waste. This is food waste that remains on the customer plate.

Acknowledgements

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This pilot study has been funded by the Department of Agriculture, Environment and Rural Affairs (DAERA).

Key facts

- The Food Waste Regulations (Northern Ireland) 2015 (The Food Waste Regulations) have identified a need for food businesses to separately collect their food waste for disposal. This has been a requirement for all businesses generating more than 5Kg week of food waste since 1st April 2017.
- DAERA wanted to understand what level of participation could be observed within the Hospitality and Food Service (HaFS) sector and whether the "*Your Business is Food; don't throw it away*" (Your Business is Food) materials could support businesses to not only comply with the Regulations but also reduce their food waste.
- WRAP has developed a food waste prevention campaign with resources for the HaFS sector and food manufacturing sector.
- Derry City and Strabane District Councils and Mid and East Antrim Borough Council participated in a Pilot study to assess the effectiveness of WRAP's "*Your Business is Food; don't throw it away*" campaign resources to Environmental Health Officers (EHOs) and food businesses in understanding where food waste arises through food waste measurement and identifying food waste prevention measures that could be adopted.
- Both Councils participated in the Pilot study whilst other pilots were being carried out on behalf of the Food Standards Agency (FSA).
- The time window available to the Councils and Food businesses was 4 to 6 weeks.
- 27 businesses were approached to participate in the Pilot. Each of these businesses were well known to the EHOs and felt to be open or warm to participating in the Pilot. 17 committed to carrying out a food waste measurement exercise for 7 days. 15 provided data they collected; a further 2 have completed the exercise but not submitted the data.
- 8 businesses have committed to carry out the exercise again 1 month later. To date, 2 businesses have provided their collected data at week 4.
- EHOs observed that all food businesses visited with this Pilot were implementing the "Food Waste Regulations"
- The time taken to support the businesses in terms of engaging them with the materials and offering follow up support was greater than expected. It was felt that there

would be insufficient time to incorporate discussions around food waste prevention into a food hygiene inspection visit. The "Your Business is Food" campaign was deemed to be sufficiently useful to businesses that a separate visit or discussion was held.

- It takes time and resources to support the businesses, especially at the start of their involvement and in getting them recruited.
- No food businesses were recruited through information on Your Business is Food on the Council websites. Only those businesses contacted directly by EHOs participated.
- Although the 2 Councils took differing approaches to delivering the Pilot similar numbers of businesses (9 and 8) in each locality successfully completed the food waste measurement exercise and all businesses identified potential for reducing food waste tonnages and cost saving.
- EHOs were recognised as a trusted expert voice to talk to food businesses about food waste prevention messages and the support offered through the Your Business is Food campaign resources was welcomed and contributed to strengthened working relationships.
- Average annualised food waste tonnages reported by food waste measurement for 7 days by the participating pilot businesses was 8.7 tonnes which equates to £16,784 in terms of food purchase costs.
- Hotels reported average annualised tonnes of food waste of 11.16 tonnes; Restaurants, 10.14 annualised tonnes and Residential Homes, 0.89 annualised tonnes. This equates to £23,153 potential savings in annual food costs for hotels, £18,017 for restaurants and £1,582 for Residential Homes.
- All the food businesses identified areas where savings could be made. The most popular areas for focus were ongoing food waste measurement, engaging staff and appointing an on-going "Food Waste Champion" role and tackling customer plate waste.
- The Your Business is Food campaign materials were well received by businesses and EHO's. The materials were noted

to be clear, concise and very professional. Businesses commented on the usefulness of the information they received in the Calculator Tool.

- Continuation of the "Your Business is Food" campaigns by local authorities will require senior management commitment and resources allocated; and preferably with their adoption into Directorate-level Business Plans.
- There was potential for cross-directorate working identified within the Councils as Environmental Health, Waste and Recycling Services and Economic Development teams all have an interest in promoting various aspects of the food waste prevention message.
- The "*Your Business is Food; don't throw it away*" campaign is essentially a call to action on food waste prevention aimed at food businesses, however the campaign design does not include a defined way of recognising business participation and their contribution to food waste prevention through tonnage or actions. Consideration should be given to how evidence of change can be gathered, disseminated and recognised to ensure changes implemented sustain food waste prevention achievements.
- There is the potential for each Council to provide a joined-up offer to their client businesses to maximise use of their contact points with food businesses. The Directorates identified with an interest in this Food Waste Prevention Campaign include the EHOs primarily in relation to food safety; Waste and Recycling Advisors in terms of food recycling options and food waste prevention measures; and the Economic Development teams in terms of supporting resource efficiency and helping business performance.
- A joined-up approach within local Councils and across Councils to any future use of the "Your Business is Food" campaign resources would allow a greater impact to be realised. There are also other potential partners that have a common interest in promoting food waste prevention measures, such as those invested in healthy eating messages, food poverty prevention, and food waste recycling.

Introduction

The Department of Agriculture, Environment and Rural Affairs firstly, wanted to gain a better understanding of how the Food Waste Regulations (Northern Ireland) 2015 (the "Food Waste Regulations") had been adopted by the Hospitality and Food Service sector in terms of collecting and disposing of food waste and; secondly, equip the sector to prevent food waste.

WRAP has developed the "Your Business is Food; don't throw it away" ("Your Business is Food") campaign and resources for the Hospitality and Food Service sector and the Food Manufacturing sector. These resources target food waste prevention and legal compliance.

The Council Environmental Health departments provide regulatory services to ensure that food businesses are compliant with food hygiene legislation and they also have a business improvement and support role.

The purpose of the Pilot study was to gain a better understanding of:

- how the Hospitality and Food Service sector has responded to the Food Waste Regulations (Northern Ireland) 2015;
- whether the "Your Business is Food; don't throw it away" materials are an effective resource for Environmental Health Officers (EHOs) to engage businesses on food waste prevention and any associated food hygiene issues during their inspection / enforcement visits;
- how food businesses respond to hearing about food waste prevention measures from EHOs; and
- how local food businesses benefitted from using the "Your Business is Food" materials.

Food Waste in the Hospitality and Food Service (HaFS) Sector

In 2013, WRAP published industry-leading research findings¹ that:

- Identified the true cost of food waste within the UK Hospitality and Food Service sector as £2.5billion each year;
- Provides insights into the cost of food waste across different subsectors and operational environments in the UK HaFS industry; and
- provides the business case for organisations to reduce the amount of waste they produce and realise cost savings.

Each year the Hospitality and Food Service Sector in the UK serves more than 8 billion meals, and produces more than 2.87 million tonnes of food and associated packaging waste. Nearly 1 million tonnes of this is food waste, of which three quarters could have been eaten. This is equivalent to throwing away one in every six meals served.

Only 46% of food waste is recycled – either sent for anaerobic digestion or composted. The remaining food waste (54%) is sent to landfill. This provides two opportunities; the first is to reduce the amount of avoidable food waste generated and second, to ensure that food businesses are aware of their obligations under the Food Waste Regulation and that food waste is recycled.

In an industry that has around 260,000 UK outlets, this equates to food waste costs of £10,000 for each outlet each year. That's money that businesses on tight margins could do without throwing away.

¹ <http://www.wrap.org.uk/content/overview-waste-hospitality-and-food-service-sector> Accessed 19.04.2018

We also know what type of food is being thrown away, 40% of food waste is carbohydrates, including foodstuffs such as potato, bread, and rice².

WRAP's research took into consideration the costs associated with the whole of the sector's supply chain, such as:

- food purchase;
- waste management;
- energy and water use;
- labour;
- administration; and
- transport.

Often the cost of food waste is considered to be the cost of food purchases and waste disposal but the business has also bought the food, stored it, paid people to move it around, prepare it and serve it. Many of these 'hidden costs' are not readily considered when a business thinks about the true value of the food it buys. In addition to the environmental benefits of avoiding food waste, controlling these operating costs by avoiding food waste will contribute to the economic success of a business.

Food waste from a regulatory perspective

When we consider food and drink materials in the context of the waste hierarchy (Figure 1, we can see that the most gains can be made by preventing food waste from arising in the first place. Where food waste is generated the food and drink material hierarchy indicates that redistribution is the preferred option. Where this is not possible food waste should be collected for recycling through anaerobic digestion or composting. Incineration and landfill are the least preferable options for dealing with food waste.

² <http://www.wrap.org.uk/content/overview-waste-hospitality-and-food-service-sector> Accessed 19.04.2018

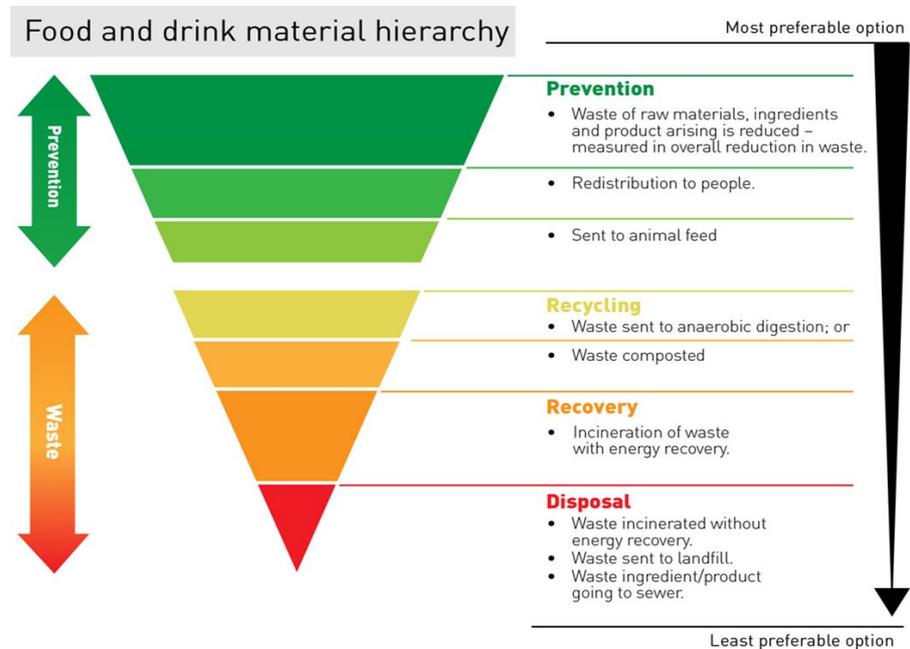


Figure 1 Food and drink material hierarchy

The Food Waste Regulations (Northern Ireland) 2015 require that food waste is not mixed with any other waste produced and that food waste is not deposited in a lateral drain or public sewer³. Food businesses are defined as such if they carry out activities related to the processing, distribution, preparation or sale of food and are subject to the Regulations if they produce more than 5 Kg of food waste each week. Waste food, under the Regulations, is food that was at any time intended for human consumption (even if of no nutritional value). This includes waste produced from the processing or preparation of food but, does not include drink.

³ <https://www.daera-ni.gov.uk/sites/default/files/publications/daera/RPS%20-%20FOOD%20WASTE%20-%20Are%20You%20Compliant%20-%20August%202017.pdf> Accessed 11.04.2018

Making the business case for tackling food waste

WRAP has developed a set of campaign resources "*Your Business is Food; don't throw it away*"⁴ for the HaFS sector that presents the business case for addressing food waste prevention and provides the practical tools for measuring food waste and guidance to reduce food waste. These materials outline a food waste measuring process which allows the business to record wastes measured at 3 key stages in the food production and service cycle (spoilage waste, preparation waste and plate waste) and access tips for reducing food waste.

A further set of Your Business is Food resources has been developed for the food manufacturing sector⁵ which outlines a food waste audit approach to identifying sources of food waste and how to quantify the cost of the food waste identified.

Research from the World Resources Institute (WRI) published in March 2017⁶ shows that one third of all food produced in the world is lost or wasted from farm to fork. This level of inefficiency in the food system has tremendous economic, social, and environmental consequences. This report finds that there is a robust business case for companies, countries, and cities to reduce food loss and waste that reflect real-world financial costs and benefits.

A review of 1,200 business sites across 700 companies in 17 countries found that nearly every site evaluated achieved a positive return, with half seeing a 14-fold or greater return on investment in food loss and waste prevention measures.

⁴ <https://partners.wrap.org.uk/campaigns/your-business-is-food/hafs/> Accessed 11.04.2018

⁵ <https://partners.wrap.org.uk/campaigns/your-business-is-food/manufacturing/>

⁶ World Resources Institute (2017) *The Business Case for Reducing Food Loss and Waste*

The first in a series of in-depth sector reports from this research, for hotels, has recently been published⁷. This analysed data relating to pre-consumer waste from 42 hotel sites, located across 15 countries, and calculated the following results:

- The average benefit-cost ratio for food waste reduction was nearly 7:1 over a three-year time frame.
- Within the first year of implementing a food waste reduction program, over 70 percent of the sites recouped their investment. Within two years of implementing a program, 95 percent of sites recouped their investment.
- By reducing food waste, the average site saved over 4 cents on every dollar of cost of goods sold (COGS).
- There appears to be no clear correlation between benefit-cost ratios and a site's market segment or geography.
- Key strategies for achieving food waste reduction were to measure the food waste, engage staff, rethink the buffet, reduce food overproduction, and repurpose excess food.

The role of Environmental Health and food safety

Environmental Health teams have a legal duty to enforce the Food Hygiene (Northern Ireland) Regulations 2006 and the laws associated with that. Their role is to ensure that all food and drink intended for human consumption is produced stored and handled without risk to the health and safety of the consumer. They also provide advice and guidance to Food Business Operators regarding food safety, hygiene and legal requirements for selling food. Given their role they are often in business premises and as such have working relationships with these businesses.

⁷ <https://champions123.org/the-business-case-for-reducing-food-loss-and-waste-hotels/> accessed 11.04.2018

WRAP’s experience of collaboration with the Chartered Institute of Environmental Health (CIEH) at a national and regional level since 2014 has shown that Environmental Health Officers (EHOs) welcome the opportunity to develop working relationships with food businesses through offering support and advice. Engagement programmes with EHOs in England and Wales in relation to raising knowledge and capacity to food waste, food waste prevention and food waste disposal have been well received.

Pilot methodology

This section outlines the methodology and approach undertaken during the Pilot.

Environmental Health NI (EHNI) was approached in December 2017 to see if they would be interested in participating in a Pilot using the “Your Business is Food; don’t throw it away” campaign resources.

Derry City and Strabane District Council and Mid and East Antrim Borough Council agreed to participate in a Pilot. WRAP NI met with both participating councils to discuss the aims and objectives of the pilot and to agree its scope and methodology in mid January.

An information sharing session was held with each Council to outline the business case for food waste prevention and to provide an overview of the “Your Business is Food” resources available for the HaFS sector. In early February, WRAP NI facilitated a two-hour workshop to allow council EHOs to familiarise themselves with the Your Business is Food materials and to discuss how the pilot might be tailored for their constituent businesses. The Campaign materials can be located online in the [WRAP Partners Resource Library](https://partners.wrap.org.uk/campaigns/your-business-is-food/)⁸.

⁸ <https://partners.wrap.org.uk/campaigns/your-business-is-food/> or <https://partners.wrap.org.uk/campaigns/your-business-is-food/hafs/>

It was agreed that each Council would try to recruit between 10 and 15 businesses to ensure at least 10 businesses completed the 7-day Food Waste Tracker. In order to complete the Pilot by the end of March the EHOs had a 6 week window available to them to recruit businesses to the Campaign.

EHOs considered that successful recruitment of food or hospitality businesses would most likely involve engaging with the Business Managers or Senior Management team. An invitation to participate would require time so it was agreed that an initial phone call would be made to allow EHOs to arrange a face-to-face visit. During the site visit the EHOs would then provide the business managers with the Your Business is Food resources.

During the first meeting with the business the EHOs agreed what level of follow up and support could be provided. A flexible approach was adopted within the Pilot to allow each council team to determine the level and type of support they wished to offer. The Councils determined what level of close-out they wished to provide to the participating businesses.

Participating businesses would return their 7-day Tracker to either WRAP NI or the Council EHO. In addition to the data, managers would also have an opportunity to complete an online survey (approximately 5 minutes to complete) to provide feedback on the value of the materials and the pilot.

A feedback session was arranged with each of the EHO teams and WRAP to gather the EHOs experience of the Pilot.

Business Engagement

Each of the participating Councils agreed to approach 10-15 businesses to use the “Your Business is Food; don’t throw it away”

resources. 27 businesses were approached across both participating councils and 11 businesses did not participate and 16 businesses participated. Equal numbers of businesses participated from both Council areas.

Food businesses within the Council areas

EHOs are responsible for the oversight of food hygiene within all food businesses within their Council areas. Each of these businesses is visited to check compliance with food hygiene regulations and offer advisory and support services. A summary of the food businesses by type within each of the Council areas is provided in Table 1 below.

Business category	Derry City and Strabane District Council	Mid and East Antrim Borough Council
Restaurants other	284	241
Restaurants and Cafes	200	206
Takeaways	126	124
Hotels / B&B's/ Guesthouses	53	59
Pubs and Clubs	119	110
Residential homes and Caring premises	40	45
Manufacturers and Processors	49	84
Retailers (mobile vans, bakers shops, butchers) supermarkets, newsagents and off licences)	379	278
Schools	106	76

Business category	Derry City and Strabane District Council	Mid and East Antrim Borough Council
Total number of food premises registered * note table does not add to total, as not all categories have been listed.	1,617	1,572

Table 1: Food Business type by Council Area

Common approach

In terms of engagement with the businesses each Council adopted a similar approach.

- Each council allocated time and resources to the project with the support of senior management.
- EHOs from each council found the "Your Business is Food" materials interesting and noted that there were common practices identified to reduce food waste and ensure food hygiene e.g. good stock rotation, use of first in, first out principles for ingredients, clear date labelling etc.
- Used local knowledge to identify individuals and businesses likely to participate in the pilot. This approach was adopted given the tight timescales of the Pilot.
- Both Councils worked as a team to identify businesses to approach.
- An initial phone call was placed to the business owner or manager to discuss their potential involvement as they were perceived as the decision maker.
- The Councils generally already had contact details for the General Manager for the business, but in some cases needed to use their existing contacts to identify this individual. General Managers have a very demanding job role that pulls them in many directions so in some instances it took a more than one call to talk to the decision maker.

- Arranged a meeting with the business contact to discuss and handover the materials pack. Each meeting lasted an average of 45 minutes.
- The EHOs provided practical advice and tips on weighing the waste during the site visits (e.g. using kitchen scales for small quantities or using luggage scales or fishing scales for larger containers with a handle e.g. empty mayonnaise tub, bucket),
- Arranged a follow up phone call during the pilot to check progress and to sustain commitment.
- Both Councils recognised that their existing working relationship with the food businesses made them a trusted voice.
- Both Councils advertised the “*Your Business is Food; don’t throw it away*” materials on their websites before and during the Pilot programme duration to allow businesses to self-select to participate in the Pilot.⁹ No businesses were recruited by either Council through their website alone. Only those businesses approached directly by the Council became participants.

Differences in approach

The Council teams each took a differing approach to how they delivered the Pilot. Derry and Strabane District Council EHOs ensured that each team member recruited an average of 2 businesses. Mid and East Antrim Borough Council, after all team members were trained in the use of the materials, decided to appoint a dedicated team member to engage with the businesses.

It should be noted that the differing approaches did not impact the overall number of businesses that successfully completed 1-week of Food Waste measurements as both Councils saw similar numbers (9 and 8) complete 1 week of food waste measurement.

⁹ <http://www.derrystrabane.com/foodinitiatives> (accessed 11.04.2018)

In addition to the common actions carried out above, one of the Councils also:

- Used a "Commitment" document to outline the key facts about the *"Your Business is Food; don't throw it away"* resource pack, what would be required of participating businesses and what support the businesses could expect from their Environmental Health Practitioner.
- The "Commitment" also provided a clear record of contact details for both parties which became a useful tool for continuing contact.
- The EHO produced and provided 3 stickers for kitchen food waste measurement containers (labelled "Spoilage Waste", "Preparation Waste" and "Plate Waste")
- Provided information on where to purchase weighing scales in their local area and the cost of the scales.
- As part of the "Commitment" the EHO and Business agreed a date for starting food waste measurement. The EHO then followed up with a phone call during the week food waste measurement was taking place to check progress and book in a meeting to discuss their results the following week. This allowed the EHO to identify early if there had been any problems starting the food waste measurement exercise and support the business accordingly.
- The follow up meeting to discuss the results and identify an Action Plan allowed the businesses to discuss ideas and get reassurance that their planned actions e.g. food re-distribution, would be considered appropriate from a food hygiene perspective.

Findings

The findings have considered the key questions the Pilot set out to address. This included:

- **how the Food Waste Regulations (Northern Ireland) 2015 have been adopted by the HaFS sector:**
- **what the experiences of the EHOs and Food Businesses using the Your Business is Food campaign resources was;**
- **how well did food businesses engage with the Your Business is Food campaign materials and adopt them for use;**
- **whether the campaign materials were engaging and easy to use by all parties; and**
- **identified benefits and savings achieved by the food businesses.**

Adoption of the Food Waste Regulations by HaFS sector

The Food Waste Regulations (Northern Ireland) 2015 require that any food businesses producing more than 5 Kg a week of food waste should take all measures to secure the separate collection of that food waste. Separately collected food waste can't then be mixed with any other waste produced nor food waste deposited in a lateral drain or public sewer¹⁰.

All of the food businesses visited in the Pilot had implemented the requirements of the Food Waste Regulations, and were separating food for separate collection by a waste management service provider

¹⁰ <https://www.daera-ni.gov.uk/sites/default/files/publications/daera/RPS%20-%20FOOD%20WASTE%20-%20Are%20You%20Compliant%20-%20August%202017.pdf> Accessed 11.04.2018

or local council food collection. Some of the businesses had also implemented their own review of food waste since the requirement for a separate food waste collection became a legal requirement and had started to look at food waste prevention measures.

It is not the role of EHOs to give advice on the acceptability of food waste treatment measures under the Food Waste Regulations. The Regulations, however, are clear that food waste maceration systems do not meet the objective of not depositing food waste in a lateral drain or sewer and are therefore prohibited. A food dewatering system (for example, using an Archimedes screw or centrifuge) may be acceptable as these interventions remove the water content of the food waste, but it should also be noted that the water extracted from these systems is regarded as "grey" water and needs to be appropriately consented by either NI Water (if discharge is to sewer) or by the Northern Ireland Environment Agency (NIEA) (if discharge is to surface waters).

What were the experiences of the EHOs and food businesses of using the Your Business is Food campaign resources?

Food business owners were asked using an online survey about why they decided to get involved in the Pilot, how they found the process of running the Pilot and their views on how the Pilot worked.

Feedback from EHOs was gathered through a face-to-face Pilot close-out meeting. A summary of the responses is provided below.

Food Businesses: reasons for participation

The most common reason cited for getting involved was the potential for saving money.

The information provided by the EHOs and the Your Business is Food resource materials contained clear information on how to start a food waste measurement programme. The simplicity of the model appears to have been a key feature of the decision to use the resources.

Food Businesses: barriers to participation

Most of the companies cited concerns about the timing of the trial (February and March) as there were a lot of occasions coming up (Valentine’s Day, Mother’s Day and St. Patrick’s Day) and were concerned about the disruption to service that may happen. The time window for completing the pilot was limited to 6 weeks.

Some were also concerned that it would be difficult to get staff on board and take a long time to set up.

Some businesses would have valued the resources being available in other languages rather than English language.

Some businesses wondered what this was a pilot for and wary of future implications. Was there a future food waste tax planned? Some recalled the experience of participating in the Food Scores on the Doors hygiene rating scheme at pilot stage, which has since become a statutory requirement.

Food Businesses: Measuring Food Waste

Feedback in relation to the Your Business is Food resource materials and ease of use can be found below. The most frequently received comment to Environmental Health Officers and as part of the online survey is that the materials were easy to use and easy to understand.

For all businesses the key decision makers were involved in the decision to proceed with the trial. Each business owner or manager then appointed a Food Waste Champion. This role was either carried out by themselves or delegated to another member of staff e.g. Head Chef.

The Food Waste Champion was responsible for ensuring all staff knew which bin to put their food waste for weighing into prior to disposal. This person was key to ensuring that each shift understood what was required of them. The Champion was also responsible for agreeing the location of the food waste containers and ensuring the contents were weighed and recorded before disposal.

Food Businesses: feedback

Generally, businesses were very positive about the scheme and encountered very few problems in terms of setting up for the Pilot and getting staff on board.

Comments received by the Environmental Health Officers and through the online survey included:

"Very easy" (more than one business made this comment)

"staff embraced"

"handy"

"straightforward"

"Opened our eyes to the amount of food waste"

"Staff totally on board"

"easy to implement"

"front of house staff on board and get why they are doing it"

"Seeing cost to the business"

"Really interesting, gives you something to work on"

"Smaller outlet within business trialled and cost per year was very interesting, plate waste and spoilage waste were a big shock!"

"WoW I am loving the calculator... I just shared with my owner.... He was up for a meeting. Superb [that] the formulas and calculations

are there and put into graphs. This creates a much more attractive visual that more people can relate to."

"Thanks again to WRAP and [the local Council EHO] for piloting this with [us]. Happy to act as a spoke person (sic)to spread the word."

"complicated due to staffing issues and language barriers"

"staff saw it as another thing to do"

EHOs: Integrating food waste prevention messages

Feedback from EHO's in both Councils indicated that the food businesses understood that the EHO's were talking to them about a food waste prevention message rather than their more typical food hygiene message. This was attributed to the extended role that EHOs have in Northern Ireland compared to other parts of the UK (they have a responsibility for food safety standards as well as food hygiene) and the varying responsibilities that the businesses understand EHOs to have.

EHOs noted that the conversation about food waste prevention was easy to initiate with food business managers. The conversation allowed them to get a better appreciation of how each business operates and the approaches taken to address food waste. It also allowed the EHOs to develop their working relationship with the businesses and it felt good to be able to provide support in this area.

Again, EHOs from both Councils were agreed that a food waste prevention message should be a separate discussion to a food hygiene visit as there is so much else to cover during a food hygiene inspection visit.

The EHOs also noted that there was potential for cross-collaboration with colleagues from different Council Directorates, for example, officers from the Waste and Recycling Services could have a role when having food recycling conversations with businesses and

referring businesses to Your Business is Food as a food waste prevention tool. In addition, their Economic Development teams have a role to support businesses to be more financially stable and have resource efficiency embedded into their remit.

In terms of materials that would be required in the future, an A5 flyer was identified during the feedback session as a useful way to be able to leave the information for future support requests.

EHOs: Resources required for the pilot

EHOs from both Councils noted that the pilot had required more time to engage with the business owners than expected and that there was more time needed to check in on progress than first anticipated. Initial phone calls took on average 15 minutes but it may have taken many calls to reach the decision maker within the business. An initial site visit took 45 minutes average time.

Only one Council decided to take the approach of making a follow up phone call to check measurement was happening (average call length, 10 minutes, but again may have taken multiple calls to reach the business owner) and then a follow-up site visit to discuss the Calculator Tool (approx. 45 minutes).

Key to the success of the Pilot was the support from senior management. It should be noted that delivery of this Pilot was in addition to day to day workload requirements. Any future and ongoing promotion or support of the Your Business is Food campaign would need to be suitably resourced by senior management and even incorporated into Directorate level business plans.

EHOs from both Councils indicated that having a printed pack of information available to hand over to the businesses overcame one of the initial barriers to a business participating. The Your Business is Food materials have been designed to be downloadable from the

internets and are fully interlinked so that they do not all have to be printed. A printed leaflet outlining the Campaign benefits could be a bridging resource to the online resources.

EHOs: Awareness training provided

EHOs from both Councils felt that the awareness training about the Your Business is Food campaign and campaign resources provided by WRAP NI was pitched at an appropriate level and gave the them sufficient knowledge and context to talk confidently about food waste prevention.

EHOs: Collaborative working

Both Councils recognised that there are other departments within their Councils that are talking to food businesses about aspects of the Your Business is Food; don't throw it away campaign.

Environmental Health have a role to play as they have a strong working relationship with the businesses and they also clarify food hygiene messages in relation to served leftover food, storage of food waste and redistribution of food to prevent food waste arising.

Economic development teams within the Council will have a business support role and they would have an interest in promoting the resource efficiency and savings message.

Council waste and recycling services often have dedicated waste education officers as well as a commercial waste collections team. These officers may be able to provide a role in ongoing support to managers of food businesses in measuring food waste. Recommendations that may impact on food safety should be the remit of the EHOs.

A personal relationship with the food businesses was key to their participation and completion of the Pilot. No businesses joined directly from the Council websites. This would indicate that the trusted relationship with local Council EHOs is effective at overcoming barriers to participation.

EHOs: Observations

Generally, both Councils felt that EHOs would be the preferred point of contact for food businesses in relation to food safety as they have a thorough understanding of catering and food production processes and can advise on food safe practices.

The area within the food waste hierarchy that requires careful discussion with businesses is in relation to food redistribution and when and how prepared food can be re-distributed safely. Safety guidelines are available from the EHOs and it is important food businesses understand issues around food re-distribution.

Your Business is Food; don’t throw it away **Campaign resources**

One of the key questions for this pilot is whether the Your Business is Food campaign resources are fit for purpose to engage food businesses and whether they were suitable for EHOs to recommend their use.

Both the food businesses and the EHOs were asked for their comments on the materials provided in relation to their clarity, ease of use and which materials they found most useful.

For the purposes of the Pilot study the “Your Business is Food; don’t throw it away” materials were each identified with the Council’s logo in addition to the WRAP Northern Ireland logo. Template materials

are available with the WRAP logo and can be edited by organisations to include their own logo.

It should be noted that the Your Business is Food materials are normally only downloadable via WRAP's Partner Resource Library.¹¹ The materials are free to use but businesses are required to create a log in for the Partners Website to download the materials. This is an effective means for WRAP to inform document users when a change to the document has been.

The requirement to register on-line to acquire the materials was perceived by the EHOs as a potential barrier to the Pilot being successful. As a result, some of the materials were provided to businesses in a printed pack format and participants were directed to additional on-line resources.

The materials provided in the Pack included the following:

- Starter Guide
- 6 ways to save Poster
- 7-day Tracker Record
- Calculator Tool Quick Start Guide

Other materials which are available on-line include:

- Campaign Guide (A Guide to engaging staff and running your campaign)
- Case Studies (from a range of hospitality business in England and Wales)

Environmental Health Officers from both Councils noted that:

- the materials were of high quality and looked very smart and professional. They were content to distribute them accordingly.
- the content of the resources was appropriately pitched, the layout was clear and easy to follow.

¹¹ <https://partners.wrap.org.uk/campaigns/your-business-is-food/hafs/> accessed 11.04.2018

- It added credibility that the materials used the Council logo (although it was not a significant factor for both Councils).
- A small number of the participating food businesses (4) responded to an online survey questionnaire. 2 of the respondents said that the resources were very easy to use and others said they were neither difficult nor easy to use.
- *"Excellent materials as they are easy to understand and staff friendly."*
- The most used resources were the 7-Day Tracker Sheet, Starter Guide, 6 Ways to Save Poster. Food businesses that used the *"Your Business is Food; don't throw it away"* website and accessed case studies and videos found these useful. Feedback indicated that the least used resource was the Summary Checklist.

There were some improvements to the materials suggested by both EHOs and food businesses that could be considered:

- Excel format for Calculator tool can be problematic for Apple users where the Excel package is not used.
- This is important as users (EHOs and businesses) noted that they wanted to be able to enter data "on the go".
- The Calculator Tool needs to be set for print format correctly, as it runs to multiple pages at present.
- An A5 overview flyer or "Commitment" would be useful to engage the businesses in the first instance.
- Contact details could be easier to find in the Starter Guide.
- EHOs noted that some of the key statistics around food waste costs and food wasted in the UK Hospitality and Food Service Sector were missing from the Starter Guide. This information was available on the "Commitment" document designed for use at one of the Councils request by WRAP.

Business engagement with the Your Business is Food campaign

Food businesses by type

A mix of food businesses participated in the Pilot. Of the 27 businesses approached by the EHOs, 17 businesses completed 7 days of food waste measurement. 15 (88.2%) businesses returned their completed Waste Calculator to WRAP during the timeframe of the Pilot study.

A breakdown of participating food businesses by type is shown in Chart 1.



Chart 1: Number of food businesses participating by sector

3 businesses committed to continuing to measure their food waste data and submit calculator data after 4 weeks of measurement. To date 2 businesses have returned a Calculator after 4 weeks and both these businesses have seen a reduction in food waste from the measures they implemented between Week 1 and Week 4. A summary of business participation is presented in Table 2.

Description	Council 1	Council 2	Total
Number of businesses approached in trial.	15	12	27
Number of businesses that did not participate.	6	5	11
Number of businesses that measured food waste data for at least 1 week.	8	9	17
Number of businesses that provided food waste data for 1 week.	6	9	15

Savings and benefits identified by Food businesses

Each of the food businesses voluntarily submitted their completed 7-day food waste measurement results to the Council or WRAP NI. WRAP NI has collated the information together for the returned data.

The businesses were also asked to complete an online survey which allowed further information to be provided on any planned actions they intend to implement because of the Pilot.

7-Day Tracker results

The food businesses collected and measured food waste from 3- key areas of their kitchens:

1. Spoilage waste. This is all food that has been damaged or not fit for preparation;
2. Preparation waste. This is food waste generated through meal preparation or meal overproduction, and;

- 3. Plate Waste. This is all food waste returned on the customer's plate.

Participating food businesses also had an option to collect a further food waste source that was of interest to them e.g. buffet waste.

As part of the Calculator Tool results sheet, the food businesses could see the percentage contribution each food waste stream made to their total food waste. These percentages varied by business type and preparation approach.

The average annual food waste in tonnes was estimated from the 7 - day survey for each business by business type is shown in Chart 2. The food waste tonnage is an annualised figure based on the findings of the 7-day tracker food waste measurement period. A breakdown per business is presented in Table 2.

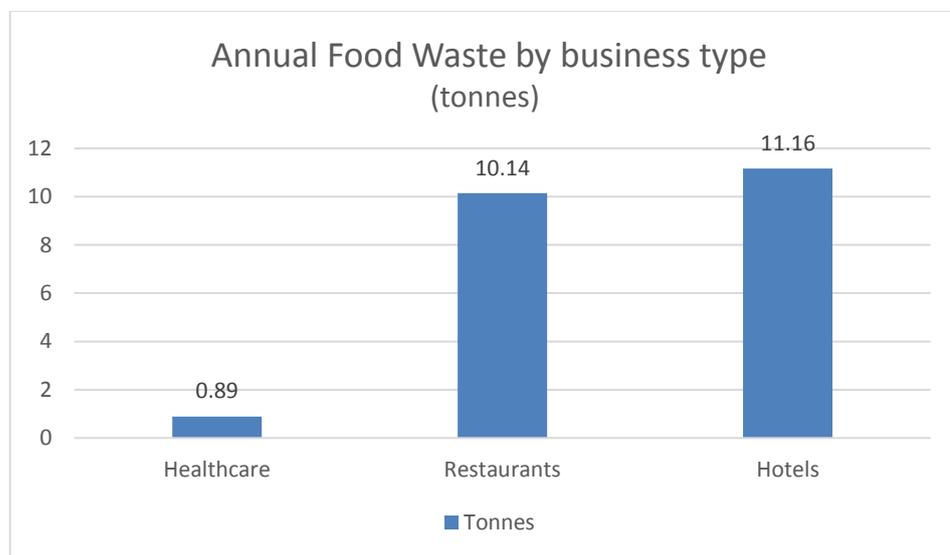


Chart 2: Annual Food Waste (tonnes) by food business type

Business Category	Reference	Annualised tonnes
Hotel	#1	3.07
	#2	7.7
	#3	22.06
	#4	12.57

Business Category	Reference	Annualised tonnes
	#5	10.01
	#6	11.55
Hotel Average		11.08
Restaurant	#7	14.04
	#8	16.22
	#9	22.97
	#10	4.76
	#11	0.85
	#12	2.02
Restaurant Average		10.14
Residential Care	#13	0.371
	#14	1.19
	#15	1.12
Residential Care Average		0.89

Table 3: Annualised food waste (tonnes) per business

The total annualised tonnes of food waste generated by all the participating businesses would be 131 tonnes, costing the businesses £251,764 based on typical food purchasing costs for the sector.

The average food waste weight by cover and cost per cover by business type captured during Week 1 is shown in Table 4. A "cover" is a table setting for one person to dine, therefore four people sitting at one table would be four "covers". Cover could mean an individual diner or the entire meal served to an individual diner. Results are also presented per business in Table 5.

Food Business Type	Total Covers served, Week 1	Food Waste / cover (g)	£/cover
Residential Care	164	104	£0.18
Restaurants	1,040	157	£0.28
Hotels	1,077	215	£0.46

Table 4: Average Number of Covers served and food waste weight and cost per cover (shown by food business type)

Category	Reference	Total covers served, Week 1	Food Waste / Cover (g)	£/cover
Hotel	#1	287	206	£0.52
	#2	1,251	118	£0.21
	#3	1,437	295	£0.52
	#4	1,950	124	£0.31
	#5	835	231	£0.41
	#6	700	317	£0.80
Hotel Average		1,077	215	£0.46
Restaurant	#7	1,255	215	£0.38
	#8	1,407	222	£0.39
	#9	1,675	264	£0.47
	#10	623	147	£0.26
	#11	707	23	£0.04
	#12	570	68	£0.12
Restaurant Average		1,040	157	£0.28
Residential Care	#13	120	59	£0.10
	#14	231	99	£0.18
	#15	140	154	£0.27
Residential Care average		164	104	£0.18

Table 5: Total covers served in Week 1 and Food waste weight and cost per cover shown by business

All the businesses that completed a 7-day tracker could see the cost of their food waste. Food waste costs are based on food purchase costs. The average annual cost of food waste and potential saving on food purchase costs if food waste is reduced by 50% is shown in Table 6. Results are also presented per business in Table 7.

Food Business Type	Annual cost of food waste (average / business type) £	Food waste cost, if 50% reduction made (average / business type) £
Residential Care	£1,582	£791
Restaurants	£18,017	£9,009

Food Business Type	Annual cost of food waste (average / business type) £	Food waste cost, if 50% reduction made (average / business type) £
Hotels	£23,153	£11,576

Table 6: Average food waste cost and savings identified by food business type

Category	Reference	Annual tonnes	Annual cost of waste	50% food waste reduction
Hotel	#1	3.07	£7,715	£3,858
	#2	7.7	£13,667	£6,834
	#3	22.06	£39,172	£19,586
	#4	12.57	£31,576	£15,788
	#5	10.01	£17,776	£8,888
	#6	11.55	£29,009	£14,805
Hotel Average		11.16	£23,153	£11,576
Restaurant	#7	14.04	£24,937	£12,469
	#8	16.22	£28,808	£14,404
	#9	22.97	£40,797	£20,399
	#10	4.76	£8,452	£4,226
	#11	0.85	£1,514	£757
	#12	2.02	£3,596	£1,798
Restaurant Average		10.14	£18,017	£9,009
Residential Care	#13	0.371	£651	£326
	#14	1.19	£2,109	£1,055
	#15	1.12	£1,985	£993
Residential Care average		0.89	£1,582	£791

Table 7: Total covers served in Week 1 and Food waste weight and cost per cover shown by business

For all businesses plate waste represented the largest source of food waste, the % of the total food waste ranged from 38% to 96%. This was followed by preparation waste which ranged from 4% to 54%; and then spoilage waste which ranged from 0% to 25%. Where Buffet waste was recorded separately this represented 3-27% of the overall waste recorded. Similar to the findings of the Champions 12.3 (2018)

¹²report there wasn't a strong correlation between business type, size or turnover and the level of food waste generated.

Planned actions

Each of the food businesses that took part identified further actions that they wanted to take. Your Business is Food campaign resources also include case studies that contain ideas that other businesses have used successfully. Most of the claimed actions aimed to reduce customer or client plate waste.

These included:

- Consider offering sides as a separate menu item so that customers can "pick and mix" their meal choices or asking if there are any changes the customer wants to make to the sides on offer;
- Introduce a "light bites" option to provide a smaller portion size costed appropriately so that those with smaller appetites or just wanting a snack aren't required to order more than they can eat;
- Review menus based on items that are consistently selling less of or being left behind on the plate for quality or presentation issues;
- Optimising ingredient use across the menu options;
- Ensuring daily specials to consider short-date fresh food items;
- Appoint a "Food Waste Champion" on every shift to ensure that staff had a point of contact;
- Commit to seeking staff suggestions for food waste prevention measures and rewarding staff for their suggestions;
- Train front of house staff to explain to customers any changes to menu offers and the reasoning behind the change;

¹² <https://champions123.org/the-business-case-for-reducing-food-loss-and-waste-hotels/> accessed 11.04.2018

- Introduce 'table talker' literature to customer tables to explain changes to service or information about why preventing food waste is important to the business;
- Consider options for reducing buffet waste e.g. reducing plate sizes but allowing further visits to the buffet if desired by guests;
- Consider cooking to order at slower times within the buffet time window, for example a weekend breakfast buffet may experience a rush towards the end of service but have relatively few visitors earlier in the service window;
- Consider cooking eggs to order throughout all of the service window; and
- Ask customers how much toast they would like rather than bringing a fixed portion size.

Spoilage waste and Preparation waste were also identified as areas where improvements could be made.

Suggested actions included:

- Consider better rotation of short-date foods on premises where there are multiple stores and kitchens to ensure no wastage;
- Use pre-prepared vegetables to reduce the amount of peelings in the preparation waste;
- Ensure staff are up to date with good stock rotation practices and have adopted a first in, first out approach to the use of ingredients;
- Ensure that all food deliveries are inspected before being accepted to reduce the amount of spoilage waste; and
- Ensure staff are available during delivery times to sign for goods and make sure those are stored appropriately as soon as possible.

Half of the food businesses that completed the 7-Day Tracker verbally committed to completing a re-assessment of their food waste 4 weeks after the Pilot had finished to determine if any of their

planned changes had resulted in a reduction in food waste. To date 2 Food Waste Calculator trackers have been received and both businesses have implemented changes which resulted in a decrease in food waste arising in this time window.

Three participating businesses used the Your Business is Food campaign materials in one of their business group. The ease of implementation and the success of the initial pilots has resulted in plans to roll out the Your Business is Food campaign to all remaining operational sites. Both businesses are also proposing to carry out a weekly review every quarter to ensure changes are maintained and appoint a Food Waste Champion to be on duty for each shift.

BOX 1: Case Study

One smaller restaurant within a group of restaurants that participated in the Pilot discovered that they were generating higher levels of food waste than expected and especially preparation waste.

Management procedures were reviewed with regular conversations between managers about stock levels or prepared but not served items between managers and this allowed fresh ingredients or prepared dishes to be circulated to other restaurants within the complex to ensure that edible food was not sent to waste.

They then repeated the food waste measurement 4 weeks later after introducing these management changes and had seen their overall food waste decrease by 51%. The management team has committed to introducing "Your Business is Food" measuring tools into the other group restaurants.

Summary

Generally, businesses were very positive about the scheme and encountered very few problems during the Pilot. Over half of the businesses have committed to continuing to address food waste at their premises.

Managers and chefs at each of the participating food businesses stated surprise at the amount of food waste being generated. Some managers chose not to share their completed spreadsheets with the Council or WRAP; however, all the submitted spreadsheets identified significant cost and tonnage savings.

EHOs found the Your Business is Food campaign easy to understand, that the materials are engaging and the information provided interesting. The experience of supporting food businesses has improved working relationships and increased their reputation as being a trusted expert voice by food businesses.

Recommendations

Both the participating food businesses and the Environmental Health Officers benefitted from the Pilot, in terms of cost savings identified by the food businesses, strengthening already good working relationships and communication around food waste prevention practices.

Adopting the Your Business is Food campaign

From this Pilot EHOs consider there is merit in continuing with the promotion of the “Your Business is Food; don’t throw it away”

Campaign. It provided a platform for maintaining positive working relationships with client food businesses and gave both food businesses and EHPS a greater understanding of how their business functions and the type of support and expertise EHPs can bring to their working environment.

For EHOs to continue to provide support to businesses to continue it will need to be resourced by senior management.

Recommendation 1:

Consider providing senior management with evidence that this Campaign supports the wider EHO goals to allow resource allocation to be made to support the "Your Business is Food; don't throw it away" Campaign as part of the Council Business Plan or Delivery Plan.

Cross-Directorate working

The experience of this pilot across two council areas has demonstrated that it is possible to adapt the Your Business is Food initiative to engage local food businesses. Feedback from EHOs further identified a potential role to develop a cross-departmental approach to engaging businesses and providing ongoing support.

There is the potential for each Council to provide a joined-up offer to their client businesses to maximise use of their contact points with food businesses. The Directorates identified with an interest in this Food Waste Prevention Campaign include the EHOs primarily in relation to food safety; Waste and Recycling Advisors in terms of food recycling options and food waste prevention measures; and the Economic Development teams in terms of supporting resource efficiency and helping business performance.

Recommendation 2:

Identify areas within the Council where cross – collaboration will be beneficial.

Collating experience

Some of the greatest barriers to a food business engaging in a food waste measurement exercise and implementing a Food Waste Prevention Action Plan are that they have the belief that they don't have significant quantities of food waste and also that accommodating a measurement exercise will be too disruptive and costly. All of the food businesses that participated identified significant food waste arising in areas of their business that they had not seen before and all of the businesses identified actions that they either have already implemented or plan to implement change.

Whilst there is an evidence base that the Your Business is Food campaign approach results in savings there is no centralised record of the savings achieved across the sector.

The Your Business is Food campaign is essentially a call to action on food waste prevention aimed at food businesses, however the campaign design does not include a defined way of recognising business participation and their contribution to food waste prevention through tonnage or actions.

Recommendation 3:

Identify a method to show how evidence of change can be gathered, disseminated and recognised to ensure changes implemented sustain food waste prevention achievements.

Future Campaigns

One of the Councils suggested that there could be a "Food Waste Focus" month perhaps twice a year when businesses could be recruited. Councils could run a seminar for interested businesses to learn about the campaign resources and hear success stories from business owners.

The "Food Waste Focus" month could also be adopted by other departments and partners with an interest in this area. These include:

- Food Waste Prevention campaigns (e.g. WRAP's Love Food Hate Waste which is part of its Citizen Food Waste Prevention Program);
- Healthy eating campaigns (Consumer campaigns adopted by the Health Trusts and business campaigns adopted by Environmental Health e.g. Caloriewise);
- Food poverty campaigns (such as Community Fridge programs, Fairshare and Trussel Trust Foodbanks); and
- Food Waste recycling advice and services provided by local authorities

Recommendation 4:

Develop a Food Waste Focus Month programme across the Council departments and alongside other partners to develop a co-ordinated approach to reaching citizens and businesses on aspects of food waste prevention, healthy eating, food poverty and food waste recycling.

www.wrapni.org.uk