

CASE STUDY



## Solving problems by strengthening partnerships

When high levels of contamination threatened the integrity of a food waste collection scheme for Sefton Council, composting specialists TEG Environmental facilitated the problem solving process. By sharing their expertise and encouraging cross communication between all parties involved, the core issue of cross contamination was solved and several other beneficial practices were identified to assist the collection process.



Sefton's food waste caddies courtesy of Straights and Letsrecycle.com

## Background

Sefton's recycling is collected at the kerbside in separate boxes. Food waste is one of three waste streams collected using one vehicle and three staff. Recyclables from the householders' boxes are emptied into a larger box (or?) known as a 'stillage' on the vehicle. In addition to the food, the crew collects paper, glass bottles and cans which are taken to a transfer station for stockpiling. The food waste is then delivered to TEG Environmental's plant near Preston for composting.

### Important changes to your food waste collection service

Residents who use the food waste collection service for Sefton can now use starch based COMPOSTABLE liners to line their kitchen caddy.

You can use any starch based liner that displays the seedling logo.

Please do not use any other type of liner, including biodegradable liners or bags, as these will not compost in our facility.

We will not be able to empty caddies with incorrect liners.

If you are interested in joining the food waste collection service, or would like more information on where to buy starch based compostable liners, please contact Sefton Plus or visit our website.

Sefton Plus 0845 140 0845 [www.sefton.gov.uk](http://www.sefton.gov.uk)

### Weekly Food Waste Collection Service

**How to use your food waste collection service**

**STEP 1** You have been provided with a small and a large food waste caddy. Before using these food waste caddies please do keep them. The smaller caddy can be kept in your kitchen while the larger caddy is left outside, with the lid closed and out of direct sunlight.

**STEP 2** Choose if you want to line your caddy (we provided the information on lining your caddy).

**STEP 3** Put your peelings, plate scraps and any other food waste into the appropriate bin provided in the smaller caddy instead of your normal kitchen bin.

**STEP 4** Every few days empty your smaller caddy into the larger caddy. Close your small caddy or close before using it.

**STEP 5** **EVERY WEEK** On your collection day place your large caddy full of your prepared food waste into your green recycling bin. Your external caddy has a locking lid that is held in place when the bin is locked to prevent the caddy from being used with the lid locked to prevent access for animals and reduce potential odours if maintained.

**STEP 6** Once emptied, close your caddy and leave.

What we will collect from your caddy:

The best waste you can give us is combined with the rest to a carefully managed composting facility across the food waste, effectively producing a soil improver. Composting food waste is vital to England's public health, reducing your food's carbon footprint. ONLY if you cannot practically do this should you compost.

Please note that the best waste you become suitable for your collection service is: **Food from your own plot and your household.**

Yes please	No please
<ul style="list-style-type: none"> <li>Food (vegetable peelings)</li> <li>Leftover bread</li> <li>Meat (small amounts)</li> <li>Tea/coffee</li> <li>Egg shells</li> <li>Yoghurt</li> <li>Coffee grounds</li> <li>Beer swillings</li> </ul>	<ul style="list-style-type: none"> <li>Household</li> <li>Fluff</li> <li>Coal</li> <li>Plastic (including cooking oils)</li> <li>Normal</li> <li>Flammable</li> <li>Flammable</li> <li>Oil</li> <li>Flammable</li> <li>Flammable</li> <li>Flammable</li> </ul>

**Should I line my caddy?**

If you wish you may line your kitchen caddy or external food waste bin with a single sheet of newspaper, a paper liner or with a starch based compostable liner. You can use any compostable liner that displays the seedling logo (see below). Please DO NOT use any other type of liner, including biodegradable liners or bags, as these will not compost in our facility. We will not be able to empty caddies with incorrect liners.

Starch based compostable liners with the seedling logo can be purchased in most supermarkets and are available from several other suppliers such as:

[www.ecogreen.com](http://www.ecogreen.com)  
[www.bonapackaging.co.uk](http://www.bonapackaging.co.uk)  
[www.gardening4life.co.uk](http://www.gardening4life.co.uk)  
[www.recycle.com](http://www.recycle.com)

For more up to date information on where you can buy suitable liners including local suppliers please call Sefton Plus or visit our website.

**More help?**

If you have any questions or require this document in other languages or formats please contact us through [www.sefton.gov.uk](http://www.sefton.gov.uk) or telephone Sefton Plus on 0845 140 0845.

This note is a contract with you for your use.

AWCS

Sefton's leaflet explaining the scheme to householders

## Problem

High levels of contamination from the glass bottles and cans in particular were causing a major problem for TEG as they were difficult to remove from the composting system and were compromising the quality of the end product. The problem became so serious that it had to be addressed to avoid loads being rejected due to high contamination levels.

The problem had wider implications. Both TEG and Sefton Council knew that the success of the success of the composting scheme in Sefton was a critical part of engaging positive regional attitudes towards recycling generally. The Sefton scheme was also under close scrutiny from the public as well as other local authorities in the North West. Negative feedback could have serious implications on the region's future strategic plans for diverting organic waste from landfill which could, in turn, impact on future business for TEG.

## Action

Initial investigations showed that the collection scheme implemented by Sefton was almost identical to a scheme being run in the South West of England. Enquiries with the other local authority found that their subcontractor had not generally had problems with contamination. TEG began work with both Sefton and their sub-contractors to see how the contamination was occurring. Initially this involved visits to the TEG plant by managers, who gained an understanding of the severity of the problem and shared ideas that may resolve the issue.



A 'stillage' type vehicle, similar to those used in Sefton  
courtesy of sales@hopdeals.com

Detailed examination of the waste suggested that the contamination was occurring at some point after collection from the household. Carrier bags full of paper, glass and cans found in the food waste were too big to have been collected inside the special caddies issued to householders for their food waste. TEG's Business Development Manager, David Stowe, who has wide-ranging experience of local authority waste collection schemes, undertook to investigate the problem at grass roots level. Working closely with the Sefton team, David, who is an ex-council officer, visited several households to look at the waste typically being offered for recycling. Then, to appreciate still further the people and equipment involved, he accompanied the crews on their waste collection rounds as well as visiting the waste transfer station to see the stockpiling operation.

With a view to a deeper understanding of each others work, collection crew supervisors visited the processing staff at the composting plant, and also met with crews from a nearby local authority using slightly different operational equipment.

## Findings

It was quickly established that householders taking part in the scheme were very satisfied with the quality of the collection service. At the pavement their recyclables were correctly presented for collection. Caddies that had already been collected by the crew had been left neatly with an attention to detail. The crews were also found to be working very quickly and clearing a significant number of houses per day. From observations and discussions with the crews, it became apparent that cross contamination seemed to be occurring, between the different 'stillage' boxes on the vehicle. The three stillages had no identification to differentiate each waste type. As they were very high, the operatives were unable to see inside to identify the waste contained and resolve any incorrect placement of waste as it occurred. Worse still, the stillages were often placed in different positions on each vehicle, so the glass container might be at the front on one round yet on the rear on another.

The problems began to look even harder to resolve when they were first scrutinised. TEG was able to appreciate that their contamination problems were being caused by a very small number of mistakes. Misplacements in the order of just 1 or 2% could be responsible for 99% of the contamination. Sefton, too, appreciated that presentation of just 1% of incorrect materials could have a serious impact on the recycler.

## Solutions

The main catalyst for change was the improved understanding between managerial and operational staff on both sides of this equation. Staff working at 'grass roots' levels at both TEG and Sefton had insufficient knowledge of each other's dilemmas, but had a key role to play in devising, implementing and reviewing the improvements. Toolbox Talks with the crews encouraged a greater understanding of the composting process, what happens to the food waste after they collect it, and the implications of cross-contamination. These meetings also provided an opportunity to review the progress of solutions that were being attempted.

For example, stillages were quickly made more identifiable – a known problem but one whose impact had not been fully appreciated. Painting the food collection stillages bright yellow differentiates them from the other waste streams. Vehicles were also laid out in a standard pattern and position to minimise the potential for cross contamination. The crews advised on this standard format, as they not only understood how sudden vehicle movements or strong winds

affected their vehicles loads but also understood which contaminants had the worst impact on the compost. At the transfer station, the supervisors monitoring the emptying of each stillage for any contaminants gained a greater understanding of what to look for and what impact it could have on the compost that would eventually be used by local farmers. Attempts to filter out the worst of the



contaminants from the food waste skips were highlighted as being ineffective and TEG suggested it was not necessary to pursue that idea. Instead, Sefton made Long litter pickers available as a safe method of removing the worst of any contamination observed.

Within a very short period of time, the level of contamination fell to well within acceptable boundaries. From being something of a problem, TEG is now happy to showcase Sefton as a model to potential new customers and visiting local authorities. In December 2008 the TEG plant that accepts Sefton's waste was awarded the stringent PAS 100QP quality standard for producing high grade compost. This would have been unlikely to happen had it not been for the work by all involved.

For the TEG team, the exercise has also identified the need for changes to procedures that help operational staff on both sides communicate more freely, a new procedure adopted throughout their UK sites.

## Conclusions

Discussing issues fully was seen to result in a cheap, quick and efficient solution. For Sefton, the process has enabled them to refine their food waste collections to a higher standard and to become a leading local authority in food waste segregation. Local authorities from elsewhere in the UK have recently visited their scheme.



Excellent quality food waste: showing some use of compostable bags, and minimal newspaper (not a harmful 'contaminant' and in fact encouraged as an alternative to

### Post script

#### **This initiative won the 'Partnership Award' in the AfOR awards 2009**

For the partnership, continuous improvement is still being sought. Both householders and crew like the way compostable liner bags improve hygiene and TEG sees how they can reduce contamination still further but are aware that these innovative liner bags are costly. Sefton has experimented with alternatives to buying and distributing these bags, and their collection crews are fully able to differentiate these cornstarch-based bags from plastic bags – something that other parts of the industry had claimed was a problem. Also, Sefton have begun sharing far more detailed information with their householders, about what happens to the food after it is collected and how recycling food into compost is helping their local environment.

During the early part of 2010 this project will extend as a compulsory scheme for 30,000 houses, and seems set to influence food recycling collection across Merseyside in the next few years.