



Trolibocs stackable recycling container system

The most reliable method to achieve high-quality recycling is to ensure materials like paper and glass are collected separately at the kerbside. To do this efficiently, Conwy council has pioneered giving its residents a system of stackable boxes for presenting most of their recyclables.

In 2013, the council undertook trials with different variations of the stackable box system. The focus was on improving ease of use for householders and residents, as well as collecting high-quality recyclate. It also aimed to lower the footprint of the overall design while encouraging a tidy appearance.

The final design of three boxes stacked on a metal trolley was introduced across the county from November 2014, and given the name Trolibocs, an amalgamation of Welsh and English words.

The Trolibocs are emptied weekly into resource recovery vehicles (RRVs), which also collect household food waste at the same time. This is part of a comprehensive recycling system that also separately collects garden waste, electrical items and textiles.

The stackable system

Conwy's Trolibocs system comprises: a 45-litre top box for paper and card; a 55-litre middle box for plastic bottles and containers, drink

cartons and cans, which are collected together and later sorted; and a 55-litre bottom box for glass, which are sorted at the kerbside. In some local authorities using Trolibocs, the middle box has been increased to 70 litres to provide more space for these bulky materials.

The system is designed to make it easy for both residents and the collection operatives to use, with the box likely to hold the heaviest material (paper and card, which accounts for 55 per cent of dry material) on top to minimise operative lifting. The system also saves collection operatives time, as they can safely move several boxes in one go to the resource recovery vehicles.

For residents, flaps on the middle and lower box allow the posting of material to take place without unstacking the containers, and there's a lockable lid on the top box so that material does not blow away in windy conditions. Wind was also a consideration when adding stabilising 'feet' to the bottom box.

Improving public engagement

Conwy's residents were involved throughout the process of introducing the Trolibocs. The council supplied an information pack, as well as organising roadshows to explain the rationale behind the system. During trials, user feedback showed that 97 per cent were happy with the Trolibocs.

Following this, after the stackable box system was rolled out, a Recycle Now survey received responses from 20 per cent of Conwy's residents, with 77 per cent saying that they recycle everything they can, and less than one per cent saying that they do not recycle and do not intend to start. Moreover, 83 per cent of respondents said that they use the recycling services every week.





Although 98 per cent of the county's 51,000 low-rise houses use the Trolibocs system, a small number of these households have retained the old system involving a bag for plastic and cans, a sack for paper and a box for glass and cardboard. This option was necessary due to physical obstacles, such as steps from the house to the kerbside.

Increased recycling, saving money

Conwy County Borough Council estimates that countywide rollout of the system has increased the amount of dry recyclate captured by 600 tonnes a year. This has saved more than £60,000 worth of material from going to landfill and gained an income of £40,000 for recyclable material. This means that overall the system has contributed an annual cashable revenue saving of £100,000 in landfill avoidance and recycling income. The volume of paper, in particular, has increased because the three boxes are now linked, meaning people are more likely to put out the full range of recyclable materials every week.

From an already high starting point, the council has seen an uplift of 1.3 per cent towards statutory recycling targets, and has already surpassed the statutory target of 58 per cent recycling by 2015/16, reaching 59 per cent recycling in the 12 months to September

2015. The achievement means the council has avoided paying fines of £108,000 a year for failing to meet targets.

High-quality recycling

The Trolibocs system achieves high-quality, closed-loop recycling, including for paper and glass. The council has access to reliable, long-term markets in the UK, generating more than £500,000 annually from materials sales.

Even with its comprehensive service, Conwy CBC found that 51 per cent of materials in the residual bin could have been recycled using the existing collections. Therefore, from mid-2016, residual waste collections will decrease to once every three weeks for most residents, though the council will also trial four-weekly collections to 10,500 households. It is estimated that a move to a four-weekly collection system would save the council £558,000 a year, while reducing residual waste generation by almost 18 per cent. Collection every three weeks is expected to save £213,000.

The revised service will mean that the weekly capacity levels per household will be 155 litres for dry recyclables through the collection of Trolibocs, 23 litres for food waste and just 80 litres for residual waste (or 60 litres, in the case of four-weekly collections).