



**CAMPAIGN FOR**

**REAL RECYCLING**

**Andy Moore**

[andym@crn.org.uk](mailto:andym@crn.org.uk)

**[www.realrecycling.org.uk](http://www.realrecycling.org.uk)**



**CAMPAIGN FOR**  
**REAL RECYCLING**





**CAMPAIGN FOR**  
**REAL RECYCLING**





# **CAMPAIGN FOR REAL RECYCLING**





# CAMPAIGN FOR **REAL RECYCLING**





## **Two Key Reports:**

**Kerbside Recycling: Indicative Costs and Performance**

*WRAP 16th June 08*

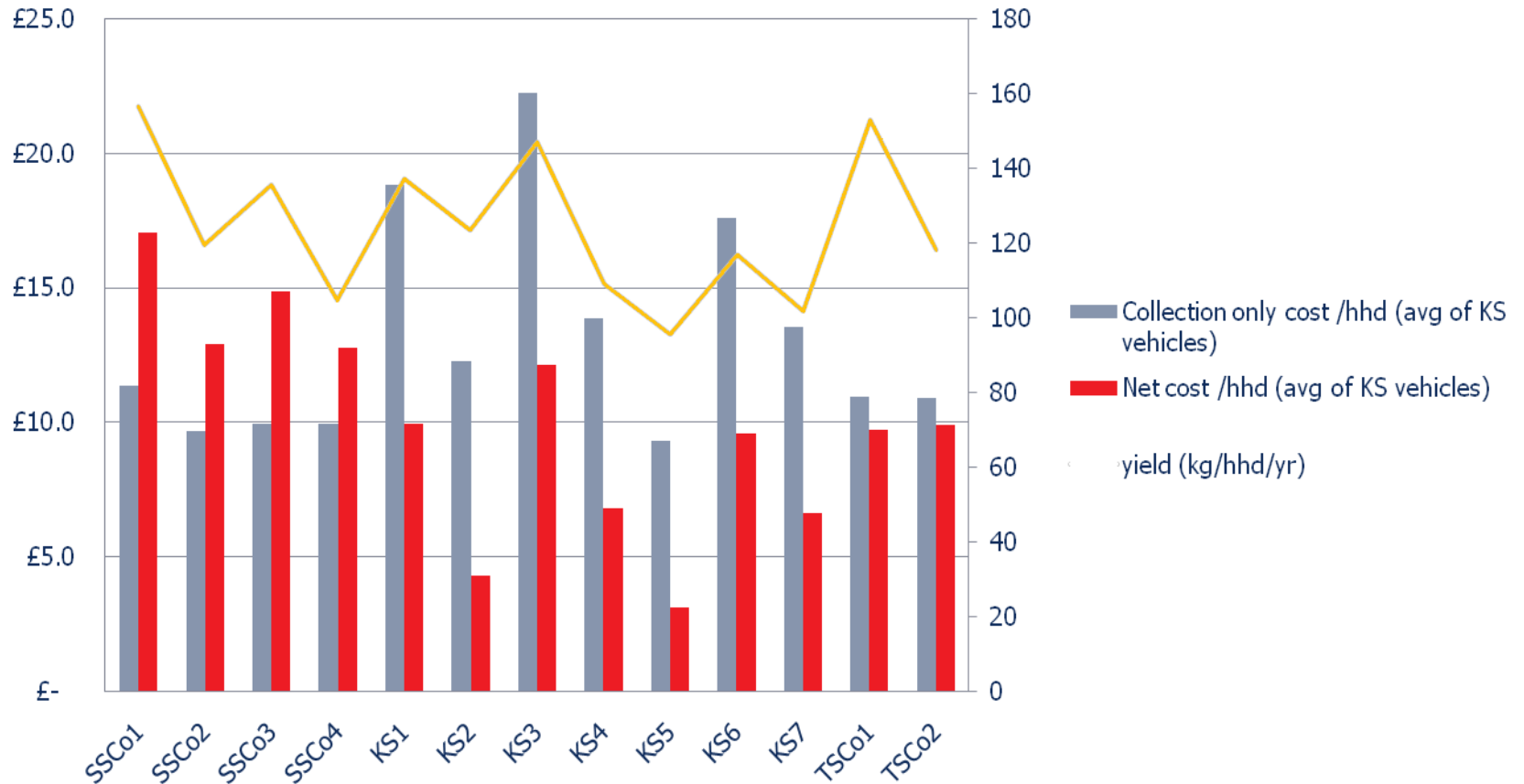
**Survey of Funding of Municipal Waste Management Kerbside  
Collection in Wales**

*Welsh Assembly Government 9th August 2007*



# CAMPAIGN FOR REAL RECYCLING

## Collection only costs and net cost per household



Source: WRAP



# CAMPAIGN FOR REAL RECYCLING

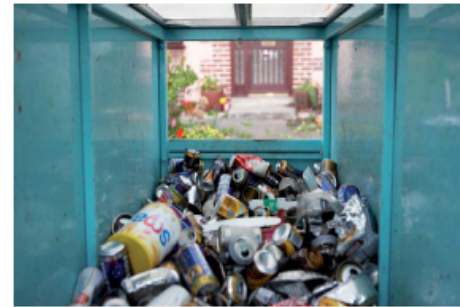
## WRAP - *Choosing the Right Collection System*

“On the evidence available to WRAP, our view is that kerbside sort systems offer reliable material quality and lower net costs for council taxpayers...  
...Because of our priority for quality materials as a way to improve resource efficiency, WRAP believes that kerbside sort collections should be preferred where they are practical and should be in the majority of local authority areas”.

wrap

Material change for  
a better environment

### Choosing the right recycling collection system



WRAP's role in relation to the design of recycling systems is to help practitioners by gathering and sharing knowledge and understanding about the relevant operational principles. This leaflet addresses a question which WRAP (Waste & Resources Action Programme) is often asked: which collection system is the best, in particular whether kerbside sort systems or co-mingled collections are to be preferred?

There is no simple answer, and certainly no one-size-fits-all solution. Local authorities have to make choices that are right for their local circumstances. Provision for recycling needs to be considered alongside requirements for refuse, garden and increasingly food waste and taking account of factors such as the physical characteristics of collection areas and property types.

Recognising that experience and knowledge is increasing all the time WRAP has identified some underlying principles which we believe should guide decision making.

#### Kerbside collection systems

**Kerbside sort** – involves the sorting of materials at kerbside into different compartments of a specialist collection vehicle.

**Single stream co-mingled** – involves the collection of materials in a single compartment vehicle with the sorting of these materials occurring at a MRF (Materials Recovery Facility).

**Two stream co-mingled** – residents are provided with two recycling containers and are asked to place different materials in each container, typically paper/card (fibre) in one and plastics, glass and cans (containers) in the other. These materials are kept separate but collected on one vehicle which has two chambers.



## System Comparisons

### Kerbside sorted collections:

- operative has good quality control opportunity
- reject rate typically ½% or less
- high quality materials yield best prices
- hold on to reliable market outlets
- achieve lowest cost per tonne in domestic material recovery eg. Newport CC < £40/t
- costs/tonne will fall as diverted tonnage rises



**CAMPAIGN FOR**  
**REAL RECYCLING**

## **System Comparisons**

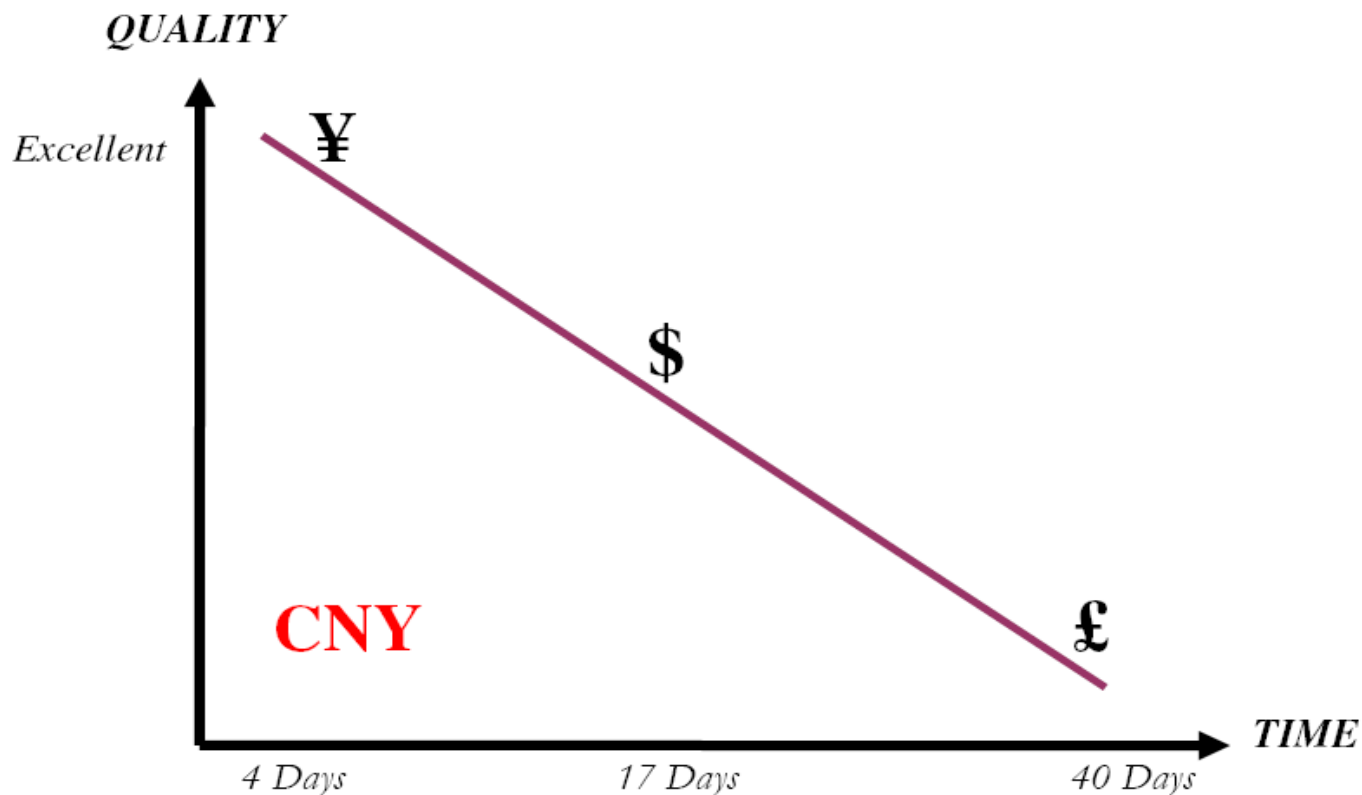
**Co-mingled/compacted MRF-sorted collections:**

- **collection operator has little quality control or feedback opportunity**
- **collect typically 14% non-target material (WRAP)**
- **reject rate typically 9% (Defra)**
- **yield poorer material prices**
- **provide lower value for money**
- **gap between systems seems to be widening**



## Far East Export Market - Near Future:

Increasing quality control in China and across Far East on all materials.  
Increasing Chinese domestic paper collection means demand for UK paper will fall. Dependence on Far Eastern markets unwise.





## **CAMPAIGN FOR REAL RECYCLING**

### **Myths regarding Kerbside Sort**

- no evidence that kerbside sort harder for public to grasp than co-mingling
- no evidence that co-mingling yields higher diversion – reverse seems true over time
- no evidence that kerbside collections any less safe for operators – but vehicle design and practice improving
- kerbside sort doesn't require lots of boxes
- no evidence that kerbside sort yields worse carbon value – again, reverse seems to be case



**CAMPAIGN FOR**

**REAL RECYCLING**

**Carbon** - new LA indicators NI 185, 186 and 188

- **WRAP planning to undertake new research toward collection carbon guidance**

**Indicative analysis suggests that:**

- **collection transport most locally visible aspect but may well represent less than 1% of the carbon emissions involved in recycling**
- **direct carbon emissions can be doubled by contamination and carbon offset value can be more than halved by contamination**

**LB Camden added 77% to its carbon collection footprint just by taking its recyclate to the Greenwich MRF**

*ADAS/LBCamden2008*



**CAMPAIGN FOR**

**REAL RECYCLING**

## **Bryson Recycling - Northern Ireland**

- serves 200,000 houses on kerbside sort
- receives co-mingled material from 250,000 houses
- processes total of 60,000 tonnes this year
- 60% of dry recyclables collected from NI houses
- most services rolled out in 2005
- collects from Armagh, Banbridge, Ballymena, Belfast, Carrickfergus, Castlereagh, Londonderry & Newtownabbey.



**CAMPAIGN FOR**  
**REAL RECYCLING**

## Bryson Recycling Experience

<b>Quality</b>	MRF	Kerbside Sort
Contamination in feedstock	1 – 45%	< 0.5%
Contamination in sales	2 – 15%	< 0.5%
Rejects from mills	Yes	No
% sent to landfill	6 - 10%	< 0.2%
Sales difference		+20%



**CAMPAIGN FOR**  
**REAL RECYCLING**

## Bryson Recycling Material Range

Material	Kerbside Sort	Co-mingled
Paper	Yes	Yes
Mixed paper		Yes
Cardboard	Yes	Yes
Plastic bottles	Yes	Yes
Cans	Yes	Yes
Glass	Yes	No
Textiles	Yes	No
Food waste	Yes	No
Batteries	Yes	No
Mixed plastics & tetrapak	Probably	No



**CAMPAIGN FOR**

**REAL RECYCLING**

## **Recycling Glass Bottles and Jars**

- good quality required for remelt
- very few bottles being remade from ex MRF/co-mingled/compacted material - expensive or experimental
- some ex MRF/co-mingled found to be 40% non-glass
- contamination from co-mingled glass reduces paper/other material quality and so overall basket price/VFM of service
- roadfill over remelt makes no carbon sense
- glass only roadfilled in UK and Ireland
- PRN structure creates insufficient incentive for MRFs to prioritise glass quality



**CAMPAIGN FOR**  
**REAL RECYCLING**

# Container Capacity

240 litre bin  
collected  
fortnightly

= 120 litres / week

=

Two 55 litre  
boxes collected  
weekly

= 110 litres / week



# CAMPAIGN FOR **REAL RECYCLING**

## Kitchen Waste on Same Vehicle



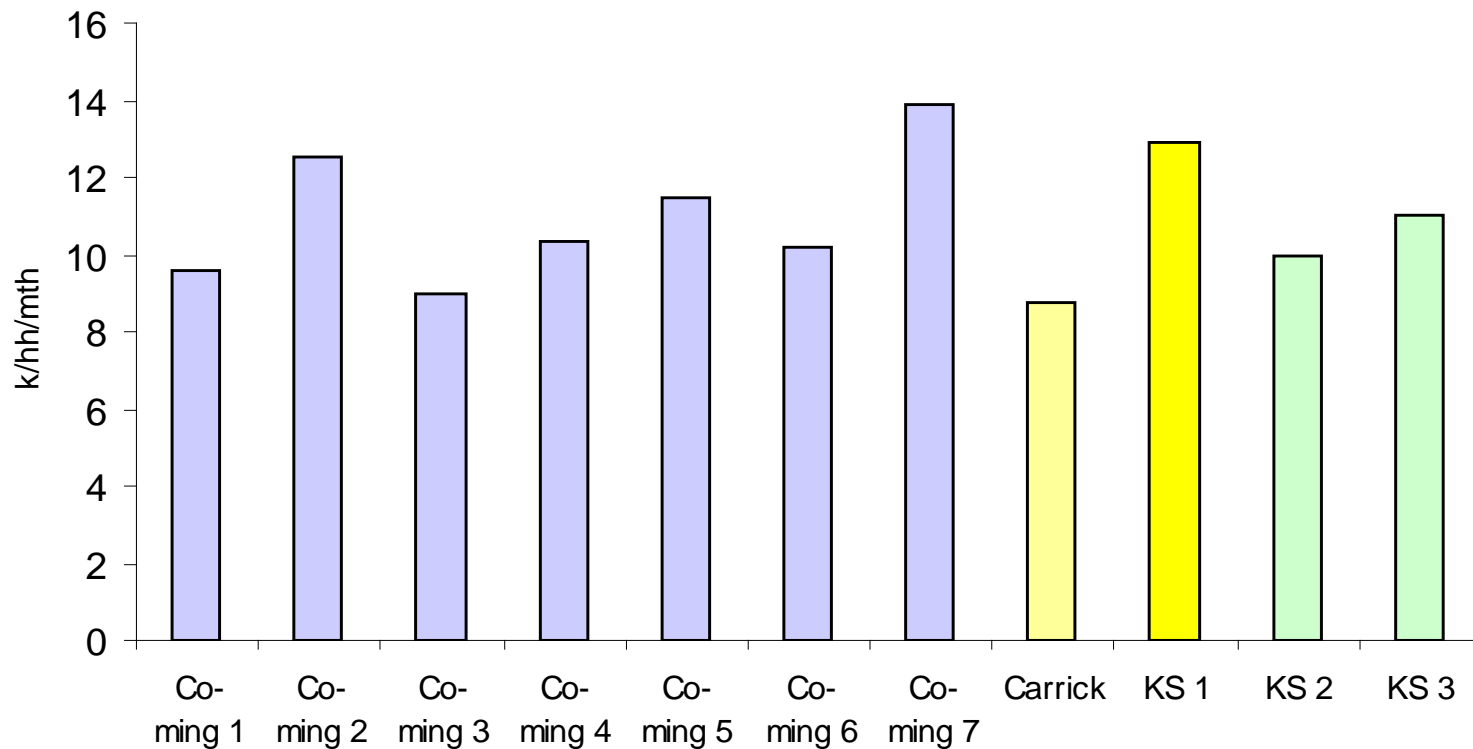
Picture - Somerset Waste Partnership/May Gurney



# CAMPAIGN FOR REAL RECYCLING

## Bryson Recycling Carrickfergus and Belfast region March 07

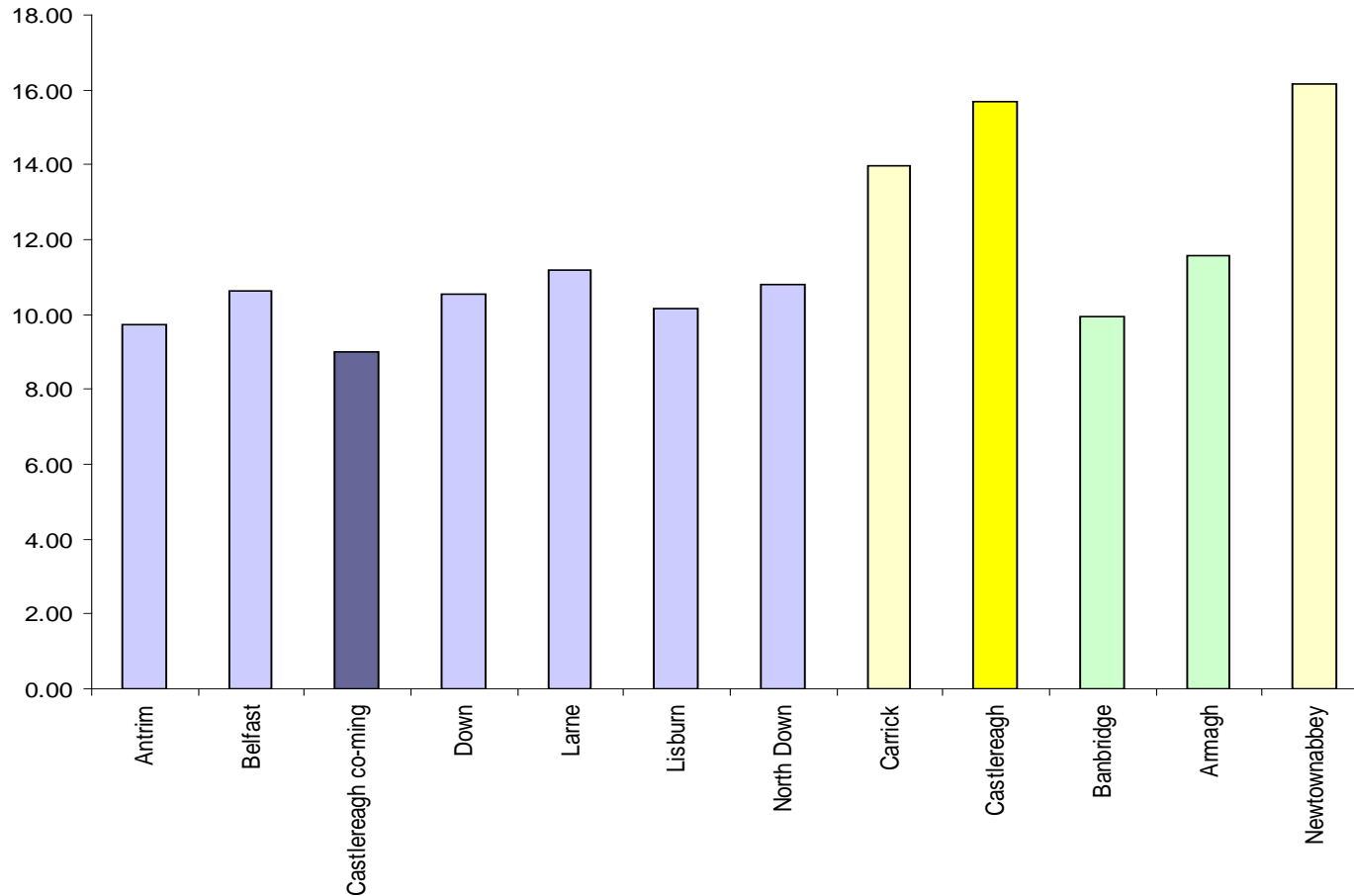
*Before* - Kilos per house per month





# CAMPAIGN FOR REAL RECYCLING

## Bryson Recycling Belfast region, July–Sep 08 *After* - Kilos per household per month



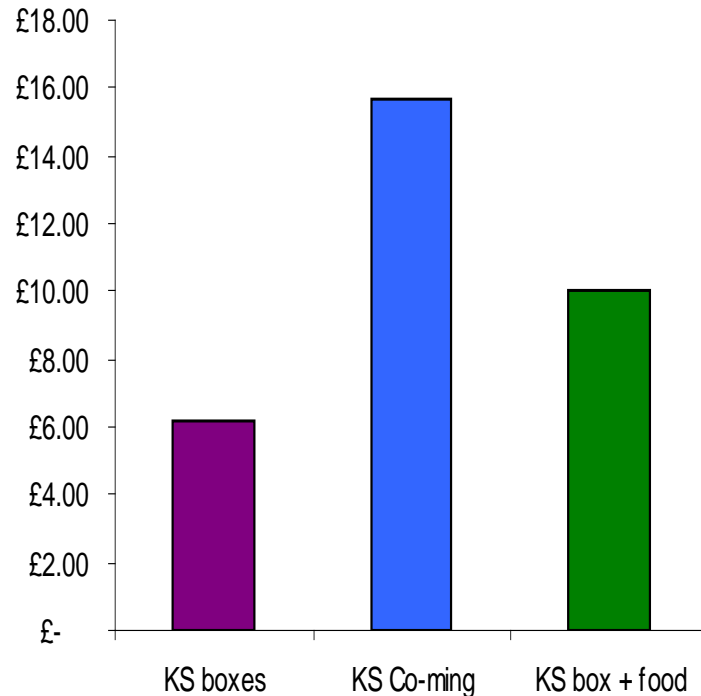
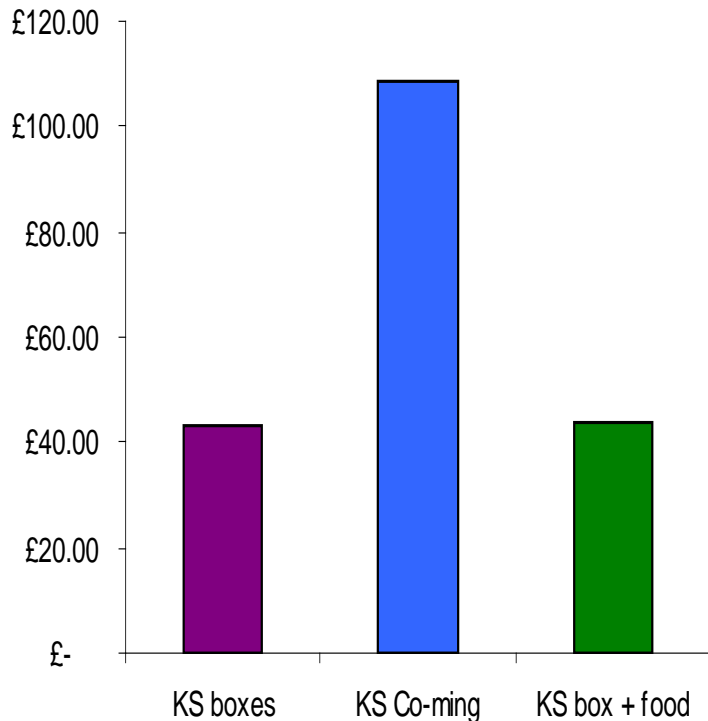


# CAMPAIGN FOR **REAL RECYCLING**

## Bryson Recycling Whole cost modelling in NI

Net cost per tonne

Net cost per house





# CAMPAIGN FOR REAL RECYCLING



## Somerset Waste Partnership

- now over 50% diversion
- knows it can get to 60%
- lowest UK residual waste: 162Kg per capita (Sort It)
- knows where all diverted material goes logged in end-user register for public info

Andy Bond of May Gurney re  
SWP:

*"It is more cost effective to recycle 65 to 70% than it is to remain at 35 or 40% because we are now in a high landfill or end-of-pipe treatment gate fee world."*



**Andy Moore**

**[andym@crn.org.uk](mailto:andym@crn.org.uk)**

**[www.realrecycling.org.uk](http://www.realrecycling.org.uk)**

