



# Commingled versus Source Segregation

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# Agenda

- > Greenstar Company Outline and Scope
- > Collection method choices & criteria
- > The case for comingled collections
- > Greenstar's possible utopian solution
- > Conclusion

# Who are we?

- > Greenstar UK – Recycling-led waste management service provider
- > 4<sup>th</sup> largest municipal services provider
- > Municipal services division – Verdant Group
  - > 1,000,000 collections per week
  - > 600 vehicles
  - > Single stream, dual stream, kerbside sort
- > Reprocessing
  - > 5 Facilities
    - > Aldridge, one of Europe's largest MRF's
    - > Atlas – 500ktpa facility 2010
- > Market development - WES



# What are the options?

## > Choices

- > Collection frequency      weekly versus AWC
- > Collection method          comingled or kerbside sort
- > Container type              bag, box or bin

## > Criteria

- > Carbon efficiency
- > Cost
- > Diversion rates
- > Health & Safety
- > Political acceptability
- > Sustainable end markets

# Environmental Impact

- > Various reports point in different directions
  - > Hyder report on Milton Keynes
  - > WRAP report for Slough & others
- > Single stream
  - > Reduced environmental externalities
  - > Tidier street scene
  - > Reduced traffic congestion
  - > Reduced collection frequency
- > Operational reductions
  - > < 2/3 fleet size
  - > Urban trial 3 trucks x 9 hour days KSS vs 2 trucks x 6 hour days comingled
  - > Fortnightly = further savings

# Are commingled collections more expensive?

- > EU procurement assures cost transparency
- > Must compare like with like
  - > Verdant experience - commingled is cheaper
- > Recent conversion to comingled – 6% saving (with additional services)
- > Urban trial achieving >20% direct cost saving
- > Current tender – net cost evaluation
  - > Existing service £3.6m
  - > KSS no plastics £2.7m
  - > Single stream £2.6m
- > More than 50% of UK councils adopt some form of commingled collections – surely their not all wrong

# Maximising Diversion from landfill

## Commingled recycling services (DEFRA 2007/08)

- > 15 of top 20 performing councils have commingled collections
- > Compatible with wheeled bins
- > Simplicity is the key

## Our experience of increased diversion

Local Authority	Tonnage increase with Wheeled Bins	Kg/hh/yr	Change in residual Collections?
Stratford on Avon	<b>80.8%</b>	265	Weekly sack to weekly 240Ltr wheeled bin
Blackburn with Darwen	<b>35.7%</b>	211	Fortnightly 240Ltr to weekly 140Ltr wheeled bin
South Oxfordshire	<b>41.7%</b>	305	Weekly loose to fortnightly 180Ltr wheeled bin
LB Waltham Forest	<b>42.0%</b>	n/a (pilot)	6,000 household trial, weekly 240Ltr wheeled bin

# Health & Safety

- > Bins vs boxes & bags
  - > RSI
  - > Manual Handling
  - > Gloves – cuts & abrasions
  - > bending
- > What is safer for the householder?



# Political Acceptability

- > Knowsley MBC
  - > Collection service - best customer satisfaction in the UK
  - > Recycling – wheeled bin single stream
- > Storage for householders
  - > Householders like it
  - > Container footprint
  - > Littering issues
- > MRF Perception
  - > Manual picking
  - > Poor working conditions



Promotion is Key for RCV Collections



Manual Picking

# The quality debate

- > Global markets are important
  - > Uk, Europe, Far East, India
  - > Consumer driven
- > Greenstar
  - > During the most difficult economic time in modern times all recyclables marketed
  - > 100% sales record - nothing land filled
  - > No glass contamination
- > Modern Mrf's are much improved over older facilities

# The quality debate – Really a question of money not quality

What is the appropriate definition of MRF quality – should be

- > Recyclates are produced which are capable of being marketed in a global market place

Not

- > Recyclates are produced such that they can be used by UK reprocessors, without any further investment by the UK reprocessor industry

If the UK reprocessing industry invested in more technology there would be no debate about quality

- > Glass can be sent to remelt

- > Paper from a MRF can be used in UK paper making

We are in danger of asking the UK taxpayer to pay for (through higher waste collection charges ) a cost that should be borne by the reprocessing industry

# Is there a perfect answer?

- > Utopia in the home counties!
  - > >70% recycling
  - > >£0.5m annual saving
  - > AWC refuse (180l) and single stream (240l)
  - > Weekly food waste
  - > One-pass collections
  - > Subscription based green waste
- > No single solution
  - > MRF location
  - > Disposal facilities
  - > Housing stock – density and type



Steve Parker  
Head of Environmental Services  
Denbighshire County Council

## 1. Facts and figures:

- AWC system – 180 litre residual waste bin
- Boxes, bags, and sacks replaced with standard single 240 litre bin in April 2009
- Subsequent increase in dry recyclate tonnages (per household covered) of 50kg p.h / year. 174 kg.p.a. up to 224 kg. p.a.
- A lot of our 240 litre bins are now being replaced by 360 litre bins.
- **Bin size matters.**

## 2. Benefits (part one)

- You get more stuff (50kg = 29% increase for us).

- This extra tonnage is crucial if we are to get to 70%

We were already collecting from the 'willing' (with our bags, little boxes and sacks). BUT: we needed the rest. We needed all of the rest – and we needed ALL of their stuff.

**We had to make recycling the easy way out.**

- CO<sub>2</sub> footprint: the extra landfill diversion we are actually getting (in the real world) blows the theoretical 'MRF differences' out of the water.
- Most of the top performing councils in the UK use co-mingled systems. That's no coincidence.

## 3. Benefits (part two)

- It looks like a professional operation, and leaves you with clean streets
- It's simpler – and its cheaper. In Denbighshire ten employees were re-deployed onto other work.
- **No need for cajoling or huge publicity drives. People do it automatically. It's basic behavioural psychology.**
- Flexibility: RCV's are used
  - not specialist vehicles (kerbsiders etc.)



## 4. Benefits (part three)

- The public love it members love it, and our operatives love it.
- It fits in with the council's priority of **increased Customer Focus.**
- It reduces the risk of Manual Handling claims against LA's - by satisfying the legal duty (placed upon employers) to eliminate manual handling risks, where there is a reasonably practicable method of doing so.
- **You get more stuff (50kg = 29% increase).**



# Campaign for Really Difficult Recycling



# The Greenstar Experience

- > Single Stream vs Kerbside Sort
  - > Smaller carbon footprint
  - > Cheaper
  - > Higher diversion
  - > Safer
  - > Politically acceptable
  - > Secure and stable recycle markets

It's your choice

