

Somerset Waste Partnership

COMPLIANCE WITH THE WASTE (ENGLAND AND WALES) REGULATIONS 2011



The purpose of this report is to undertake an assessment of compliance to the separate collection requirement in the Waste (England and Wales) Regulation 2011. The assessment covers all of SWP's collection responsibilities.

The Waste (England and Wales) Regulations 2011 require local authorities to apply the waste hierarchy (Regulation 12), and to determine whether they are required to collect glass, metal, paper and plastics separately (Regulation 13).

Regulation 12 requires local authorities to comply with the waste hierarchy. Departure from it is allowed when the measures that would be required would not be '*reasonable in the circumstances*' or when departure will '*achieve the best overall environmental outcome where this is justified by life-cycle thinking on the overall impacts of the generation and management of the waste*'.

The waste hierarchy is as follows:

- Prevention
- Reuse
- Recycling
- Other Recovery
- Disposal.

Regulation 13 states '*that from the 1st January 2015 all Waste Collection Authorities (WCAs) will be required to collect paper, metals, plastics and glass ('the materials') separately, where doing so is:*

- *Necessary to ensure that waste undergoes recovery operation in accordance with Articles 4 and 13 of the Waste Framework Directive and facilitate or improve recovery; and*
- *Technically, environmentally and economically practicable*'.

The Waste and Resources Action Programme (WRAP) has produced a route map (<http://www.wrap.org.uk/content/requirements-waste-regulations>) to help local authorities understand the steps that need to be taken to see whether they are compliant. This report follows that map.

About Somerset Waste Partnership

Somerset Waste Partnership (SWP) was established as combined organisation in 2007 to manage waste services on behalf of Mendip, Sedgemoor, South Somerset and West Somerset District Councils, Taunton Deane Borough Council and Somerset County Council.

SWP was the first county wide waste partnership in the country. It has delegated authority to deliver household waste and recycling services throughout Somerset, including management of kerbside collections, recycling centres and disposal sites.

SWP is also responsible for compliance with legislation, including for the The Waste (England and Wales) Regulations 2011.

Service provision is contracted to Kier MG CIC (collection services) and Viridor Plc (recycling centres, landfill sites and recycling, treatment or disposal of food waste, garden waste and residual waste).

The SWP is accountable to the Somerset Waste Board, which consists of two members from each of the six partner authorities.

The SWP Vision

SWP places a strong focus on moving waste up the hierarchy and focuses where possible on achieving high quality recyclables.

The extract below is taken from SWP's business plan 2014-2019 (<http://www.somersetwaste.gov.uk/wp-content/uploads/2014/04/Final-Approved-Business-Plan-2014-to-2019.pdf>)

We will:

- Drive material up the waste hierarchy and, where sustainable markets exist, into the circular economy*.
- Avoid landfill and encourage high participation in waste avoidance, reuse, recycling and food waste collection schemes.
- Engage with local people, support economic wellbeing and use efficient, sustainable and affordable solutions at every stage of the process.
- Encourage and facilitate innovation, joined up strategy, policy and operations across the county

**A circular economy is one where resources once used are not disposed of, but become feedstock materials or energy for making new products, thus reducing reliance on raw materials and waste disposal. A "closed loop process" is a variation of this where recovered materials are recycled into the same product. The benefits of a circular economy include reduced energy consumption, resource security and lower environmental impacts. A circular economy works most effectively where there are clear incentives for all persons on the loop (manufacturers, retailers, consumers, local authorities, reprocessors) to move the material around the loop.*

SWP has a Waste Prevention Strategy (<http://www.somersetwaste.gov.uk/wp-content/uploads/2012/05/Waste-Prevention-Strategy-2012-Final.pdf>) which actively encourages reduction and reuse of household waste.

The Waste Prevention Strategy particularly focuses on:

- Reduction of food waste

- Home composting
- Reducing unwanted mail
- Textile reuse
- Real nappies
- Donating goods to charity shops, furniture reuse groups and the reuse shop being trialled at Taunton Recycling Centre.

COLLECTION SYSTEMS

Kerbside collections

SWP provides collection services to all 245,780 households in Somerset (2013/14 figures).

Kerbside collections are provided for the majority of households. These use the kerbside sort system and collect the following materials:

- | | |
|-----------------------------|--|
| • Food waste | • Aluminium foil |
| • Paper | • Textiles and shoes |
| • Cardboard | • Car batteries |
| • Glass bottles and jars | • Garden waste (optional chargeable service) |
| • Plastic bottles | |
| • Food tins and drinks cans | |

All materials collected at the kerbside are sorted into different compartments on the collection vehicle, with the exception of plastic bottles and food tins and drinks cans which are collected together and later separated at depots using a conveyor system with an eddy current separator and overband magnet.

Glass is sorted by colour (green, brown, clear), and paper and cardboard are collected separately. Residents are advised to place out brown paper and low grade papers such as gift wrap with cardboard, to ensure a high quality paper grade.

Communal collections

Somerset has a relatively small number of blocks of flats which are offered a communal service consisting of wheeled bin collections of:

- | | |
|-----------------------------|--------------------------|
| • Paper | • Glass bottles and jars |
| • Food tins and drinks cans | |

Materials are loaded into separate compartments on the collection vehicle. Mixed cans are later separated at the depot as with the kerbside cans. Glass is not colour separated but mixed with the green glass as quantities of the other colours are very low and within acceptable levels for the reprocessor.

It is planned to add plastic bottles and cardboard to communal recycling collections during 2015/16. The collection system to be used is under review and will be assessed for compliance with the Waste (England and Wales) Regulations 2011 before adoption.

Recycling centres

Somerset has a network of 16 recycling centres, which are free to enter, and 2 community recycling sites with a £2 entry fee.

These sites accept the following materials:

- Batteries (car & household)
- Books *
- Cans (drink & food)
- Cardboard
- Drink cartons such as Tetra Pak *
- Electrical appliances
- Fluorescent tubes
- Fridges & freezers
- Garden waste
- Glass bottles & jars
- Low-energy light bulbs
- Mobile phones
- Music & movies (reusable CDs, DVDs, videos) *
- Oil - cooking oil
- Oil - engine oil
- Paper
- Plastic bottles **
- Scrap metal
- Shoes (tied in pairs)
- Textiles (clothes etc - not stuffed items)
- Toner cartridges
- Window glass *
- Wood

* These items are not collected at all sites.

** Plastic bottles at all sites except one (Cheddar).

All materials are collected separately, as listed, in different containers, except for food and drinks cans which at all sites except Taunton are mixed with the scrap metal. Food and drinks cans from Taunton are separated into aluminium and steel and sent for reprocessing as steel and aluminium loads. Glass bottles and jars are colour separated.

There is currently a trial running at the two recycling centres in Taunton Deane with facilities to recycle plastic pots, tubs and trays. If successful, then SWP will look to extend this to other recycling centres across the county.

Bring sites

SWP manages 12 bring sites in Sedgemoor with banks for paper, card, glass bottles and jars, food tins and drinks cans, and plastic bottles. Five of the sites also have banks for cartons such as Tetra Pak.

Schools collections

Waste and recycling services for primary and secondary schools are also provided through SWP's collection contract, with orders and service payments arranged direct through Somerset County Council's Contract Support section.

Currently these collections are integrated with domestic collections. Most primary schools use SWP's kerbside service, putting materials out for recycling in boxes. Larger primary and secondary schools use the communal service, with materials collected in wheeled bins. There is also a separate service for cardboard using wheeled bins and a compaction vehicle.

New dedicated recycling service arrangements are to be introduced in early 2015 for schools and their recycling collections will then no longer be operated using the same vehicles as domestic services. With the new arrangements, all school recycling collections will be made using wheeled bins with co-mingled bins for paper, cardboard, plastic bottles and cans and separate bins for food waste. Schools do not have glass for collection, so a service is not necessary for this material.

The new arrangements for schools offer service and material quality benefits over current arrangements, as described below within this compliance report.

Quantity of materials collected

The amounts of materials collected in 2013/2014 were:

Tonnes of Waste Collected in 2013/2014			
	Recycling	Landfill	Energy Recovery
Kerbside collections	74,509	90,773	
Recycling centres	43,361	19,854	5,312
Bring banks	702		
Schools collections	536	1,765	

WASTE COMPOSITION

In 2012, SWP conducted waste composition analysis to assess what was left in the average kerbside residual bin after recycling had taken place.

The full report can be found at: <http://www.somersetwaste.gov.uk/wp-content/uploads/2015/02/Somerset-Waste-Composition-Results-Nov-2012.pdf>

The report shows:

- In 2011/12 Somerset recycled 50.9% of household waste and landfilled 47.3% with 1.8% being sent for energy recovery.

- 63% of recyclables were collected from the kerbside and 35% from recycling centres. The remaining 2% came from bring banks, schools, charities and third parties.
- 84% of materials recycled were garden waste, paper, cardboard, food waste and glass, with all other materials contributing 16% to the total recycled

Of the remaining refuse, it was found that 50% could be recycled using the existing kerbside services: 29% food waste, 15% dry recycling and 6% garden waste.

The capture rate for the main kerbside recyclable materials was found to be as follows:

Kerbside Collections	2011/12
Glass bottles & jars	92%
Paper	80%
Cardboard	76%
Cans & foil	56%
Plastic bottles	65%
Textiles & footwear	25%
Garden waste	75%
Food waste	44%
Other	1%
Total	48%

Recycling Centres were not covered at the time, but residual compositional analysis data is available from 2009/10.

These results show that the main materials remaining in the residual waste are:

Recycling Centres 2009/10	Residual Waste Composition
Carpet & underlay	17.2%
Other dense plastic non packaging	14.9%
Mattress	10.8%
DIY/Renovation waste	7.5%
Furniture (not reusable)	7.5%
Other dense plastic packaging	4.3%
Misc combustible	3.8%

Textiles (bedding & curtains)	3.7%
Other plastic film	3.7%
Textiles (clothes & shoes)	3.6%
Paint (not reusable)	3.2%
Furniture (reusable - natural wood)	2.3%
Furniture (reusable - MDF)	2.0%
Wood (composites)	1.8%
Furniture (other reusable)	1.5%
Misc non combustible	1.2%
Plate glass	1.1%
Total:	90.3%

CONTRACTS AND FINANCIAL SUMMARY

SWP has a collections contract with Kier MG (formerly May Gurney Recycling CIC) which was awarded in 2007 for 7 years. A further extension of 7 years up to 2021 was agreed in 2012 and it is possible to extend the contract by a further 7 years.

Waste Disposal Authority (WDA) contracts are awarded to Viridor Plc who manage landfill disposal, recycling centres, garden waste composting and anaerobic digestion of food waste. This was awarded in 2006 for 16 years until 2022 and can be extended by up to another 9 years with agreement of both parties.

Any changes to existing services can have cost implications and these need to be agreed by all SWP partners affected.

2013/14 Costs	
Waste Disposal Authority Contracts	
Landfill Disposal	£9,901,414
Recycling Centres	£8,449,143
Food Waste Digestion	£1,672,000
Garden Waste Composting	£1,503,505
Waste Collection Authority Contracts	
Kerbside Recycling Collections	£8,390,426
Communal Recycling Collections	£73,060
Kerbside Refuse Collection	£5,380,826
Communal Refuse Collection	£257,778

OVERVIEW OF WASTE MANAGEMENT

SWP handles approximately 245,330 tonnes of waste from Somerset households (2013/14 figures).

Once collected at the kerbside or through a recycling centre or bring bank, the materials are handled as follows:

- **Recycling materials** – sent for reprocessing. Each year, SWP publishes an ‘End Use Register’ which details what happens to all materials collected at the kerbside, bring banks and recycling centres.

Details can be found at: <http://www.somersetwaste.gov.uk/about/end-use/>

- **Residual waste** – sent to landfill at Walpole near Bridgwater, Broadpath near Uffculme, and Dimmer near Castle Cary.
- **Garden Waste** – composted at various sites, but mainly Priorswood, Taunton and Dimmer, Castle Cary.
- **Food Waste** – as of 2014, all of Somerset’s food waste is sent to Viridor’s new Anaerobic Digestion facility at Walpole near Bridgwater.

The kerbside sort system and the separation of materials at the recycling centres results in a high degree of quality separation. At the kerbside, incorrect materials are left in the resident’s box and tagged so the levels of contamination are low.

APPLICATION OF THE WASTE HIERARCHY

The application of the waste hierarchy in Somerset was subjected to an appraisal below to assess compliance with Regulation 12 (Waste Hierarchy).

Kerbside Collection						
Material	How it is managed	Is it mixed with any other waste after collection?	Where on the waste hierarchy is it?	Measures taken to prevent it?	Closed loop recycling?	Possibility of moving up the hierarchy?
Paper	Directly for reprocessing	No	Recycling	Yes - unwanted mail campaigns	Yes	No
Cardboard	Directly for reprocessing	No	Recycling	Promote reduction and reuse	Yes	No

Kerbside Collection (continued)						
Material	How it is managed	Is it mixed with any other waste after collection?	Where on the waste hierarchy is it?	Measures taken to prevent it?	Closed loop recycling?	Possibility of moving up the hierarchy?
Glass	Directly for reprocessing	No	Recycling	Promote reduction and reuse	Yes	No
Plastic Bottles	Separated at depot	Mixed with cans	Recycling	Promote reduction and reuse	Some closed and some open loop	No
Food and Drinks Cans	Separated at depot	Mixed with plastic bottles	Recycling	Promote reduction and reuse	Yes	No
Aluminium Foil	Directly for reprocessing	No	Recycling	Promote reduction and reuse	No	No
Other metals	Landfill	Collected with refuse	Disposal	Promote reduction and reuse and encourage other metals to be taken to recycling centres	No	Yes – technically recyclable
Food Waste	Directly for reprocessing	No	Recycling (anaerobic digestion)	Promote reduction - Love Food Hate Waste campaign	N/A	No
Garden Waste	Directly for reprocessing	No	Recycling (composting)	Yes – promote home composting	N/A	No
Drinks cartons	Landfill	Collected with refuse	Disposal	Promote reduction and reuse and encourage cartons to be taken to recycling centres	No	Yes - technically recyclable
Textiles	Directly for reprocessing	No	Reuse/ recycling	Yes – promote reuse	No	No

Kerbside Collection (continued)						
Material	How it is managed	Is it mixed with any other waste after collection?	Where on the waste hierarchy is it?	Measures taken to prevent it?	Closed loop recycling?	Possibility of moving up the hierarchy?
Rigid Plastics	Landfill	Collected with refuse	Disposal	Promote reduction and reuse	No	Yes - technically recyclable
Plastic Films	Landfill	Collected with refuse	Disposal	Promote reduction and reuse	No	Yes - technically recyclable
Sanitary	Landfill	Collected with refuse	Disposal	Yes – promote use of real nappies	No	Recovery or possibly recycling

Recycling Centres						
Material	How it is managed	Is it mixed with any other waste after collection?	Where on the waste hierarchy is it?	Measures taken to prevent it?	Closed loop recycling?	Possibility of moving up the hierarchy?
Paper	Directly for reprocessing	No	Recycling	Yes - unwanted mail campaigns	Yes	No
Cardboard	Directly for reprocessing	No	Recycling	Promote reduction and reuse	Yes	No
Glass	Directly for reprocessing	No	Recycling	Promote reduction and reuse	Yes for green and clear; no for brown	No
Plastic Bottles	Directly for reprocessing	No	Recycling	Promote reduction and reuse	Some closed and some open loop	No
Food and Drinks Cans	Directly for reprocessing	No	Recycling	Promote reduction and reuse	Yes	No

Recycling Centres (continued)						
Material	How it is managed	Is it mixed with any other waste after collection?	Where on the waste hierarchy is it?	Measures taken to prevent it?	Closed loop recycling?	Possibility of moving up the hierarchy?
Other metals	Directly for reprocessing	No	Recycling	Yes – promote reuse and appliance repair	No	No
Garden Waste	Directly for reprocessing	No	Recycling (composting)	Yes	N/A	No
Drinks cartons	Directly for reprocessing	No	Recycling	Promote reduction and reuse	No	No
Textiles	Directly for reprocessing	No	Reuse/recycling	Yes – promote reuse	No	No
Rigid Plastics (trial sites)	Directly for reprocessing	No	Recycling	Promote reduction and reuse	No	Yes - technically recyclable
Plastic Films	Landfill	Collected with residual waste	Disposal	Promote reduction and reuse	No	Yes - technically recyclable
Sanitary	Landfill	Collected with residual waste	Disposal	Yes – promote use of real nappies	No	Recovery or possibly recycling
WEEE	Directly for reprocessing	No	Recycling	Promote reduction, reuse and repair	No	No
Wood	Directly for reprocessing/recovery	No	Recycling/recovery	Promote reduction and reuse	No	No
Furniture	Directly for reprocessing	No	Reuse/recycling / disposal	Promote reduction, reuse and repair	No	Increased reuse

Recycling Centres (continued)						
Material	How it is managed	Is it mixed with any other waste after collection?	Where on the waste hierarchy is it?	Measures taken to prevent it?	Closed loop recycling?	Possibility of moving up the hierarchy?
Hazardous	Directly for reprocessing	No	Disposal	Promote reduction and reuse	No	No
Mattresses	Directly for reprocessing	Collected with residual waste	Disposal	Promote reduction and reuse	No	Yes - technically recyclable
Soil	Directly for reprocessing	No	Recycling	Promote reduction and reuse	No	No

There are only a few materials (e.g. nappies, fines, ceramics) that are not targeted for recycling by either the kerbside collection system or the recycling centres. Space constraints on collection vehicles mean that some materials – waste electrical and electronic equipment (WEEE), cartons, metals are currently only collected at recycling centres and not at the kerbside.

SWP has applied the waste hierarchy using communications to prevent waste, aiding reuse, and setting up comprehensive recycling systems covering nearly all waste types where technically feasible. Some wood is sent for recovery and residual waste is landfilled. SWP therefore meets the requirements of Regulation 12.

IS SEPARATE COLLECTION OF THE FOUR MATERIALS ACHIEVED?

Under the Regulations it is necessary to ensure that waste undergoes recovery operations in accordance with Articles 4 (Waste Hierarchy) and 13 (Protection of Human Health and Environment), and to facilitate or improve recovery.

The key question for the Authority is whether collecting the material separately will lead to an increase in:

- a) Quantity available for recycling; and/or
- b) Quality available for recycling.

Quality may be defined in different ways but to ascertain a clear, unequivocal assessment Somerset Waste Partnership has defined it as 'the quantity of material available for closed loop applications'. If a commingled system makes the same quantity of material available for closed loop applications compared to separately

collecting each material, then the environmental benefits can be considered the same.

Paper and Cardboard

Paper and cardboard is collected separately in all recycling collections. SWP regularly promotes reduction of paper through campaign to reduce unwanted mail. Paper and cardboard are closed loop recycled into other paper and cardboard products, with newspaper, magazines and other paper used to make newsprint.

The new service arrangements to be introduced for schools will involve paper and cardboard grades being collected mixed and co-mingled with plastic bottles and cans. Currently the quality of paper from schools is low and therefore much of it is sent for recycling as a mixed paper grade used to make cardboard. With the new arrangements, the co-mingled dry materials from schools recycling collections will be delivered to a Materials Recovery Facility (MRF) in Taunton, where the materials will be sorted from conveyors into the following streams: office paper, old cardboard cartons (OCC), newsprint grade paper, low quality mixed papers, mixed plastic bottles, steel cans and aluminium cans. So, with the new arrangements for schools, higher grades of office paper and cardboard can be separated for recycling than can be achieved with current collection arrangements.

SWP arrangements for paper and cardboard are compliant with the separate collection requirements. New service arrangements proposed for schools will involve co-mingled collections for paper and cardboard, but separate collection is not necessary as higher quality recycling will be achieved by the new collection method.

Glass

Glass bottles and jars are collected separately both at the kerbside and recycling centres. Collections at the kerbside are colour separated (except communal which is mixed, but predominantly green and mixed with the green glass). Kerbside glass is closed loop recycled into other glass products and is not being devalued by the mixed glass component. At recycling centres clear and green glass is sold to a reprocessor for closed loop recycling, and brown is sent for glass fibre insulation production.

Glass bottles and jars are collected colour separated for closed loop recycling at bring sites. Schools do not produce glass containers for collection.

Plate glass is collected separately at recycling centres. It is open loop recycled into glass fibre insulation products.

Other types of glass such as glass ware, Pyrex, crystal etc. are not currently separated for collection and cannot be recycled with container glass as it contaminates the recycling process and can result in a defective end product. The composition analysis suggests that these other types of glass compose around 1% of the residual waste stream. There is no commercial demand for this product for closed loop recycling.

Referring back to the composition analysis, SWP are capturing around 92% of all glass bottles and jars in household waste. Collecting it separately ensures a high quality product and reduces contamination from other types of glass.

SWP glass collections are compliant with the separate collection requirements.

Metals

SWP collects metal packaging at the kerbside – food tins and drinks cans and aluminium foil.

Other metal items such as cookware and appliances are not collected at the kerbside but it is recommended that scrap metal is taken to recycling centres where they are separately collected.

Food tins and drinks cans are collected mixed with plastic bottles both at the kerbside and at the bring sites. The plastic bottles and tinplate steel and aluminium cans are separated at Kier's collection depots at Bridgwater, Evercreech and Walford Cross. Those from bring sites are sorted by the service contractor, DS Smith. Both metal streams are recycled into new metal items through both closed and open loop recycling.

The metals from recycling centres (including food tins and drinks cans at all sites except Taunton) and aluminium foil from the kerbside are sorted by a scrap metal merchant and sold on for recycling into other metal products. Food and drinks cans from Taunton Recycling Centre are sorted and sold as aluminium and steel loads for recycling into other metal products.

Although the metals from the kerbside are collected mixed with plastic bottles, they are separated to a degree that enables closed loop recycling. An overband magnet is used to separate ferrous metals and an eddy-current separator for aluminium, which are standard techniques for extracting these materials. SWP currently captures around 56% of cans and foil for recycling. To separate these materials at the point of collection would require a change in the configuration of collection vehicles.

Currently, cans are collected separately for recycling from schools. With new service arrangements to be introduced cans will be collected co-mingled with paper, cardboard and plastic bottles. Steel and aluminium cans will be sorted, using overband magnets and eddy-current separators, from the other dry materials and sent for closed loop recycling.

SWP collections for metals are compliant with the separate collection requirements, apart from cans collected at recycling centres (except Taunton) for which the practicability test is needed to judge whether the separate collection of cans from scrap metal is technically, environmentally and economically practicable (TEEP).

Plastics

Plastic bottles are collected at the kerbside and at recycling centres. Plastic pots,

tubs and trays are not collected at the kerbside, and not at most recycling centres; but there is a current trial at Taunton and Wellington Recycling Centres collecting plastic pots, tubs and trays which may be expanded to other recycling centres if it is successful.

Plastic bottles are collected mixed with both food tins and drinks cans at the kerbside and at the bring sites. The mixed plastics and cans are separated out at Kier's depots at Bridgwater, Evercreech and Walford Cross. Those from bring sites are sorted by the service contractor, DS Smith. The materials are easily separated and result in a plastic bottle load and aluminium and steel loads. The plastic bottles are recycled into new plastic items through both closed and open loop recycling.

Plastic bottles are collected separately at recycling centres. There is also a trial running presently at Taunton and Wellington Recycling Centres to separately collect plastic pots, tubs and trays. If successful and affordable the possibility of extending this to other recycling centres will be considered.

SWP does not offer collection of other non-packaging rigid plastics or plastic films.

Although the plastic bottles from the kerbside are collected mixed with cans, they are separated to a degree that enables closed loop recycling, using standard techniques to extract ferrous metals and aluminium. SWP currently captures around 65% of plastic bottles. To separate these before collection would require a change in the configuration of vehicles used for collections.

Currently, plastic bottles are collected separately for recycling from schools. With new service arrangements to be introduced plastic bottles will be collected co-mingled with paper, cardboard and cans. Plastic bottles will be sorted from the other dry materials at a MRF in Taunton and sent with separately collected plastic bottles to the same reprocessors, so the same high quality of recycling will be achieved, which includes both closed and open loop recycling.

Plastic bottles are not required to be collected separately from cans to achieve high quality recycling and so SWP collections at the kerbside, bring sites and recycling centres are compliant. New service arrangements proposed for schools will involve co-mingled collections for plastic bottles with cans, paper and cardboard, but separate collection is not necessary as the same quality of recycling will be achieved by the new collection method. As SWP does not collect all plastics, the practicability test is needed to judge whether the collection of other plastics is technically, environmentally and economically practicable (TEEP).

PRACTICABILITY TESTS (TEEP)

A) Cans at recycling centres

SWP currently collects cans mixed with scrap metal at all recycling centres, except Taunton where the cans are collected separately. The TEEP test has been applied to cans collected with scrap metal at recycling centres, except Taunton, to see if separate collection should be considered.

Technically practicable test:

The separate collection of cans at all recycling centres is technically practical.

Environmentally practicable test:

Depending on additional transport impacts for the quantities involved, the separate collection of cans to allow their closed loop recycling should have a positive environmental effect.

Economically practicable test:

The quantity of cans taken to recycling centres is relatively small, especially as there are not separate collection points for them, except at Taunton, which is why they are collected with scrap metal at other sites.

Taunton Recycling Centre collected 4.6 tonnes of cans and 957.1 tonnes of scrap metal in 2013/14. Over 100 times more cans were collected at the kerbside in Taunton Deane - 509.5 tonnes in 2013/14.

Taunton Recycling Centre is situated alongside the Viridor Materials Recovery Facility (MRF) at Priorswood, Taunton, where ferrous and aluminium cans can be separated. Cans from other recycling centres would need to be transported using a collection vehicle to this facility to allow for their separate recycling from scrap metal. This is not considered to be economically practicable.

Outcome of the practicability test for cans at recycling centres:

The separate collection of cans at recycling centres passes the technical practicability test and the environmental practicability test, but does not pass the economic practicability test and so separate collection is not practicable.

B) Other plastics

SWP does not currently offer recycling collections of plastic pots tubs and trays (except for a small trial at Taunton and Wellington Recycling Centres), plastic films and other dense plastics. The TEEP test has been applied to each of these plastic streams to see if separate collection should be considered.

Technically practicable test:

Plastic pots, tubs and trays – collection of these is technically practical. SWP recently conducted trials in Taunton Deane to add pots, tubs, and trays to the kerbside recycling service. The results are still being assessed, but it is technically possible to collect and recycle these items. A trial is currently underway to collect these plastics in banks at Taunton and Wellington Recycling Centres.

Plastic films – it is technically possible to recycle carrier bags and similar films. There are limited markets to recycle carrier bags and mixed domestic plastic films, partly

due to the level of contaminants they can contain. They are also very bulky to collect separately and difficult to sort from other materials, including when mixed with plastic bottles and other rigid plastics. Reprocessors are working on methods to separate and recycle domestic plastic film, but these are not yet widely used or commercially proven.

Other non-packaging dense plastics – there are limited markets for these materials and previous trial collections at recycling centres found the end-use markets were unreliable with local reprocessors finding that end-uses were insufficient to allow continued collections. SWP will continue to focus on prevention and reuse messages for non-packaging dense plastics, but will also keep new end-use opportunities under review.

Environmentally practicable test:

Recycling of plastic pots, tubs and trays would have a positive environmental effect compared to landfill. WRAP report there is a carbon saving of 0.62 tonnes of carbon dioxide equivalent per tonne for plastics of this type when recycled. As a comparison, plastic bottles have a carbon saving of 1-1.5 tonnes per tonne recycled. The benefit would be reduced if there are high levels of rejected materials at the point of reprocessing.

Economically practicable test:

Plastic pots, tubs and trays could be added to SWP's kerbside and communal collections, as they were during the Recycle More trials in Taunton Deane in 2014. However, this is not currently economically practicable.

Extra costs were incurred during the Recycle More trials to provide additional vehicle capacity for collections and, most significantly, to cover the extra time taken for plastic pots, tubs and trays, as well as the other additional materials, to be unloaded at the Viridor Materials Recovery Facility (MRF) at Priorswood, Taunton. The other standard materials, including food waste, were unloaded as usual at Kier's collection depot at Walford Cross, near Taunton.

Currently Somerset collection depots do not have sorting or bulking facilities for plastic pots, tubs and trays, only for plastic bottles and cans, as well as bulking facilities for the other dry materials and food waste currently collected.

If plastic bottles, pots, tubs and trays were all to be collected, sorted (to remove cans) and baled together for bulk haulage, this would reduce the value of the plastic bottles collected, as mixed plastics have a lower value than plastic bottles.

Significant extra costs would also arise if plastic bottles and plastic pots, tubs and trays were to be collected separately using additional collection vehicles.

SWP's current collection contract was awarded before collections of plastic pots, tubs and trays started in the UK and does not include provision for their inclusion, as collection and sorting methods were not proven at the time.

The next opportunity to add plastic pots, tubs and trays to SWP kerbside and communal collections arises when the current recycling collection fleet needs replacing from 2016/17, when replacement of collection depot infrastructure will also be considered. A programme of work, starting with the Recycle More trials in 2014, is underway to consider the future model for SWP's collections when recycling vehicles are replaced. Plastic pots, tubs and trays should then be added to collections if it is affordable to do so and stable end-use markets are available, preferably in the UK.

Outcome of the practicability test for plastics:

Plastic films and other dense non-packaging plastics do not pass the technical practicability test and so separate collection is not practicable.

Plastic pots, tubs and trays pass the technical practicability test and the environmental practicability test, but do not pass the economic practicability test so separate collection is not practicable, but this will be reviewed at recycling centres using results of the trials that started in Taunton Deane in November 2014.

OVERALL CONCLUSIONS

Regulation 12 requires local authorities to meet the waste hierarchy, and places no restriction on the types of waste that it should be applied to. The assessment of Regulation 12 concluded that this regulation has been met by SWP collections.

Regulation 13 states '*that from the 1st January 2015 all WCAs will be required to collect paper, metals, plastics and glass separately, where doing so is:*

- *Necessary to ensure that waste undergoes recovery operation in accordance with Articles 4 and 13 of the Waste Framework Directive and facilitate or improve recovery; and*
- *Technically, environmentally and economically practicable (TEEP).*

SWP's recycling collection systems have been subjected to these tests and judged to be compliant as summarised below:

- Paper and cardboard are separately collected at the kerbside, bring sites and recycling centres and sent for closed loop recycling. New service arrangements for schools will allow higher quality recycling of their paper and cardboard.
- Plastic bottles and metals are collected mixed at the kerbside and bring sites, but it is not necessary to collect them separately as they are separated and achieve a high quality material suitable for closed loop recycling.
- Plastic bottles at recycling centres are separately collected.
- Separate collection of plastic pots, tubs and trays is currently being trialled at recycling centres in Taunton Deane with a view to expanding this to other recycling centres if the trial is successful and proves affordable.
- Glass is collected separately at the kerbside and at bring sites and colour separated (except for the communal service). Kerbside glass is closed loop

recycled. Glass is collected colour separately at recycling centres, with clear and green closed loop recycled and brown open loop recycled. Plate glass is also collected separately at recycling centres and open loop recycled.

- TEEP tests show that although it is technically and environmentally practicable to collect cans separately from scrap metal at recycling centres, it is not currently economically practicable to do so in Somerset, except at Taunton Recycling Centre which is located alongside Viridor's sorting facility.
- TEEP tests show that although it is technically and environmentally practicable to collect plastic pots, tubs and trays, it is not currently economical to do so in Somerset. This is being reviewed for 2016/17 when the current recycling vehicle fleet is replaced. It is not technically practical to collect plastic films and other dense plastics at this time.

The overall conclusion is that SWP meets separate collection requirements.

SWP will continue to work to increase capture of materials for recycling and to work with both Kier and Viridor to continue to improve material quality.

FUTURE REVIEWS

As indicated in this report, further service reviews are planned for communal and kerbside recycling collections. Any changes in collections will be reassessed to ensure they continue to comply with the regulations.

Reviews will also be conducted for future contract renewals and when other changes to collections systems are considered.