Cabinet – 17 December 2014

Compliance with the Waste Framework Directive and the Waste (England and Wales) Regulations 2011 - Recycling Collections and Material Streams

Portfolio: Councillor L Jeavons, Environment and Transport

Related portfolios: None

Service: Clean and Green Services

Wards: All

Key decision: No

Forward plan: No

1. Summary

1.1 The Council is required to meet the requirements of the European Commission's Waste Framework Directive (WFD) and The Waste (England and Wales) Regulations 2011 in relation to recycling collections and material streams.

1.2 The WFD includes a target that separate kerbside collections of paper, glass, cans and plastic must be implemented by January 2015. Walsall Council does not carry out separate collections but collects mixed (co-mingled) materials at the kerbside in a 240 litre wheeled bin.

1.3 Current interpretation is that co-mingled recycling collections comply with the WFD providing it can be evidenced that separate collections are not technically, environmentally and/or economically practicable (TEEP) and a high quality recyclate can still be achieved.

1.4 Local authorities need to have evaluated their individual compliance with WFD by January 2015 and ensure evidence is retained to support decisions. The Environment Agency will be responsible for ensuring robust assessments have been carried out but as yet no guidance has been published about how this will be enforced or the penalties for non compliance.

1.5

1.5 Re-assessment of compliance with WFD and TEEP requirements must be carried out if significant changes to waste collection or disposal arrangements are planned such as:

a) New refuse collection vehicle fleet
b) New waste containers

c) Procuring new waste treatment contracts
d) Service changes

Re-assessments will have the potential to affect domestic refuse collections in the borough.

2. Recommendations

2.1 That Cabinet agrees the Statement of Compliance required pursuant to the Waste Framework Directive, the Waste (England and Wales) Regulations 2011 and TEEP Requirements (**Appendix A**) which contains a justification for continuing with the current arrangements of co-mingled recycling collections and evidences how Walsall Council achieves TEEP compliance.

2.2 That Cabinet note the need to review and re-assess compliance with the Waste Framework Directive, the Waste (England and Wales) Regulations 2011 and TEEP Requirements when the changes referred to in paragraph 1.5 outlined above are implemented and that this may change how the service is delivered in the future.

3. Report detail

3.1 The UK Government transposed the WFD into UK law through the Waste (England and Wales) Regulation 2011 (the Regulations). The Regulations were amended by the Waste (England and Wales) (Amendment) Regulations 2012, which came into force on 1 October 2012. The amending Regulations relate to the collection of waste, and impose a requirement that by 1 January 2015 waste paper, metal, plastic and glass must be collected separately. The purpose of the legislation is to improve the quality of both the materials sent for re-processing and the end-product.

3.2 Current interpretation of the WFD is that co-mingled recycling collections comply with the Waste Framework Directive providing it can be evidenced that separate collections are not technically, environmentally and economically practicable (TEEP) and a high quality recyclate can still be achieved.

3.3 Earlier this year, the Campaign for Real Recycling instigated a Judicial Review in order to challenge the UK's interpretation of WFD. The outcome of the Judicial Review supported co-mingled collections (further detail is given in section 7 of this report). It suggested that, although kerbside sorting of recycling materials could be considered the desired option to ensure high quality recycling materials, co-mingled recycling collection is acceptable, provided authorities have assessed that kerbside sorting is either:

a) Not necessary to ensure the appropriate quality of material for its intended end use (i.e. this can be achieved by the recycling re-processor using modern material recovery technology to ensure recovered materials are of the required quality).

b) A TEEP review evidences it is not practicable to carry out kerbside sorting.

3.4 Local authorities need to have evaluated their individual compliance with WFD by January 2015 and ensure evidence is retained to support this decision.

3.5 Currently Walsall Council does not carry out separate collections but instead collects mixed (co-mingled) materials at the kerbside in a 240 litre wheeled bin on a fortnightly basis. The Council has a contract until March 2016 with Casepak for the re-processing of co-mingled recycling at their Material Recovery Facility in Leicester. This is a state of the art facility which opened in October 2011.

3.6 All local authorities must analyse and assess available evidence in order to satisfy themselves that they meet the requirements of WFD and the Regulations and are TEEP compliant when making decisions about the provision of waste collection and disposal arrangements. To help local authorities decide whether collection and disposal arrangements meet the requirements set out in the WFD, a working group comprising Waste Recycling Action Programme , London Waste and Recycling Board and the Waste Network Chairs , assisted by environmental consultants Eunomia, developed a 'route map'. Walsall has utilised this route map to undertake a TEEP review and ensure that the authority is compliant with the WFD by January 2015.

3.7 Officers are satisfied that current arrangements will provide quality products sufficient to satisfy WFD and TEEP requirements. **Appendix A** contains Walsall Council's Statement of Compliance with the WFD, the Regulations and TEEP Requirements, setting out the reasons for continuing with the current arrangements of co-mingled recycling collections and evidences how Walsall Council currently achieves WFD and TEEP compliance.

3.8 The Environment Agency will be responsible for ensuring robust assessments have been carried out but as yet no guidance has been published about how this will be enforced or the penalties for non compliance.

3.9 Compliance with WFD and TEEP requirements must be re-assessed if significant changes to waste collection or disposal arrangements are planned. In 2015/16 the potential changes by Walsall Council to refuse collection would trigger a review of compliance with WFD and TEEP requirements. Any such changes aredependent on the outcome of the ongoing budget setting process for the period 2015/16 to 2018/19.

4. Council priorities

4.1 'Ensuring the Council complies with the Waste Framework Directive, the Waste (England and Wales) Regulations 2011 and TEEP Requirements will contribute to delivering the following priorities contained in the Corporate Plan and The Walsall Plan 2013-16:

- Managing available resources responsibly for the benefit of our community;
- Improving Health and Wellbeing, including independence for older people;

- Creating safe, sustainable and inclusive communities – reducing levels of crime and providing the right environment for people to live in.

5. Risk management

5.1 There is some risk of challenge under the WFD if co-mingled collections fail to comply with the standards required by the TEEP process. Were this to be successful it may become necessary to reintroduce kerbside sorted collections, which would have a lead in time of 12 – 18 months to become operational.

5.2 The main risk is if the quality standard of co-mingled material is not high enough. The biggest factor affecting quality of recycling material is the level of contamination. It is important that contamination levels in materials sent for reprocessing are managed by Walsall Council at an acceptable level. For these reasons, it is expected that continued education and encouragement with our residents and landlords will be necessary to control the risk of challenge.

6. Financial implications

6.1 None arising at this time providing co-mingled collections deliver the required quality of recyclable material.

6.2 Any future service changes will trigger further TEEP reviews that may have financial implications.

7. Legal implications

7.1 The legislation will be enforced by the Environment Agency who will take enforcement action where necessary. No guidance has been published about how this will be done or the penalties for non compliance.

7.2 The judicial review referred to in paragraph 3.4 is the case of R (on the application of UK Recyclate Limited and others) v Secretary of State for the Environment Food and Rural Affairs and others [2013] EWHC 425 (Admin). The Court held that the obligation to set up separate collection of paper, metal, plastic and glass from 2015 is restricted by both the practicability and necessity requirements, as described in this report.

8. Property implications

8.1 None arising from this report.

9. Health and wellbeing implications

9.1 In September 2012 the Council adopted the Marmot Objectives as objectives for improving Health and Wellbeing and reducing inequalities for the people of Walsall. These objectives have provided the framework for the Joint Strategic

Needs Assessment, the Health and Wellbeing Strategy, the Sustainable Communities Strategy, and "The Walsall Plan". The recommendations in this Report are planned against these priorities.

10. Staffing implications

10.1 None arising from this report.

11. Equality implications

11.1 None arising from this report as existing services will continue unchanged. If, in the future, changes to the refuse collection service are necessary an equality impact assessment will be carried out.

12. Consultation

12.1 Legal Services and Finance have been consulted and their comments included in this report.

12.2 Officers from Walsall Council co-ordinated meetings with Sandwell, Dudley and Wolverhampton Councils during September, October and November 2014 to share useful information between the authorities. As collection and disposal arrangements are different for each authority like for like comparison was difficult.

Background papers

None

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8 December 2014

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Appendix A

Walsall Council
Statement of Compliance with Waste Framework Directive, Waste (England and Wales) Regulations 2011 and TEEP Requirements

The Council is required to meet the requirements of the European Commission's Waste Framework Directive (WFD) and Waste (England and Wales) Regulations 2011 in relation to recycling collections and material streams. The WFD includes a target that separate kerbside collections of paper, glass, cans and plastic must be implemented by January 2015. The UK's interpretation is that comingled recycling collections comply with the WFD providing it can be evidenced that separate collections are not technically, environmentally and economically practicable (TEEP) and a high quality recyclate can still be achieved.

This statement aims to show that it is not `technically, environmentally and economically practicable' (TEEP) for Walsall Council to collect dry recycling from households as separate materials.

Current Position

Walsall Council operates a co-mingled kerbside collection of dry recycling materials for households in the borough. This consists of a 240 litre wheeled bin per household for plastics, glass, cans, paper and card. The bins are collected on a fortnightly basis using a conventional refuse collection vehicle (RCV) i.e. two rear hydraulic lifts filling a single compartment for materials which are then compacted. The RCVs deliver the material they collect to a transfer station (Fryers Road) from where it is transported in bulk to a Materials Recovery Facility (MRF) in Leicester, operated by Casepak. The Council has a contract until March 2016 with Casepak for the reprocessing of co-mingled recycling.

Residual waste is collected every week in a 140 litre wheeled bin. The collection vehicles also deliver this waste to the transfer station in Fryers Road. It is then transported in bulk to 'W2R', an Energy Recovery Facility in Calf Heath, Staffordshire.

Garden waste is collected on a fortnightly basis in a 240 litre wheeled bin. This waste does not go through the transfer station, instead the collection vehicles deliver it directly to local re-processors for open windrow composting.

Walsall Council's current recycling rate is in excess of 40%, including green waste, and the authority aims to achieve the statutory target of 50% by 2020.

Any changes to the current position described above will require a re-evaluation to be carried out to ensure continuing compliance.

Proposed changes that will trigger a review include:

a) Procurement of the Treatment, Recycling and Final Disposal of Municipal Waste Contract
b) Changing general waste collections to Alternate Weekly Collections (AWCs)
c) Introduction of a charge for garden waste collections

d) Revised opening hours at the Household Waste Recycling Centres (HWRCs)

Outcome of TEEP Evaluation

Based on the findings of the evaluation carried out, Walsall Council will continue with co-mingled recycling collections. This will comply with the WFD because it can be evidenced that separate collections are not technically, environmentally and economically practicable (TEEP) and a high quality recyclate is being achieved.

TEEP Evaluation

TEEP consists of three elements which must be assessed individually in order to evidence compliance with WFD as set out below.

Technical Evaluation

Separate Collections of Recyclable Materials

Technically the separate collections of recyclable materials require different configurations of refuse collection vehicles and different bin types to co-mingled collections.

The typical method of carrying out separate collections utilises refuse collection vehicles with ‘split bodies’ i.e. individual compartments for separate materials with material being collected in a mixture of additional bins, boxes or bags.

There are multiple designs of split bodied vehicles but their effectiveness depends on the load capacity of the compartments being correct i.e. 50/50 split or 60/40 split etc. If the capacity of the compartments is not correctly configured it means that some bays will fill whilst space remains in others. How quickly the first compartment fills determines how often the vehicle needs to be emptied. Once one compartment is full the vehicle must be emptied resulting in more journeys to the disposal site, potentially making this an inefficient process. The alternative to this approach is to collect separate materials on separate conventional vehicles, increasing the number of collection vehicles required and increasing the level of disruption caused by collections in an area.

The number and type of bins, boxes or bags used for dry recycling collections must also be correct. Using a wheeled bin per material is simple and the bins can be emptied using hydraulic lifts on the vehicles. It also improves health and safety for the operatives as this system reduces the manual lifting and handling required and means operatives do not come into contact with broken glass or sharp edges on cans etc. Residents may however struggle with space to store multiple containers.

There are options to collect materials in boxes or bags. Using boxes or bags re-introduces the option to use one container for more than one material but means operatives are then required to sort the materials at the kerbside. This increases the manual lifting and handling required and means operatives come into contact with broken glass or sharp edges on cans etc.

Co-mingled Collection Process

Co-mingled collections enable collection of a wider range of materials per vehicle. Collecting materials co-mingled enables the use of a conventional refuse collection vehicle (RCV) and enables all materials to be collected until the collection hopper is full or maximum gross vehicle weight is reached, making this a more efficient process as part full vehicles do not have to be emptied.

The collection of co-mingled materials in a closed plastic wheeled bin avoids the need for handling of materials by collection crews. This reduces the risk of injuries from the handling of materials with potentially sharp edges e.g. glass and cans. It also reduces manual handling injuries as emptying wheeled bins with a conventional RCV avoids operatives lifting full containers.

The factors affecting the recycling rate include people, infrastructure and method of collection. The higher performing recycling authorities have two things in common:

a) Providing sufficient recycling container capacity
b) Dry recyclables are collected via co-mingled collection service

The current co-mingled collection service provides sufficient capacity for dry recyclable materials.

Sorting of materials after collection

Walsall Council has a 5 year contract with Casepak for the co-mingled dry recyclable materials to be re-processed at a Materials Recovery Facility (MRF) in Leicester. The contract commenced in 2011 when the facility opened and expires in March 2016.

Technically the main concern with co-mingled recycling collections is contamination of other materials by glass fragments, with the main issue being the contamination of paper with these fragments. Casepak supply paper from their MRF to Aylesford Newsprint Ltd where it is being used in the manufacture of premium quality newsprint. This is a high value use of the material, with no problems being reported due to glass contamination and demonstrates that an effective separation of materials is taking place.

Casepak currently report a 9% rejection rate of material processed through the MRF. The main contaminates are textiles, food and waste fragments. This is mainly attributable to residents putting incorrect items in their recycling bins rather than demonstrating an inefficient sorting process.

Casepak has suitable markets for all materials recovered demonstrating that it is technically practicable to collect materials co-mingled. How the materials are recovered is listed below;

Material Stream:	Comprising of:	Recycling Process:	End Product:
Mixed Papers	Office white, envelopes, wrapping paper, phone directories, junk mail & drinks cartons (tetra-packs)	Closed Loop	Paper packaging
Newspapers & Magazines	Newspapers & Magazines	Closed Loop	Newspapers
Cardboard/OCC	Corrugated boxes, brown card, coloured card	Closed Loop	Cardboard/Brown Paper Packaging
Glass	Mixed coloured drink bottles, drink glass & glass food containers	Closed Loop	Re-melt for new glass products
Aluminium	Cans, aerosols & aluminium foil	Closed Loop	Aluminium Ingots
Steel	Drink cans, food tins,	Closed Loop	General steel products
PET Bottles	Clear plastic bottles	Majority recovered for Closed Loop	Plastics pellets for new PET bottles, small % used for cleaning products.
HDPE Bottles	Milk Bottles	Split % Closed Loop	New HDPE Bottles, small % used for plastic film.
LDPE/Mixed Jazz Films	Low density polyethylene/mixed colour plastic bags	Split % Closed Loop	Plastic Film. Small % used as oils and fuel.
Mixed Plastics	Plastics pots, trays and coloured bottles of PVC, PP and PS grades	Split % Closed Loop	Variety of plastic products including film. Small % used for insulation materials and cleaning products.

This evidences that although different collection methods could be employed, technically separate kerbside collections of paper, glass, cans and plastic are not necessary to ensure the appropriate quality of material for its intended end use. Although co-mingled collections generally provide a lower quality base material for the MRF to process, the required quality is currently being achieved by the recycling re-processor using modern material recovery technology.

Economic Evaluation

The economic evaluation has been split into five components

a) Vehicles
b) Collection crews
c) Refuse containers
d) Transfer Station
e) Reprocessing

Vehicles

Walsall Council operates a fleet of 34 conventional RCV's which are able to collect dry recycling or general waste. This means vehicles can be interchangeable depending on service needs, which reduces the overall number of vehicles required. Vehicles are either purchased from capital funding or via a lease arrangement. The majority of vehicles are currently on a lease agreement. There are 8 RCV's usually used for recycling collections.

Achieving the Waste Framework Directive target of separate collections of paper, glass cans & plastic by January 2015 would require the vehicle fleet to be changed and increased. There are two options available:

a) Procure new split bodied vehicles
b) Procure additional conventional RCV's

Procuring new split bodies vehicles

A split bodied vehicle (2 compartments or more) is more expensive to purchase a conventional vehicle, and cost circa £150k each. This option means the fleet of 8 vehicles used for recycling collections would have to be replaced costing £1.2 million. It is unlikely that 8 split bodied vehicles would be sufficient to complete the current refuse collection schedules meaning additional vehicles would be required. Depending on the body configuration of the vehicle, the fleet would have to be doubled (16 vehicles), increasing the overall replacement vehicle costs to £2.4 million. Extra vehicles would also incur additional running costs for fuel, repairs and maintenance. As the vehicles are leased or financed over 7 years this cost would be spread over this period. In total, with leasing costs, fuel, maintenance and other associated running costs, an RCV costs circa £50k each per annum to operate. The 8 vehicles currently in use cost £400k per annum. Changing to split bodied vehicles and increasing the recycling collection fleet to 16 would cost an additional £400k per annum.

Procure additional conventional RCV's

A conventional RCV costs circa £130k to purchase and can be used to collect a single material but more vehicles would be required to complete the collection schedules.

It is likely that the existing fleet would have to be increased by a further 8 -12 vehicles (allowing for redesign of the collection schedules), costing circa £1m to £1.5m. Extra vehicles would also incur additional running costs for fuel, repairs and maintenance. As the vehicles are leased or financed over 7 years this cost would be spread over this period. In total, with leasing costs, fuel, maintenance and other associated running costs, an RCV costs circa £50k each per annum to operate. This option would therefore cost an additional £400k - £600K per annum.

The lead-in time required to procure new vehicles, particularly split bodied vehicles, is around 48 weeks and implementation of a re-designed service, including public consultation, would take 18 – 24 months.

Collection Crews

A recycling collection crew consists of a driver and two loaders and costs circa £120k per annum. Provision of an additional 8 crews to operate the additional vehicles would cost £960k per annum.

Refuse Containers

The current 240 litre wheeled bins used for co-mingled collections would become redundant and would need to be replaced with kerbside boxes. A minimum of four x 55 litre boxes per household would be required. This would leave each household with slightly less capacity than the current arrangements and would result in a cost to the Council of approximately £1.2m.

Transfer Station

Separately collected materials must be kept segregated before being sent for re-processing. The Transfer Station at Fryers Road, used to bulk materials prior to transport to the MRF in Leicester, currently does not have the capacity, and is not designed, to handle separately collected materials.

The Transfer Station also handles the residual waste collected in the borough. This is delivered to the Transfer Station by the collection vehicles prior to being transported in bulk for disposal via, W2R, an Energy Recovery Facility in Staffordshire.

One option would be to source an alternative or extra transfer station facility. Costs or the feasibility of this option has not been assessed but is likely to be in the region of £325K per annum.

A second option would be to deliver the kerbside collected residual waste directly to the W2R facility located at Four Ashes in Staffordshire and reconfigure the existing transfer station facility to accept separate materials. There would need to be a substantial amount of investment in the current facility to create four undercover indoor bays for the separately collected materials. Taking into account the extra distance that the vehicles would need to travel, delivering directly to W2R would require an additional three domestic vehicles and crew, costing £510k per annum.

Reprocessing

The Council has a contract until March 2016 with Casepak for the reprocessing of co-mingled recycling at a MRF in Leicester. This generates an income, which for 2014/15 is predicted to be circa £250k. The value of the material sent for re-processing depends on the level of contamination it contains. It is likely separately collected materials would contain less contamination and therefore have a higher value. Based on 33,000 tonnes this would result in approximately £400k extra income per annum.

Potentially the waste that is currently contaminating recycling collections will transfer to the residual waste stream. This could result in an additional 8000 tonnes of material being collected as residual waste. If so one extra domestic crew, costing £170k will be required to accommodate the extra tonnages and the cost of disposing of residual waste will increase by circa £400k per annum.

A summary of the additional costs/income is shown below:

Costs		**Income**	
Description	Cost per annum (£ 000)	Description	Value per annum (£ 000)
Additional 8 recycling vehicles	400	Increased income due to less contamination	400
Additional 8 recycling crews	960		
Additional 4 residual waste crews to facilitate delivering directly to W2R and diverting 8000 tonnes to the residual waste stream.	680		
Additional disposal costs for diverting 8000 tonnes to the residual waste stream.	400		
Total Costs per Annum	2,440	Total Income per Annum	400
One Off Costs			Cost (£ 000)
Procurement of alternative bins, boxes or bags			1,200
Alternative transfer arrangements/reconfiguration of current transfer station			Not assessed
		Total one off costs	In excess of 1,200

Additional costs of circa £2 million per annum, plus one off costs in excess of £1.2 million, evidences that economically separate kerbside collections of paper, glass, cans and plastic are not practicable.

Environmental Evaluation

By retaining a co-mingled recycling collection the percentage of total domestic waste sent for recycling will remain at 40 – 45%. Should a separate kerbside collection of paper, glass, cans and plastic be introduced this may decline to an estimated 35%. This means the statutory target of 50% by 2020 will not be achieved. Additionally there would be an additional 8,000 tonnes of material diverted back into the residual waste stream.

The current co-mingled recycling service requires 8 collection vehicles. It is estimated that a separate kerbside collection of paper, glass, cans and plastic would require 16 vehicles. An extra 4 vehicles would also be required on the domestic waste collection service due to increased tonnages and increased distances to tip. The collection

vehicles typically cover around 12,500 miles each per year. At an average fuel consumption of 3 miles/gallon, each vehicle uses 4,100 gallons of diesel per year. By using an extra 12 vehicles around 150,000 miles of additional travel will be created using 49,200 gallons of diesel, increasing pollution and adding to traffic congestion.

Co-mingled collections result in quicker collections as waste is not sorted at kerbside meaning less risk of traffic congestion and less vehicle emissions.

Replacing a single lidded bin with open boxes for the separated materials will result in more litter being generated, degrading the local environment and streets of Walsall. This may result in a need to increase street cleaning activity, with associated financial costs.

This evidences that environmentally single stream collections would result in an increased carbon footprint, vehicle emission pollutants, traffic congestion and litter on the street.

Conclusion

Having carried out the review of what is Technically, Economically and Environmentally Practicable (TEEP) the biggest factors currently limiting Walsall Council in providing separate kerbside collections of paper, glass, cans and plastic by January 2015 are economic. Additional costs of circa £2 million per annum, plus one off costs in excess of £1.2 million, evidences that economically separate kerbside collections of paper, glass, cans and plastic are not practicable.

Technically, although alternative collection methods could be employed, separate kerbside collections of paper, glass, cans and plastic are not necessary to ensure the appropriate quality of material for its intended end use. This is currently being achieved by the recycling re-processor using modern material recovery technology to ensure recovered materials are of the required quality.

Environmentally single stream collections would result in an increased carbon footprint, vehicle emission pollutants, traffic congestion and litter on the street.

Walsall Council meets the requirements of the European Commission's Waste Framework Directive (WFD) and Waste (England and Wales) Regulations 2011 and will continue to provide a co-mingled recycling collection service until changes to waste collection or disposal arrangements, or further guidelines from government, necessitate a further TEEP review to ensure continued compliance with Waste Framework Directive and Waste (England and Wales) Regulations 2011. Future changes to services or guidelines may require the service to be redesigned.