Waste Finance Data Report 2016-17

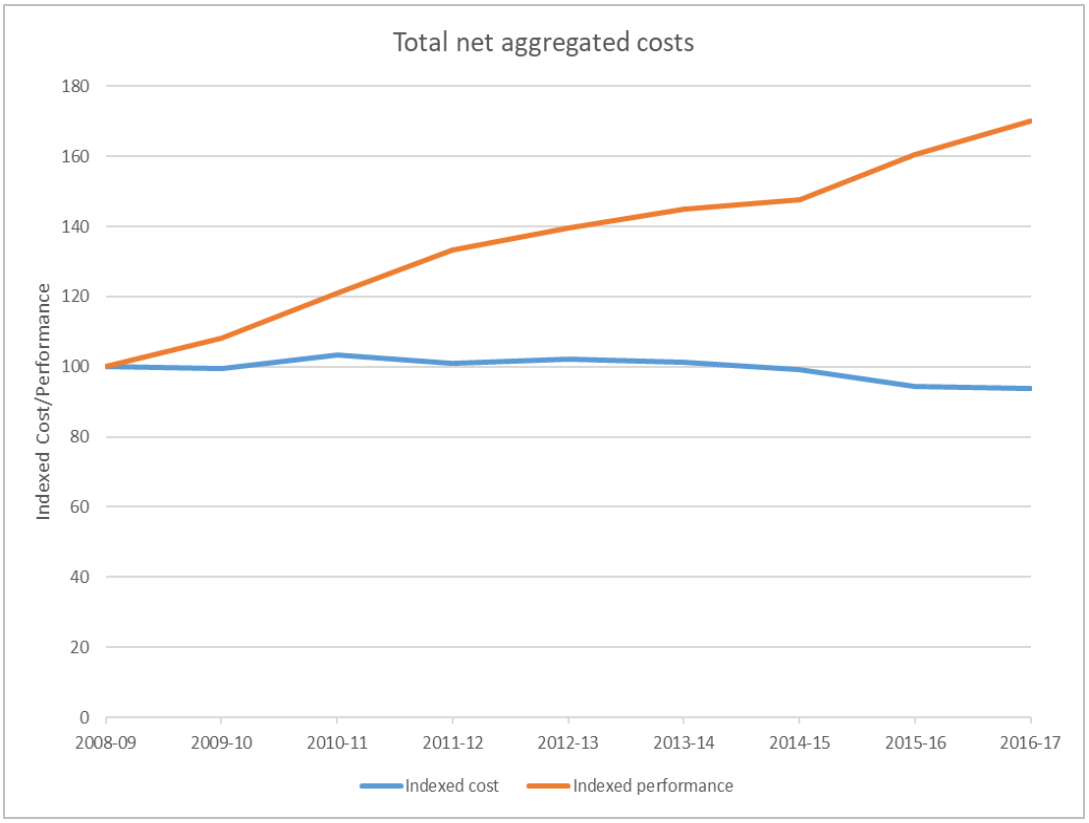
March 2018

First edition – March 2018

Executive Summary

1. Continuing the work begun in 2008/09, the WLGA Waste Improvement Programme has, with the support of all 22 Welsh local authorities, undertaken an analysis of the waste finance data for financial year 2016/17.

2. The 2016-17 finance data shows that Welsh local authorities continued to make steady progress during the year, with the recycling rate for Wales increasing by 3.6 percentage points. At the same time a reduction in both gross and net expenditure was seen. The graph below plots the indexed net cost of MSW waste services from 2008/9 to 2016/17 with indexed performance over the same time period.



3. The data supplied by authorities via WastedataFlow has undergone a quality assurance process by the Waste Improvement Programme. Data was subsequently analysed using the WLGA's financial modelling tool. The results of the modelling work are included in the body of this report. Where possible, comparisons have been drawn with data from previous years.

4. Whilst a high level analysis is provided in some places the report does not analyse national or local differences, changes or variations. Analysis and

explaining *why* changes have occurred is a role for the benchmarking process and is presented to Local Authority officers during the annual waste finance seminars, a role for the wider Waste Improvement Programme run by the WLGA in partnership with the Wales Audit Office and the WG Collaborative Change Programme.

Key Findings

5. Between 2015/16 and 2015/17 there has been continued improvement in performance whilst expenditure in real terms (adjusted for inflation) has reduced over the same time period, evidencing a clear improvement in efficiency of waste services.

6. In 2016/17, gross expenditure increased slightly from £280m to £282m, a increase of less than 0.5%. CPI for the 12 months to April 2017 was 2.3% so this represents a slight reduction in expenditure in real terms.

7. Net expenditure on waste services increased by 1.7% to £242m which represents an increase of £4m over the 2015/16 figure of £238m. The difference in gross and net costs reduction is mainly due to the income received from providing trade waste collections and income from the sale of dry recyclables.

8. Overall net expenditure on household waste services[1] (Dry Recycling, Organic, Residual, CA and Bring) during 2016/17 increasing by 1.8% to £233m. This represents an increase in expenditure of £4m compared to the 2015/16 figure of £229m.

9. Investment in organic waste services has increased very slightly in 2016/17. Expenditure increased by 1.3% to £48m. During this period an additional 7,890 (9%) tonnes of food waste was collected compared to 2015/16.

10. Expenditure on residual waste services increased slightly from £83m to £85m. However 14 authorities saw a reduction in residual waste costs demonstrating the benefits of increased recycling, composting and reducing frequency of collection.

11. Kerbside dry recycling costs reduced by £1.7m overall to £54.7m in 2016/17.During the same period, the mass of dry recyclate collected also decreased by 5,027 tonnes.

[1] figure excludes: trade waste, clinical waste, procurement of waste treatment, Consultants fees, awareness raising costs and costs associated with other MSW which are recorded elsewhere

12. HWRC expenditure increased from £40 to £43m in 2016/17. At the same time the proportion of Household MSW received at HWRCs increased from 30% to 31%.

13. Overall re-use, recycling and composting rates have increased from 60.2% in 2015/16 to 63.8% in 2016/7.

14. The table below demonstrates the differences in net expenditure on the household service elements:

	15-16	**16-17**	**% change**	**Performance change[2]**
Dry recycling	£56,462,639	£54,728,683	-3.1%	-1.8%
Residual waste	£82,983,217	£84,753,568	2.1%	-4.7%
Organic waste	£47,839,391	£48,462,082	1.3%	2.0%
CA/HWRC	£39,669,964	£43,226,539	9.0%	1.6%
Bring	£1,553,752	£1,419,204	-8.7%	-0.5%
Total	**228,508,963**	**£232,590,076**	**1.8%**	**1.1%**

[2] % difference in tonnage collected between 2015/16 and 2016/17

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Introduction

The Waste Improvement Programme is funded by the Welsh Government and has been in existence since 2007. This followed on from a programme where all authorities underwent a 'peer review' of waste management services. Initially focusing on assessing services in Welsh local authorities and sharing good practice.

Work is currently targeted at supporting authorities in increasing efficiency of waste management activities. This includes the collection of financial data on delivering MSW waste services and the benchmarking of cost variations to identify how services can be delivered at lower cost whilst improving performance.

Process

Local Authority waste expenditure data has always been collected consistently (in line with the Best Value Accounting Code of Practice). The WLGA organise a working group of finance and waste officers from a range of authorities and host the current format of reporting. Wastedataflow (a database for collecting tonnage data from waste activities) has been adapted in Wales to accept tonnage data and waste financial data creating a single point of data entry. Once tonnage data and finance data is entered into the system a series of reports can be generated.

Previously WIP provided this report directly to the Cabinet Secretary for Environment and Rural Affairs by the end of March. Waste Management is now the Responsibility for the Minister for Environment reporting arrangments and timescales are being reviewed. The data within the reports is then used as a basis for more in-depth qualitative analysis; the Benchmarking of waste services in Wales, assessing in more detail the causes of differences in cost between authorities.

Detailed Findings

Total Service Data

1. From the data it can be seen that overall gross expenditure on waste services during 2016/17 was £281,631,297 (£242,477,043 net of income). This represents an increase of £1,614,220 when compared to the 2015/16 figure of £280,017,077 a rise of 0.6%.

2. Total expenditure continues to fall following a period of significant investment, supported by the Sustainable Waste Management Grant (SWMG) recently superseded by the Environment and Sustainable Development Directorate's Single Revenue Grant (SRG).The amount of direct support has been reducing over recent years and Local authorities have also reduced expenditure as a result of severe budget cuts.

3. Between 2015/16 and 2016/17 the income local authorities received from selling dry recyclables increased by 20% to £6,812,851 from £5,479,661

4. Figure 1 shows how net expenditure on all waste services has changed in the seven years since the finance project began. Costs have been adjusted for inflation and are indexed using the 2008/09 data as a baseline. It can be seen that costs in real terms have remained stable over the last seven years, exhibiting a slight reduction compared to 2008/09 levels. However, during the same period recycling rates have increased significantly, from 35.6% in 2008/09 to 63.8% in 2016/17.

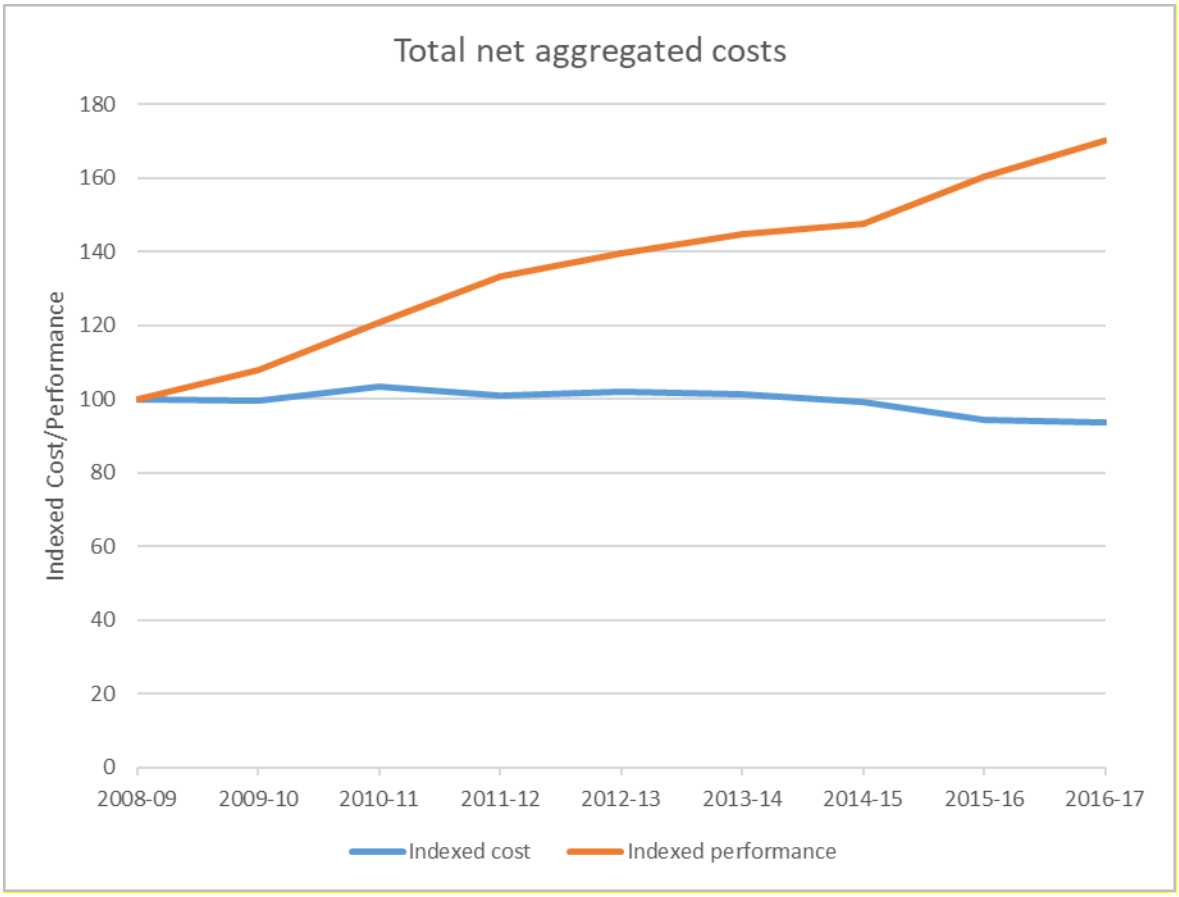

Figure 1 – Total net costs

5. The total amount of SRG allocated to local authorities in 2016/17 totalled £64.3m of this £60m was allocated against waste services.

6. 12 out of 22 local authorities have demonstrated a reduction in expenditure compared to 2015/16 The data collection exercise does not determine "why" these changes have been made, but it is intended, via the CSS facilitated benchmarking process to further investigate the factors affecting service costs.

Use of Grants[3]

7. The graph in Figure 2 below shows total net expenditure on waste services for each local authority during financial year 2016/17. Contribution made by grant is represented as 'hatched' portion of bar. Expenditure is shown on a cost per household basis.

[3] Grants = Sustainable Waste Management / Single Revenue Grant plus other grants received e.g. procurement support, SCIF, RCAF,

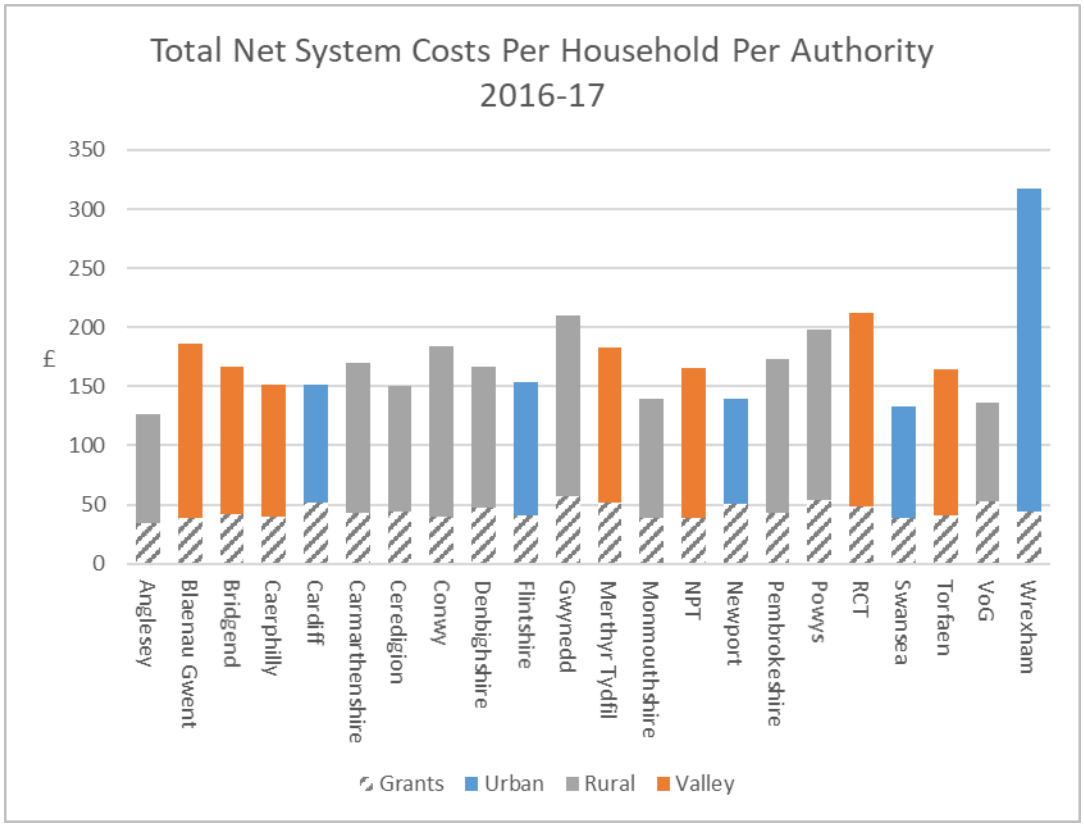

Figure 2 – Total System Costs per household 2016/17

8. This graph demonstrates that on a per household basis, grants are distributed fairly evenly across the group. As the graph shows only revenue grants, (capital grants are not shown) authorities that attribute a greater proportion of Single Revenue Grant (SRG) to capital projects will exhibit a lower value for revenue grant per household relative to the group as a whole, whilst authorities in receipt of additional grants, such as RCAF, SCIF and PFI payments, may exhibit higher relative levels of grant.

9. The majority though not all, of total expenditure results from the provision of services directly to the householder: Dry Recycling, Organic Waste, Residual Waste, CA and Bring sites.

Waste Collected by LAs

10. The following graphs shows the proportion of wastes managed for each of the services provided by mass. This provides context against which the costs can be assessed.

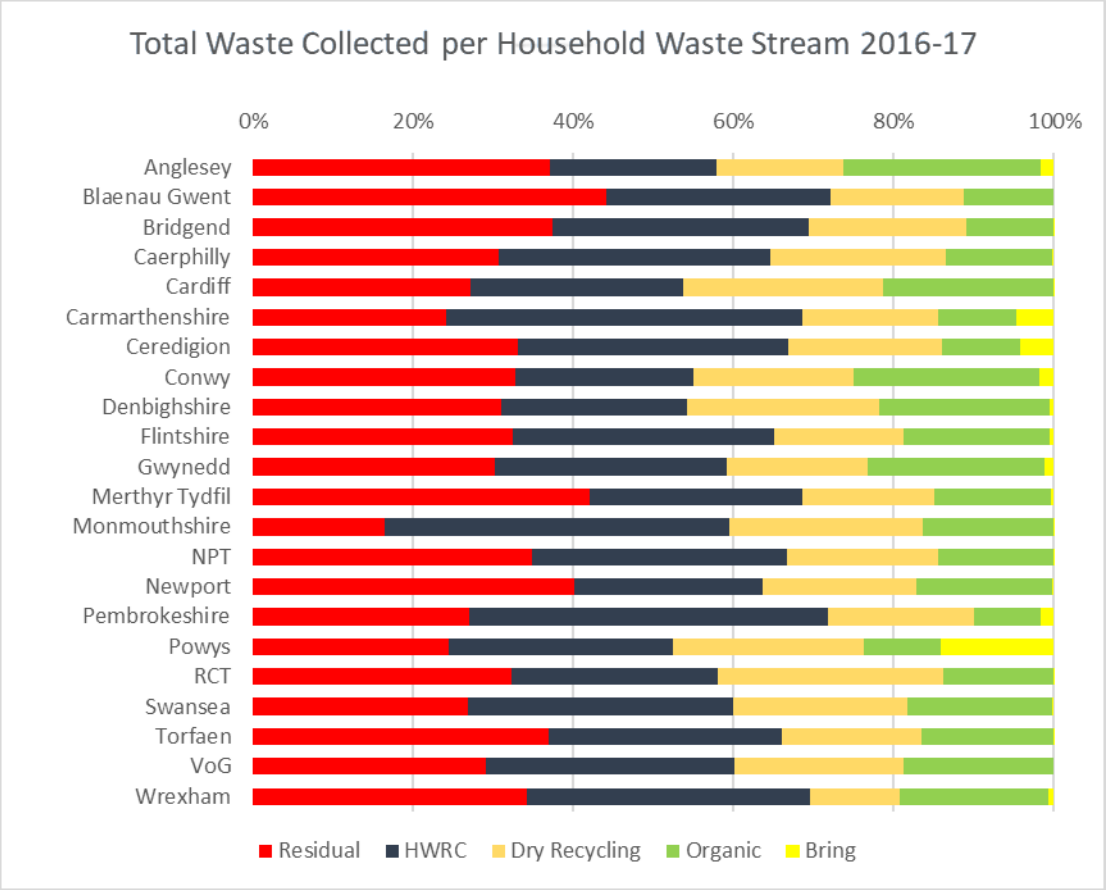

Figure 3 - Source of waste collected[4]

11. Figure 4 below shows the proportion of overall expenditure taken up by each of the household waste service areas. Residual waste remains the biggest area of expenditure accounting for between 15% and 61%. This is a wide variation seemingly influenced by the tonnage of residual waste collected and the availability of treatment options post collection. For example Monmouthshire collected the least residual waste per household in this year and was able to send all residual waste for ERF as part of Prosiect Gwyrdd. HWRC account for 19% of total expenditure whilst handling the highest proportion (31%) of all household waste collected.

[4] Does not include trade, clinical, bulky or other MSW.

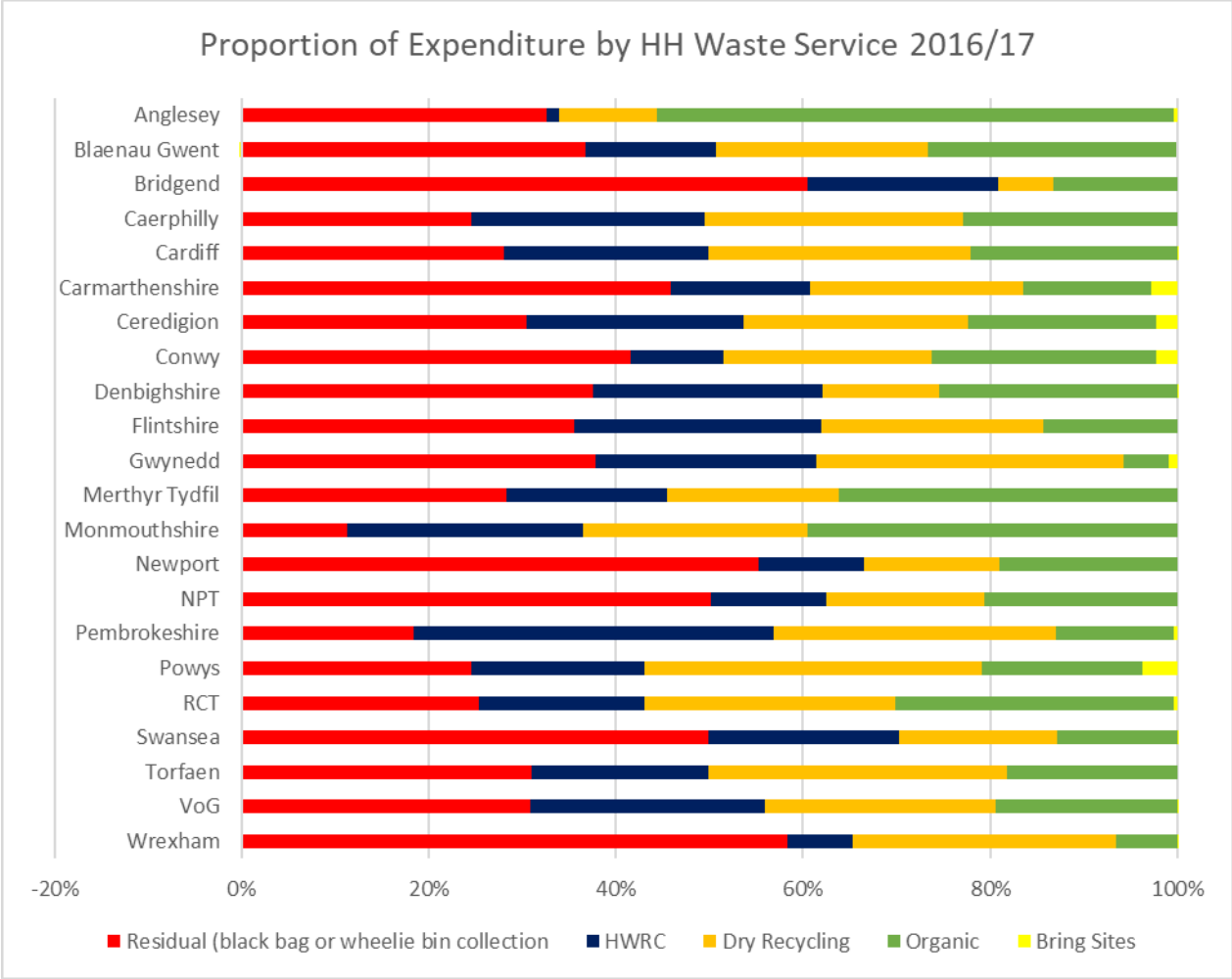

Figure 4 Expenditure by waste service

Household Waste Service Costs

12. The following data compares expenditure on household waste services across Welsh local authorities. *The Household Waste Service cost is defined as the aggregated total of cost associated with Kerbside dry recycling, Kerbside food waste, kerbside green waste, HWRCs, bring sites and residual waste.* Each element includes costs of collection, transfer, treatment and disposal of waste. Costs associated with trade waste, trade recycling, clinical waste, bulky waste, procurement of waste treatment, other MSW and awareness raising costs are not included.

13. Graphs show costs on both a per household and per tonne basis. In addition, colour coding of graph indicates whether authority is classified as Urban, Rural or Valleys, further colour coding for dry recycling services indicates the collection service profile of the authority. Level of grant allocated to each service area by local authorities is shown as the 'hatched' area of the chart. As incomes generated by services will tend to differ according to type of services in place, expenditure net of income received is shown in the graphs. In addition to cost data, performance, in

terms of % MSW re-used, recycled and composted is shown, denoted by the green dashes on the chart.

14. It is not possible to differentiate between SRG and other smaller grants when allocated against service area in WDF. Therefore grant contribution shown in the following graphs includes other grants in addition to SRG.

15. Total SRG allocation in 2016/17 was £64.3m (not all allocated for waste). Local Authorities spent £60m of this to support the delivery of reuse, recycling and composting waste services.

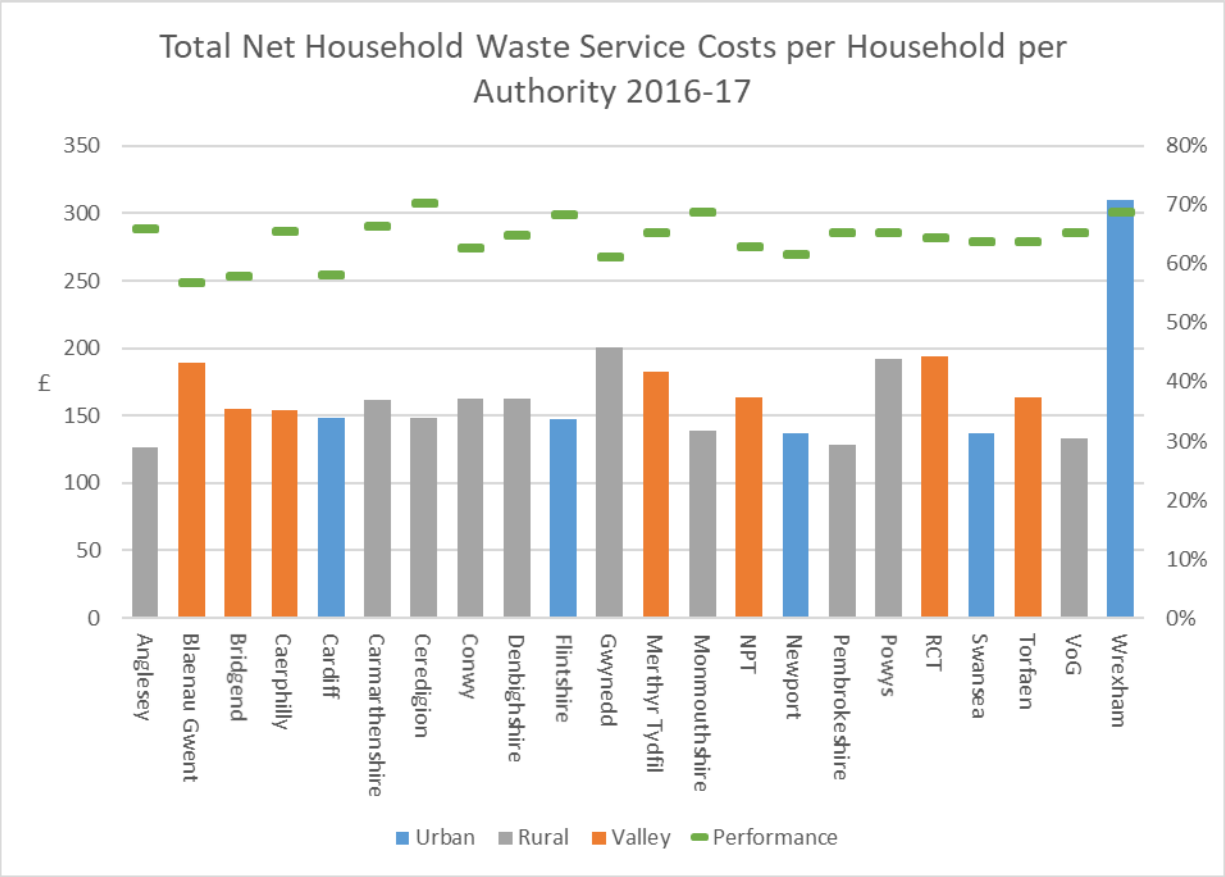

Figure 5 - Total household waste service cost per household

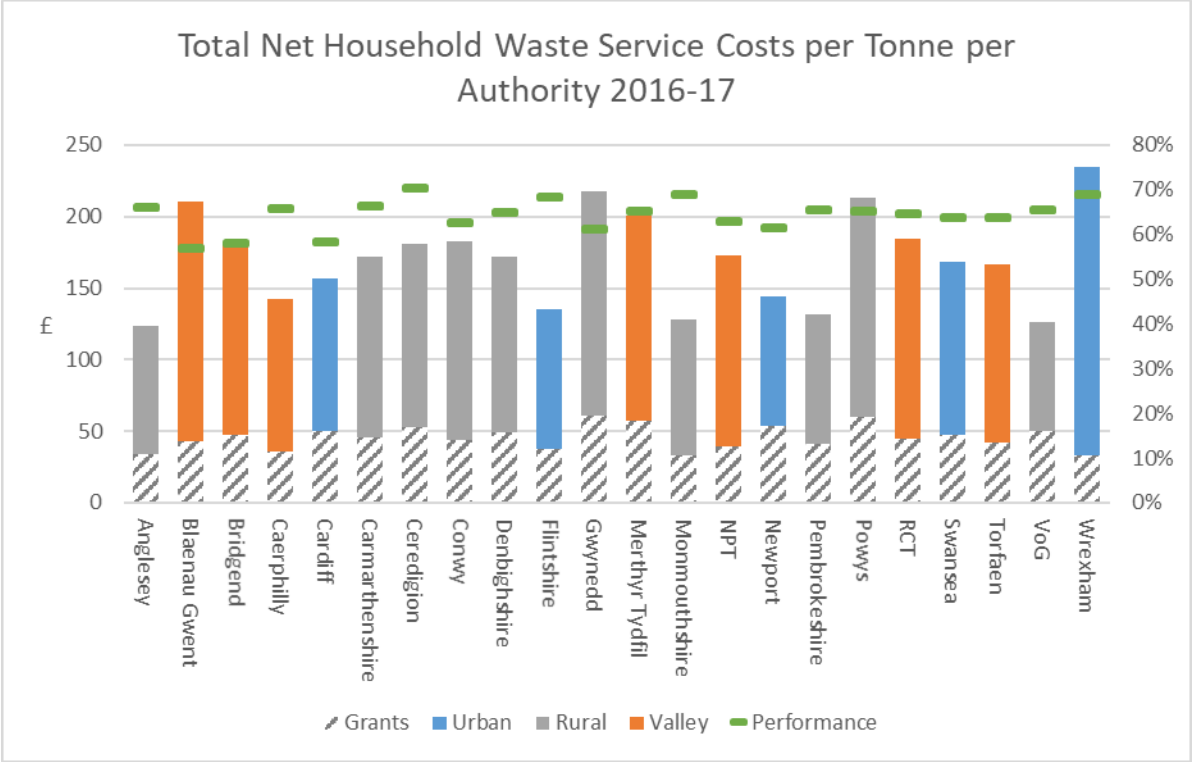

Figure 6 – Total household waste service cost per tonne

16. Overall net expenditure on household waste services during 2016/17 was £232,590,076. This represents an increase costs of £4,081,114 compared to 2015/16, an increase of just under 2%. During the same period, the overall recycling rate for Wales increased from 60.2% to 63.8%.

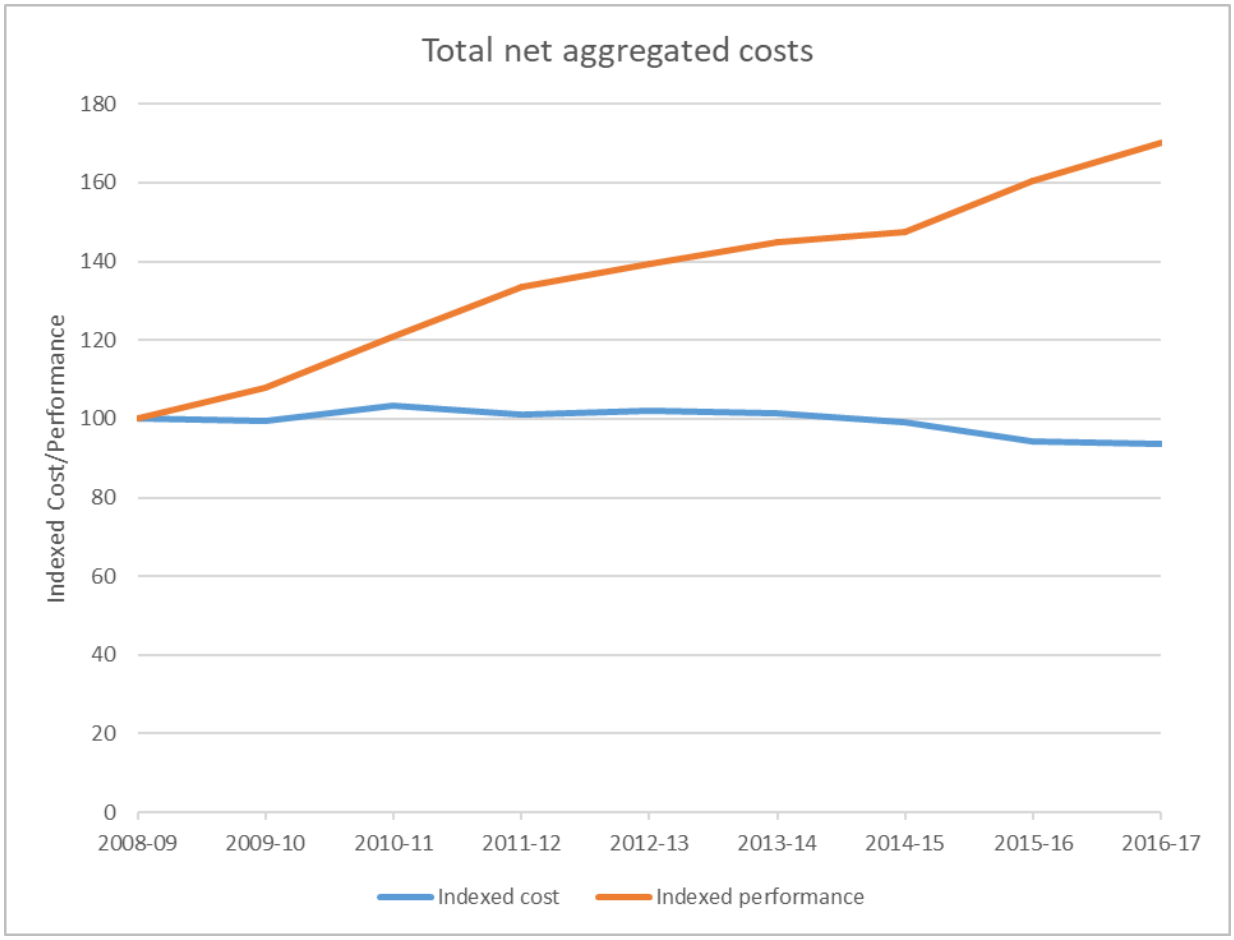

Figure 7 – Household waste service cost since 2008/09

17. The longer term trend in household waste service costs is shown in 7. It can be seen that costs, adjusted for inflation, have remained farily stable since 2008/09 but in 2016/17 have reduced for the second consecutive year. Recycling rates have increased significantly over the same period.

Dry Recycling

18. The following graphs show costs associated with dry recycling services provided by authorities on both a cost per household and cost per tonne basis. Service performance, in terms of mass of dry recyclate collected as a proportion of total MSW, is also shown as red lines on the chart, plotted using the axis on right hand side of graph.

Total dry recycling service cost

19. Figure 8 & Figure 9 show the total cost of providing a kerbside recycling service. Costs shown are net of any income received. Data includes costs of collection, transfer, treatment and disposal of recyclate. Colour coding denoting type of collection system in place by authority and contribution made by grant is retained, the contribution is higher compared to overall

expenditure due to grant expenditure being targeted towards recycling services and prohibited from residual waste services.

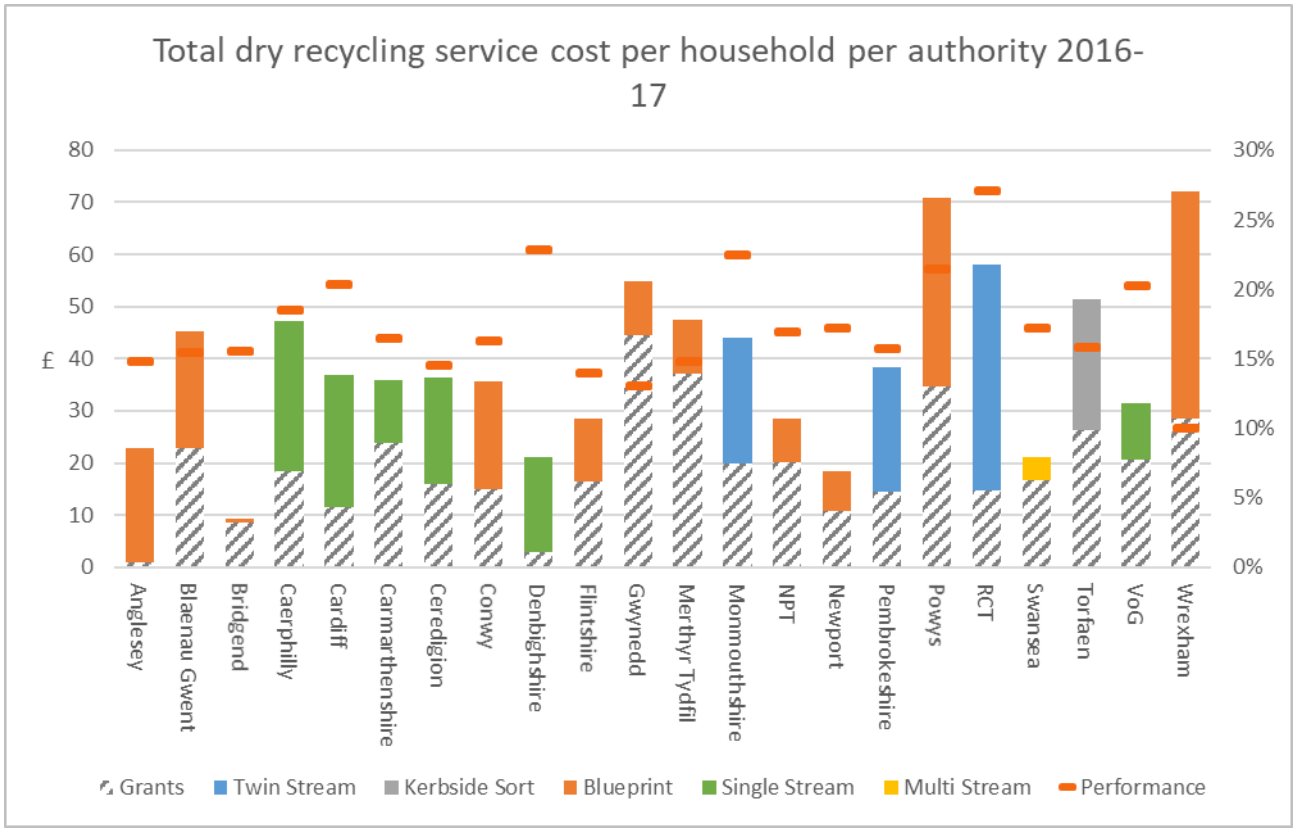

Figure 8 – Dry recycling service cost per household[5]

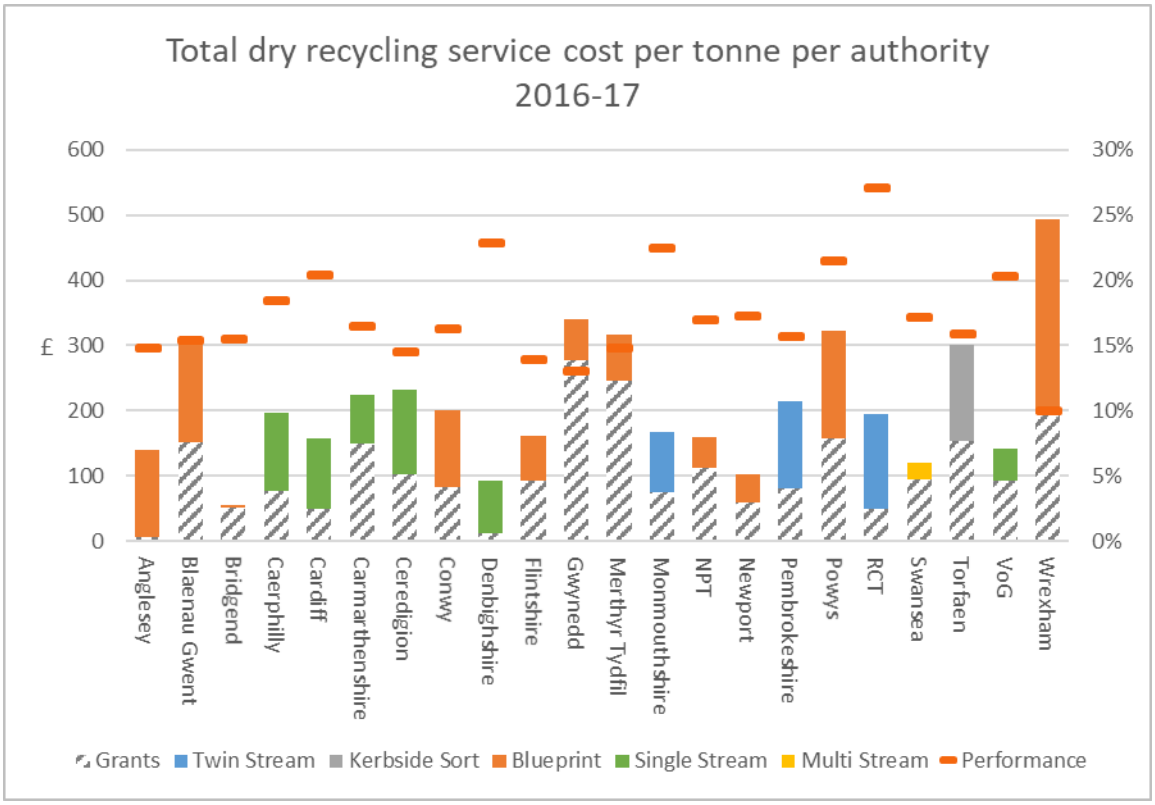

Figure 9 – Dry recycling service cost per tonne[6]

What are the graphs telling us?

20. Both cost and performance vary significantly. Ideally, services should deliver high performance, in terms of mass collected, whilst exhibiting the lowest cost possible. For example, Denbighshire's service collected 10,109 tonnes of dry recyclate, which equates to 23% of their total MSW arisings, placing their performance within the top quartile. The cost of the service is just below the average value for the group at £21.10 per household. Therefore a high level of performance is being achieved at a reasonable cost. Similarly, Bridgend's dry recycling service makes a significant contribution to their overall recycling rate, with 15% of total MSW being collected via their kerbside collection scheme, whilst service cost is the lowest seen across the group at £9.30 per household. What we want to see is a high value recorded against performance (orange line) and a low value recorded for service cost (solid bars) – the wider the gap the more effective and efficient the service.

21. On occasion, the grant figure allocated against a particular service area is greater than the actual net cost of the service itself. This normally occurs when an additional source of income is allocated against a service. E.g. sale of dry recyclate collected via kerbside dry service. To avoid anomalous results being displayed within the charts, the data shown will

always be the net service cost excluding the grant portion. When the grant allocated for a particular service is greater than the net service cost, the lower figure is used and the grant contribution assumed to be 100% of the net figure.

22. The range of values seen in the data is similar to that seen for 2015/16. However, the median cost per household has decreased from £39.20 to £36.60 per household, however the median cost per unit mass, increased from £191 to £195.90 per tonne.

23. From the core data it is also possible to compare 2016/17 overall dry recycling service expenditure with that of 2015/16, in addition it is also possible to compare the grant contribution to dry recycling services over the same period:

	15/16	**16/17**	**% change**
Dry recycling	£56,462,639	£54,728,683	3.2%
Grant (SRG)	£32,046,227	£26,259,994	22%

24. Expenditure on dry recyclate services decreased by 6.8% during 2016/17. Whilst expenditure did fall the mass of material collected decreased over the same period. Mass collected fell by 5,027 tonnes a reduction of 2%. It can be seen that almost 50% of expenditure on dry recyclate services is supported by grant funding.

25. The longer term trend in kerbside dry recycling costs is shown in Figure It can be seen that expenditure in 2016/17, whilst still above the 2008/09 baseline, has decreased in the last year.

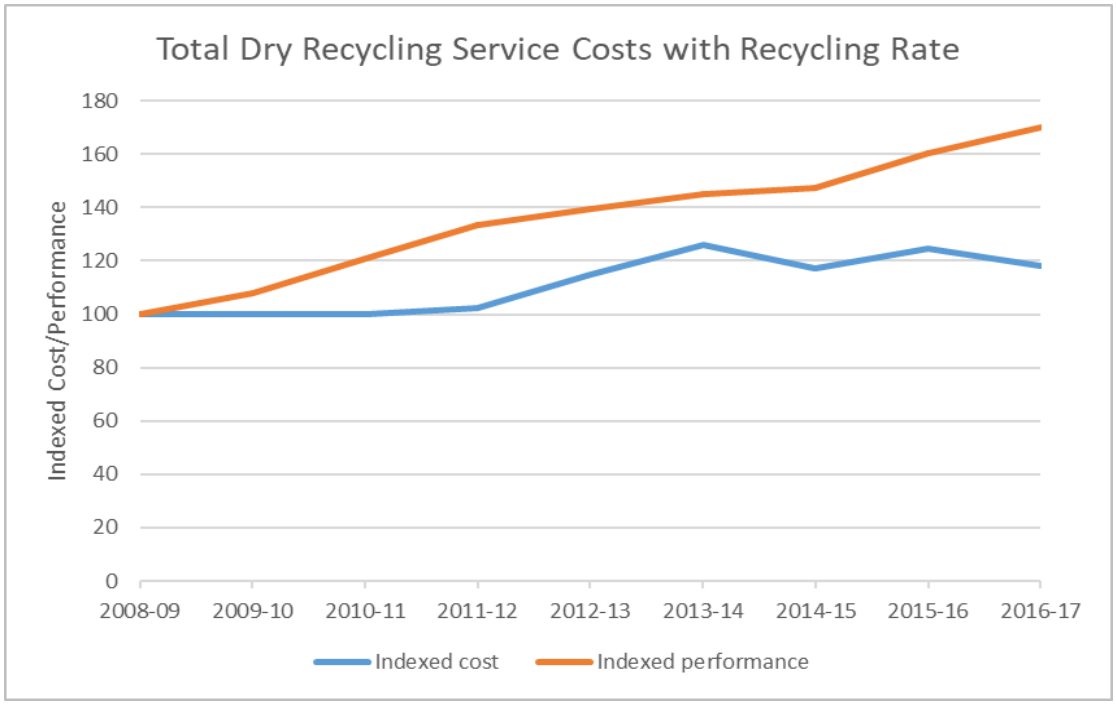

Figure 10 – Kerbside dry recycling cost since 2008/09

Collection

26. From the data it is possible to plot the individual component costs of the service. Graphs in 11 & 12 show the dry recycling collection cost on both a per household and per tonne basis net of any income. Collection systems vary across the group, colour coding shows what type of collection system was in place during 2016/17.

27. It can be seen that costs arising from the collection of the dry recyclate itself makes up the majority of overall service cost.

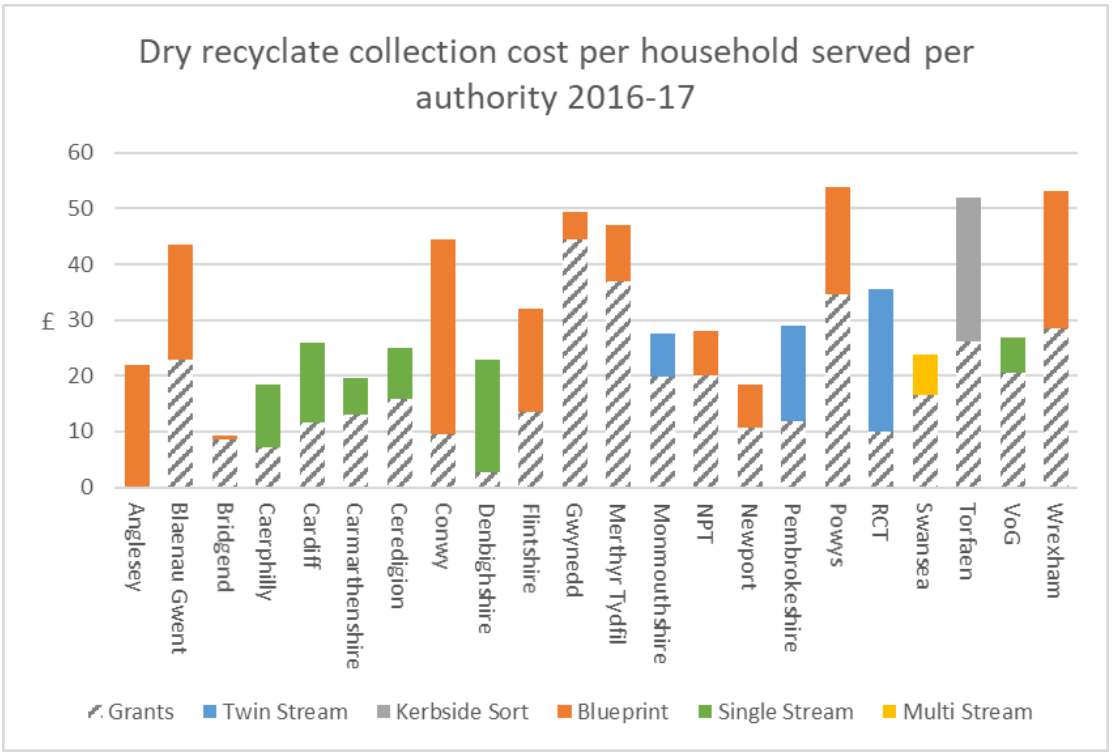

Figure 11 – Dry recyclate collection cost per household served

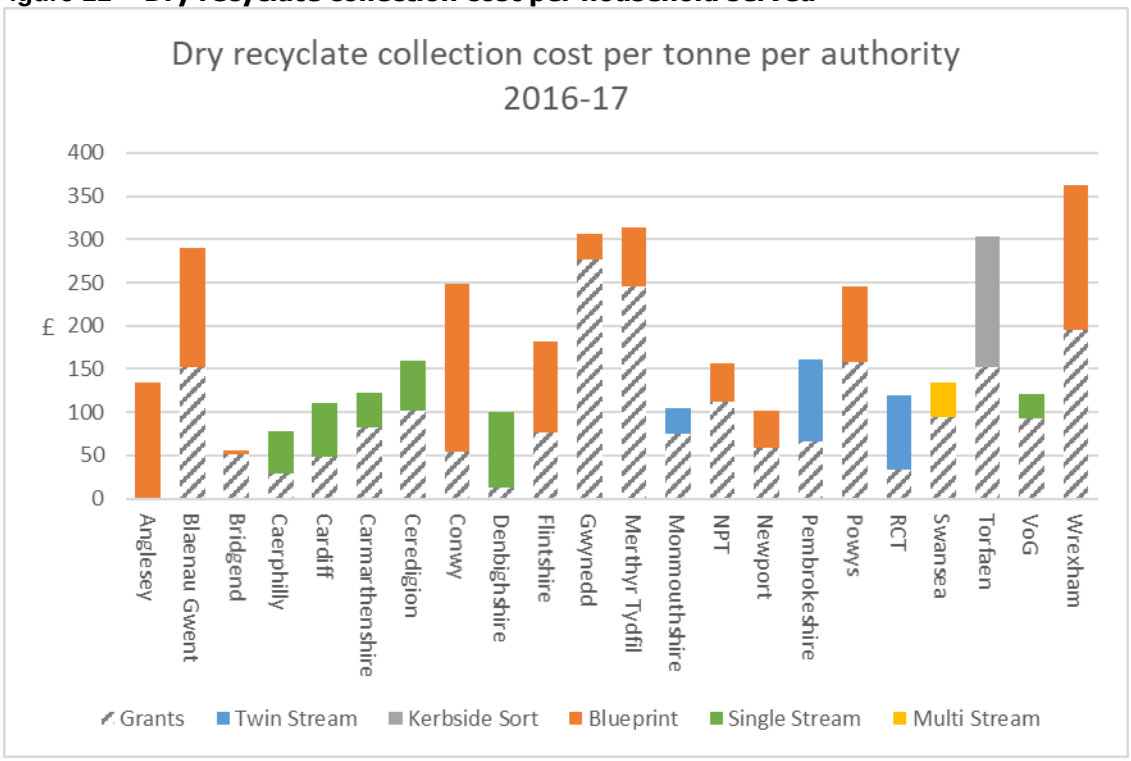

Figure 12 – Dry recyclate collection cost per tonne collected.

Transfer costs

28. According to data provided, few authorities incur costs from transfer of recyclate following its collection. In some cases contractual arrangements mean that these costs are included with treatment costs. Transfer costs that are incurred are low relative to overall service cost. For brevity, charts detailing transfer costs are not contained within the body of the report, rather they are available on request.

Treatment costs

29. Figure 13 & 14 show the costs incurred from treatment of collected dry recyclate. Costs are shown both as a cost per household served and a cost per tonne. Treatment cost can be defined as the cost of handling and/or segregating materials collected, such as treatment of materials at a MRF.

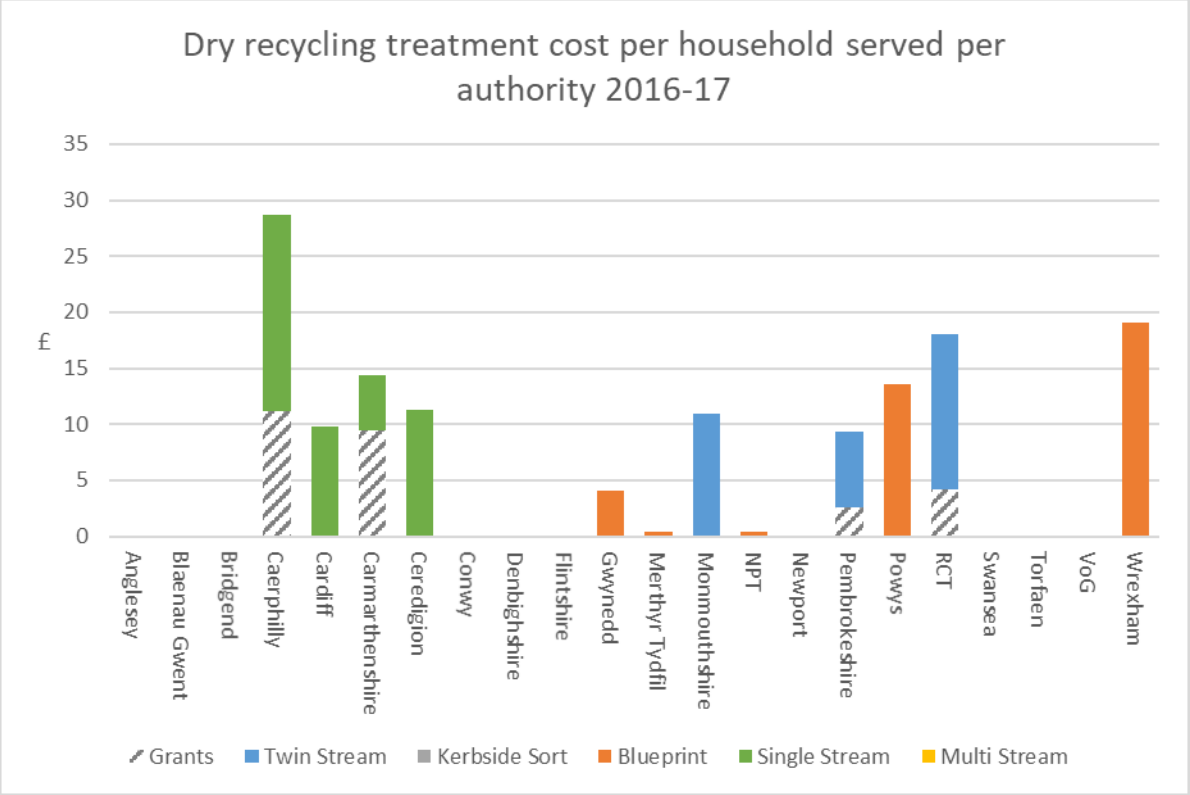

Figure 13 – Dry recycling treatment cost per household served

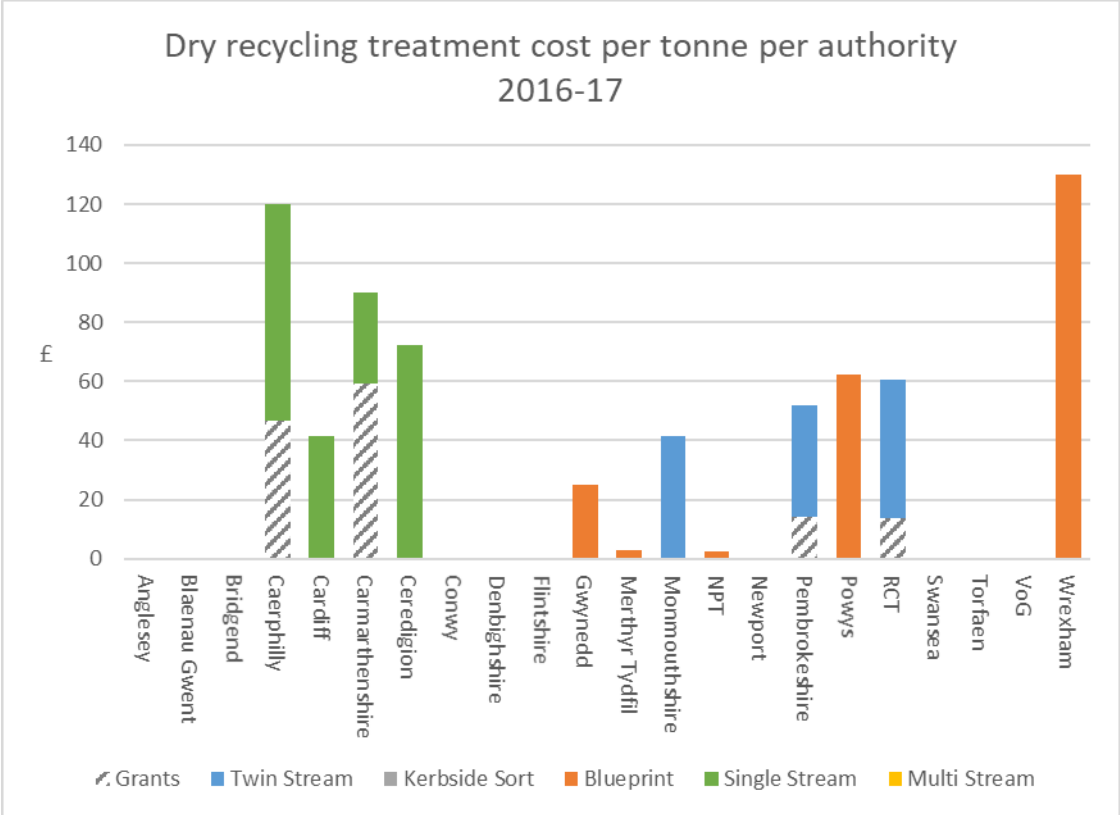

Figure 14 – Dry recycling treatment cost per tonne

30. It can be seen that there is a wide variation in treatment costs across the group. This may reflect the differing recycling systems in place across Wales, with authorities employing differing treatment methodologies depending on the collection system used. (e.g. MRF, Sorting/Baling only etc)

31. A number of authorities exhibit a negative cost for treatment activities and therefore no bar is present (these are Blaenau Gwent, Conwy, Denbighshire, Flintshire, Swansea Torfaen and Vale of Glamorgan). This occurs when the income received from the sale of the recyclate treated is greater than the cost of treatment activities themselves.

Income

32. Charts in Figure 15&16 Show the amount of income received from the sale of collected materials on a per household served and per tonne basis. Incomes vary significantly across the group and reflect the differing service configurations and the differing contractual arrangements in place for the treatment of the material collected. As stated previously, income overall from the sale of dry Recyclate increasedby 20% comparison to the previous year.

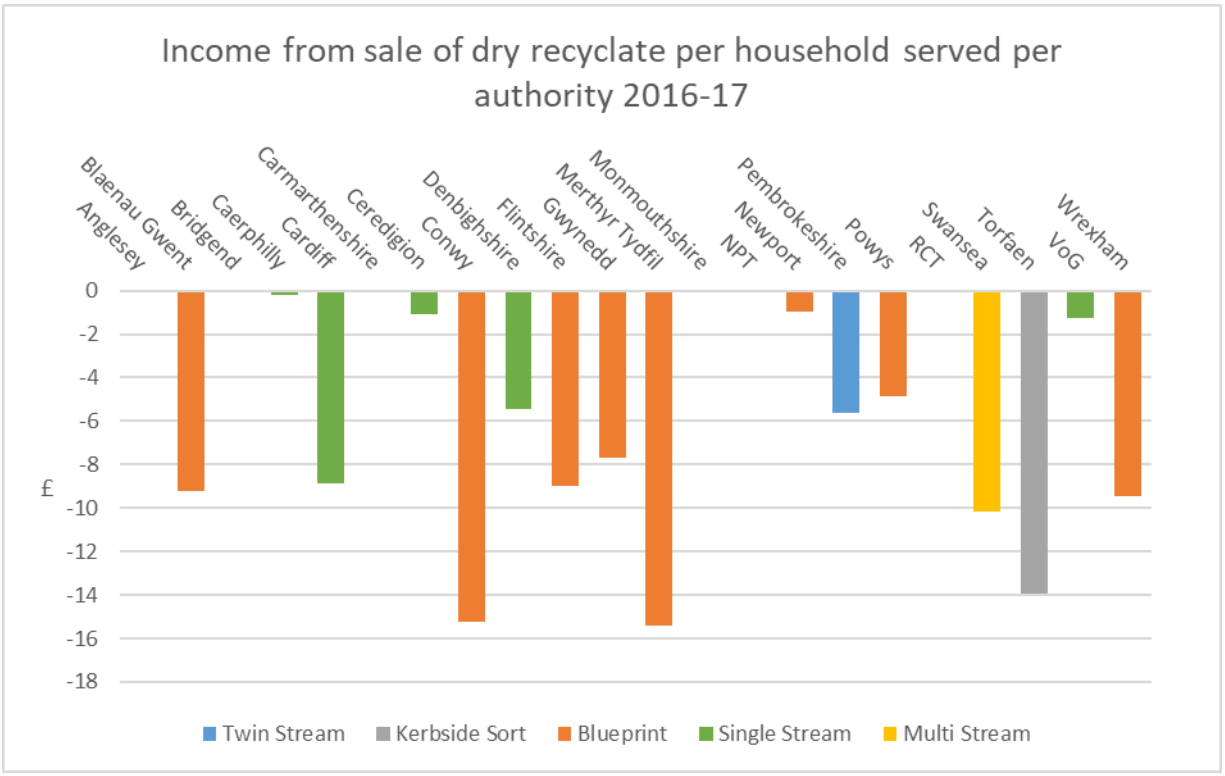

Figure 15 – Income from sale of dry recyclate per household served

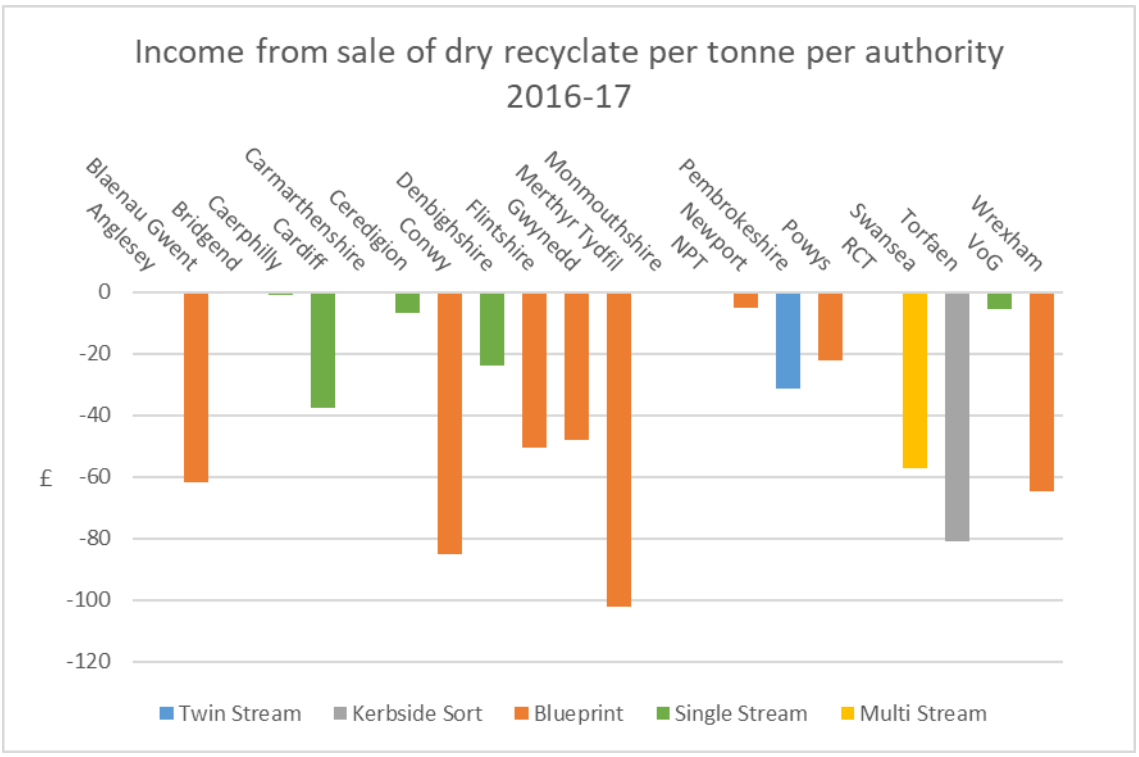

Figure 16 – Income per tonne from sale of dry recyclate

Organic Waste Services

33. Data is split across three headings covering food-only collections, green-only collections, and co-mingled green and food collections. It should be noted that Caerphilly, Carmarthenshire and Wrexham moved from Commigled organic collections to separate food and garden waste collections during this year. Therefore costs and performance shown in some charts are not necessarily for a full year and some data may appear in the separate and commingled charts.

Food waste only

34. The total cost of providing food waste collection are shown in Figure 17 (cost per household served) and Figure 18 (cost per tonne collected). The performance of the service (i.e. the percentage of MSW diverted) is shown on the right-hand axis and can be seen as the red line on the chart. It should be remembered that in practice food waste is often collected with other waste streams, usually Dry Recycling. In these cases the figures are calculated using apportionment.

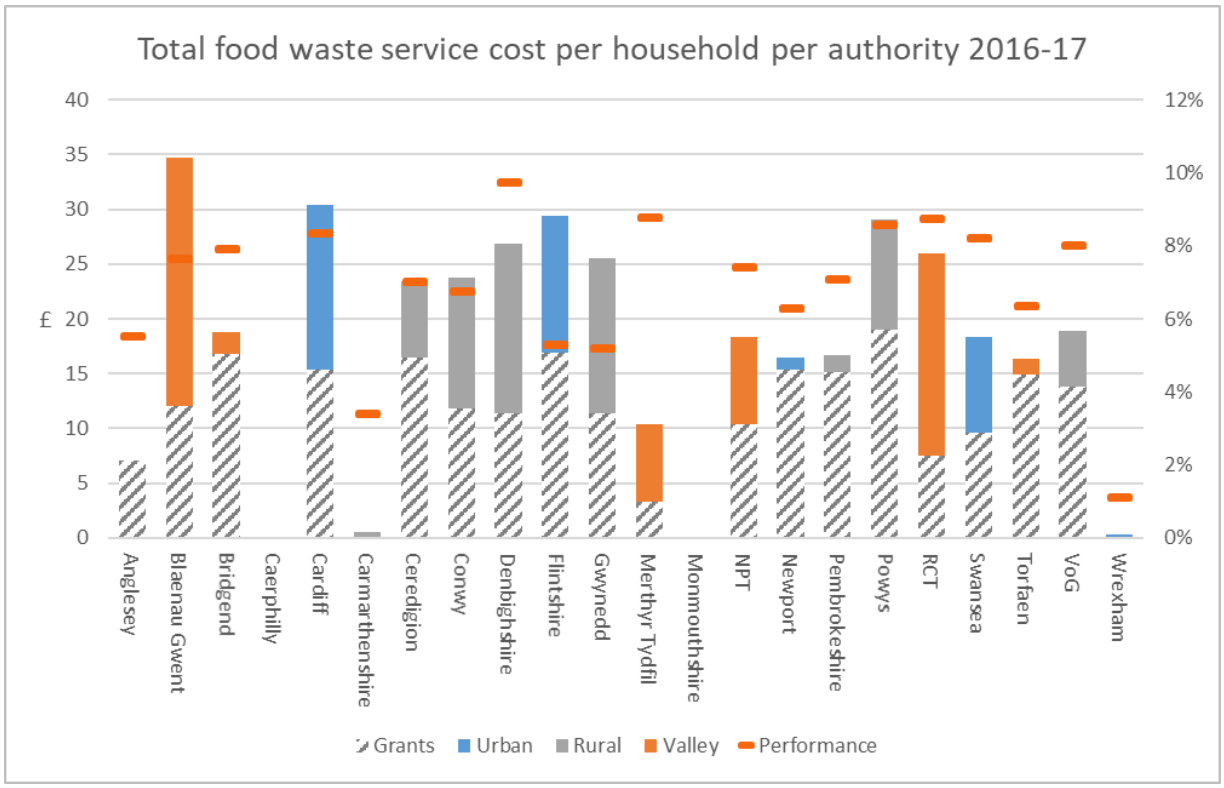

Figure 17 – Food waste service cost per household served.

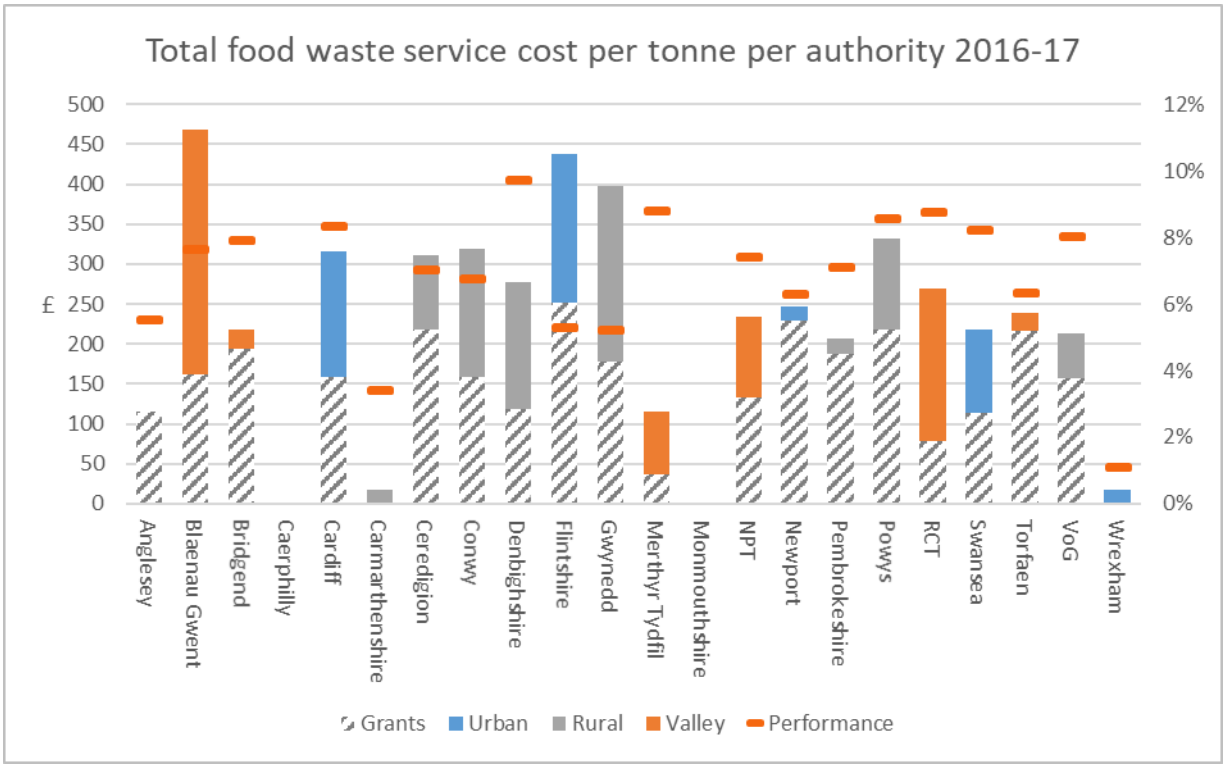

Figure 18 – Food waste service cost per tonne

35. Both cost and performance vary across the group. A wide variation can be seen in yield as % of total MSW, from 4% to 10%, little difference to 2015/16. Greater divergence between cost bar and performance bar is likely to signify a higher performing service. For example, the service operated by Merthyr Tydfil, exhibits both a low cost and high yield. Wrexham's separate food waste collection only began part of the way through 2016/17 thus costs and performance are lower.

Green waste only

36. The total net cost of providing separate green waste collection are shown in Figure19 (cost per household served) and 20 (cost per tonne collected). The performance, in terms of % MSW is shown on the right-hand axis and can be seen as the red line on the chart.

37. During 2016/17 Bridgend, Denbighshire, Gwynedd, Monmouthshire and Pembrokeshire were charging residents for the kerbside collection of garden waste. Powys do not collect garden waste at the kerbside.

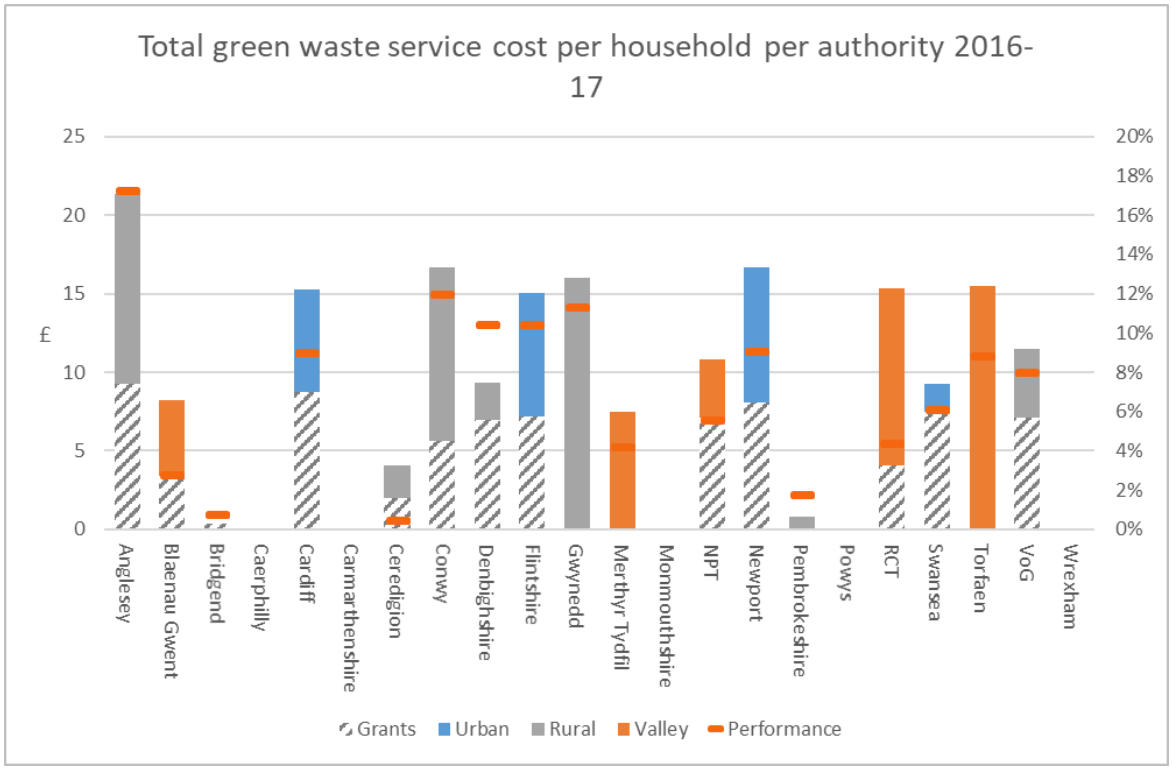

Figure 19 – Green waste service cost per household served.

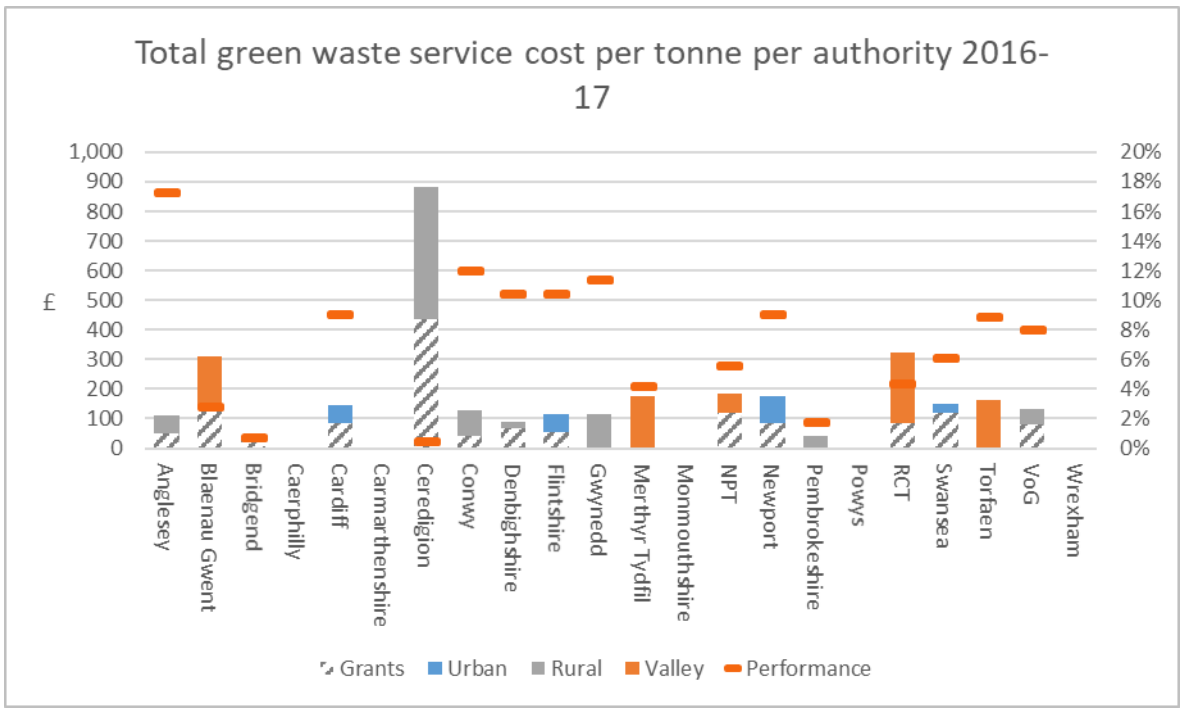

Figure 20 – Green waste service cost per tonne

38. Again, a wide variation in both costs and performance can be seen across the group. The divergence between cost and performance data seen for authorities like Denbighshire would suggest that this is a relatively efficient service. Ceredigion's costs appear to be high in comparison to other LAs

on a per tonne basis, mainly because of the relatively low tonnage of garden waste that is collected at the kerbside.

39. Variations seen in yield and therefore cost per tonne/household are likley influenced by a number of factors such as rurality, property type and whether charging is in place.

Co-mingled food and green waste

40. Some authorities co-collect the food and green waste fractions. The total cost of providing this combined food and green waste service are shown in Figure (cost per household served) and Figure 22 (cost per tonne collected). The performance of the service, as mass collected as % of total MSW, is shown on the right-hand axis and can be seen as the red line on the chart.

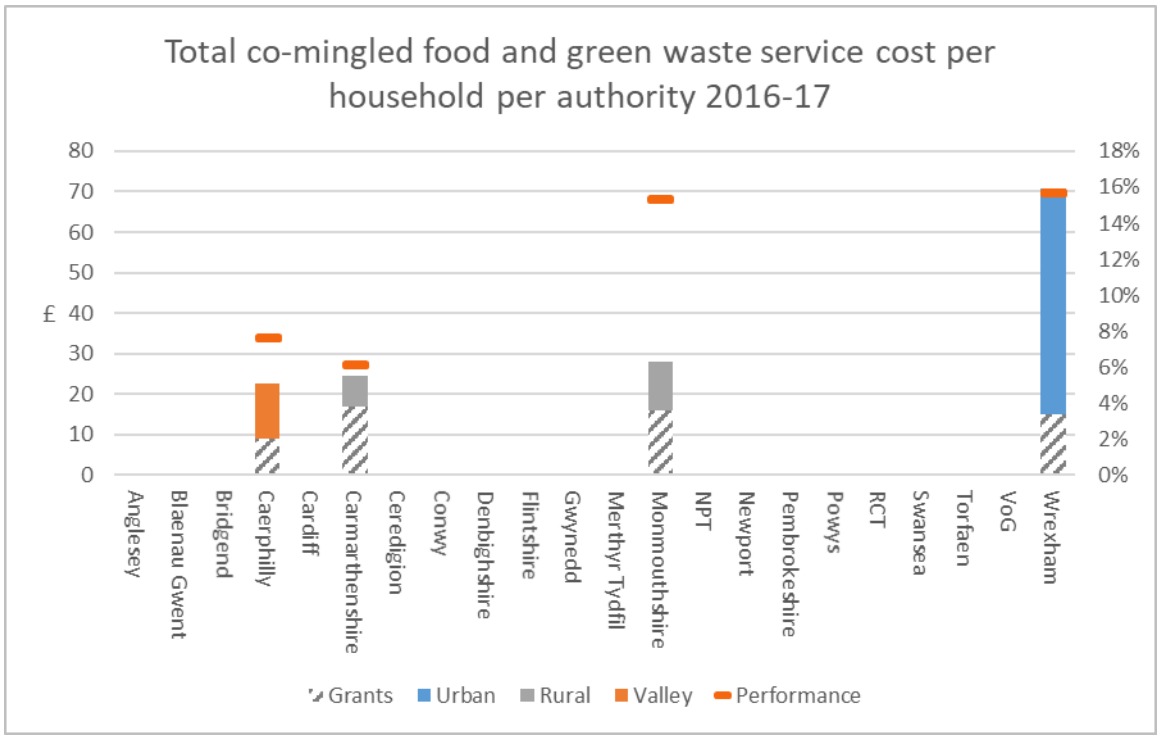

Figure 21 – Co-mingled organic service cost per household served.

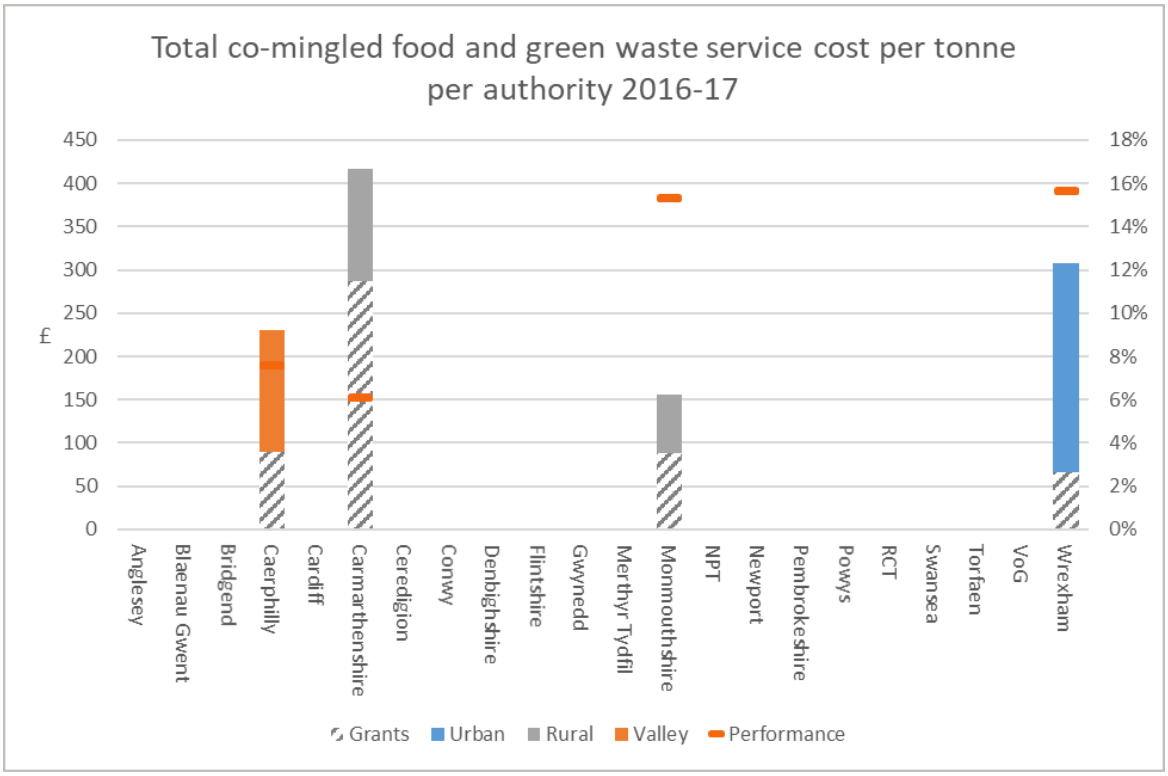

Figure 22 – Co-mingled organic service cost per tonne

41. For all organics collections it can be seen that there are wide variations in costs across the group. The variation in costs is most pronounced when comparing on a per tonne basis. Low yields from new services especially from chargeable green waste services, coupled with elevated start-up costs result in some authorities exhibiting higher service costs.

42. If all costs associated with various organic collection services are aggregated, it is possible to compare total expenditure in 2015/16 with that of 2016/17:

	15/16	**16/17**	**% change**
Organic	£47,839,391	£48,462,082	1.3%
Grant (SRG)	£ 24,694,028	£ 24,222,438	-1.9%

43. Food waste services are now well established by local authorities, fewer changes are being made to services therefore costs are becoming more stabilised. Performance in terms of total organic waste mass collected increased by 4,277 tonnes.

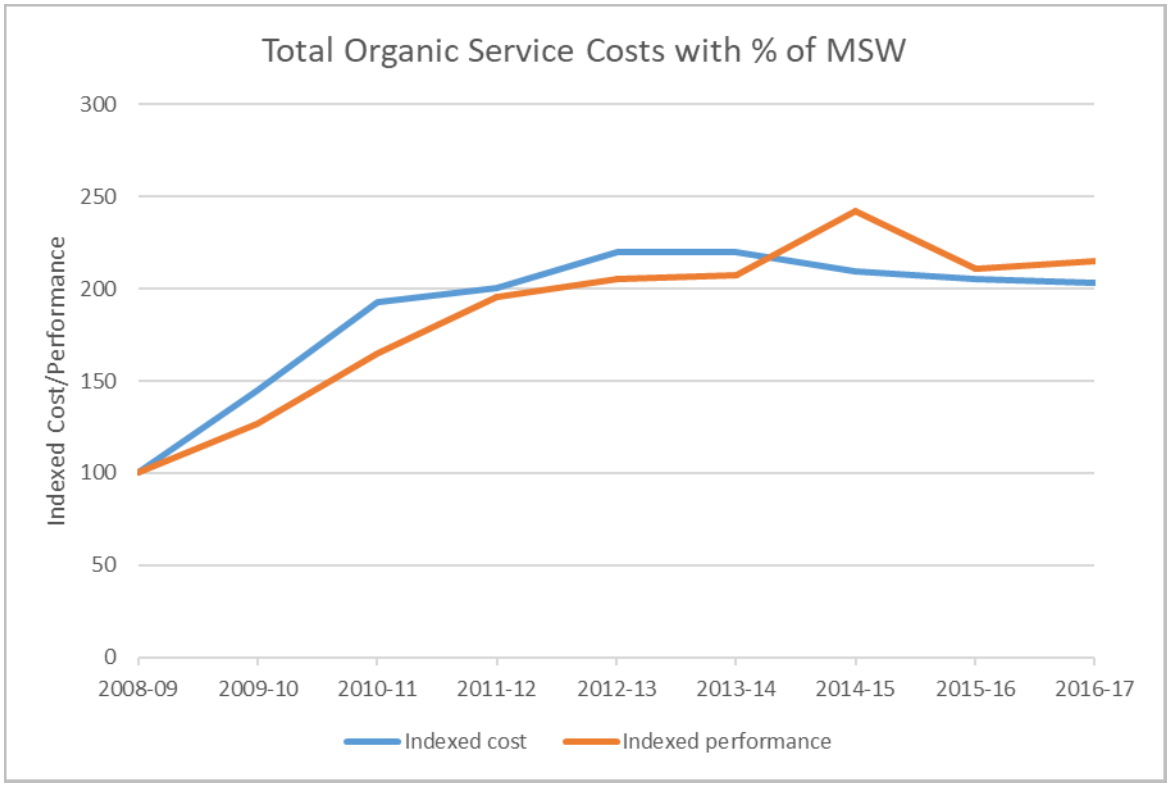

Figure 23 – Organic waste costs since 2008/09

44. The longer term trend can be seen in Figure . The seven years since 2008/09 have seen significant investment in organic waste services. A rapid expansion of food waste services took place with virtually all Welsh households now served by a collection scheme. This expansion of services has seen the total mass of organic waste, as a proportion of total MSW rise greatly over the same period. The mass collected increased in 2016/17 despite the amount of garden waste collected reducing slightly for the second year in a row. This likely due to more authorities introducing charging and restricting the frequency and capacity of garden waste collections. Food waste tonnage increased by just under eight thousand tonnes overall.

Collection costs

45. From the core data, it is possible to further break down the whole system costs and examine the various constituent costs such as collection, transfer and treatment.

Separate food waste collection

46. The food waste collection cost is shown in Figure 24 (cost per household served) and Figure 25 (cost per tonne collected).

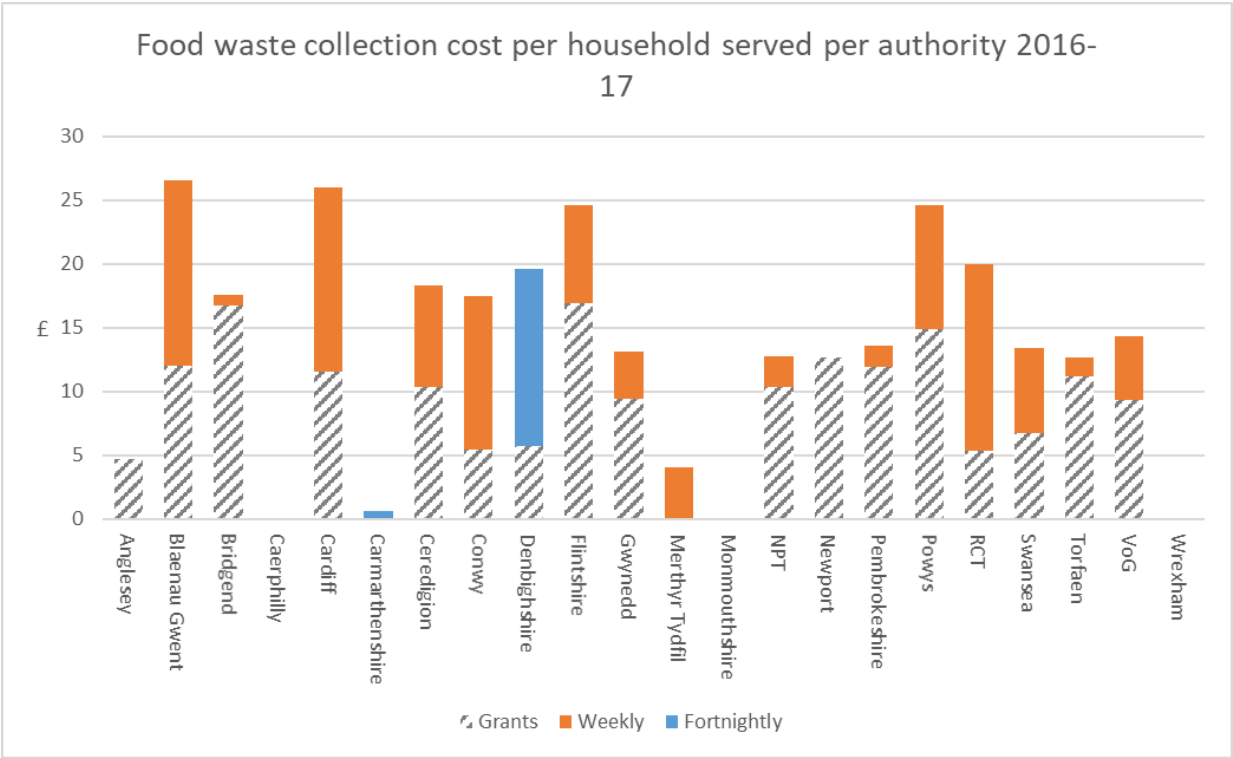

Figure 24 – Food waste collection cost per household served.

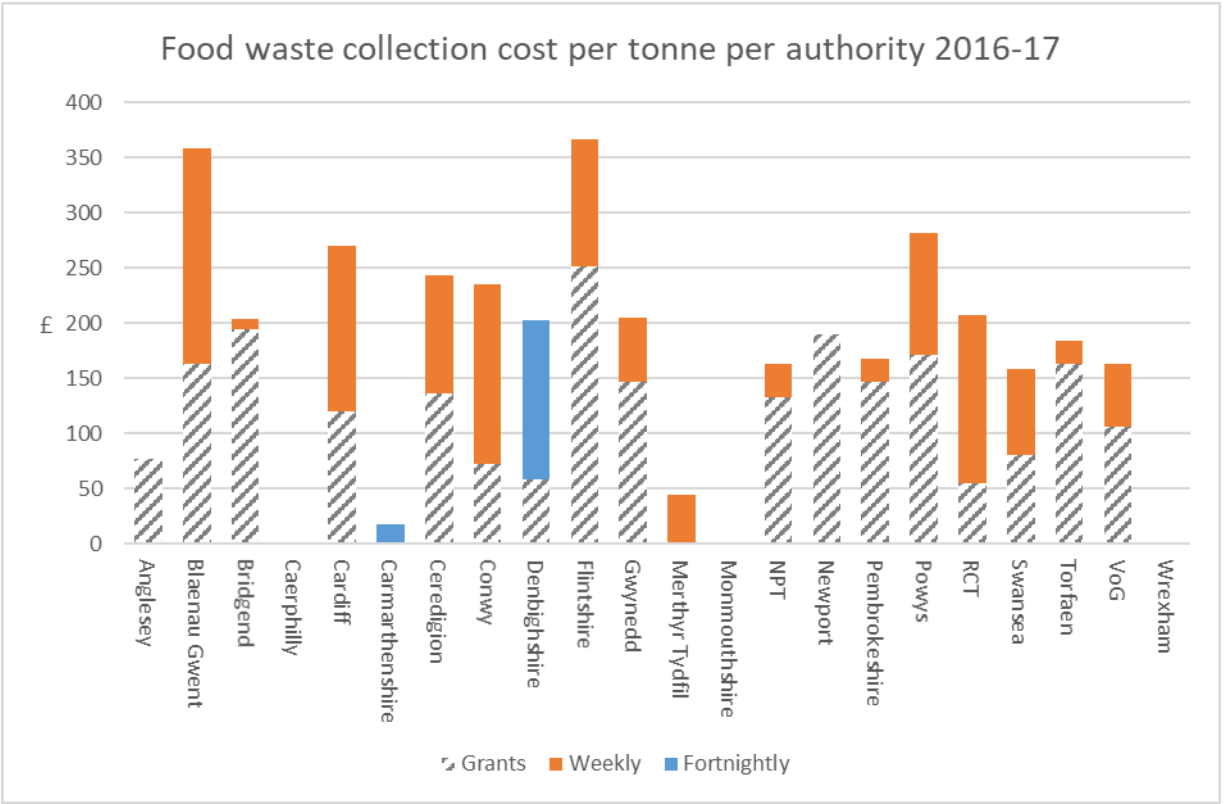

Figure 25 – Food waste collection cost per tonne

Separate green waste collection

47. The green waste collection cost is shown in Figure 26 (cost per household served) and Figure 27 (cost per tonne collected).

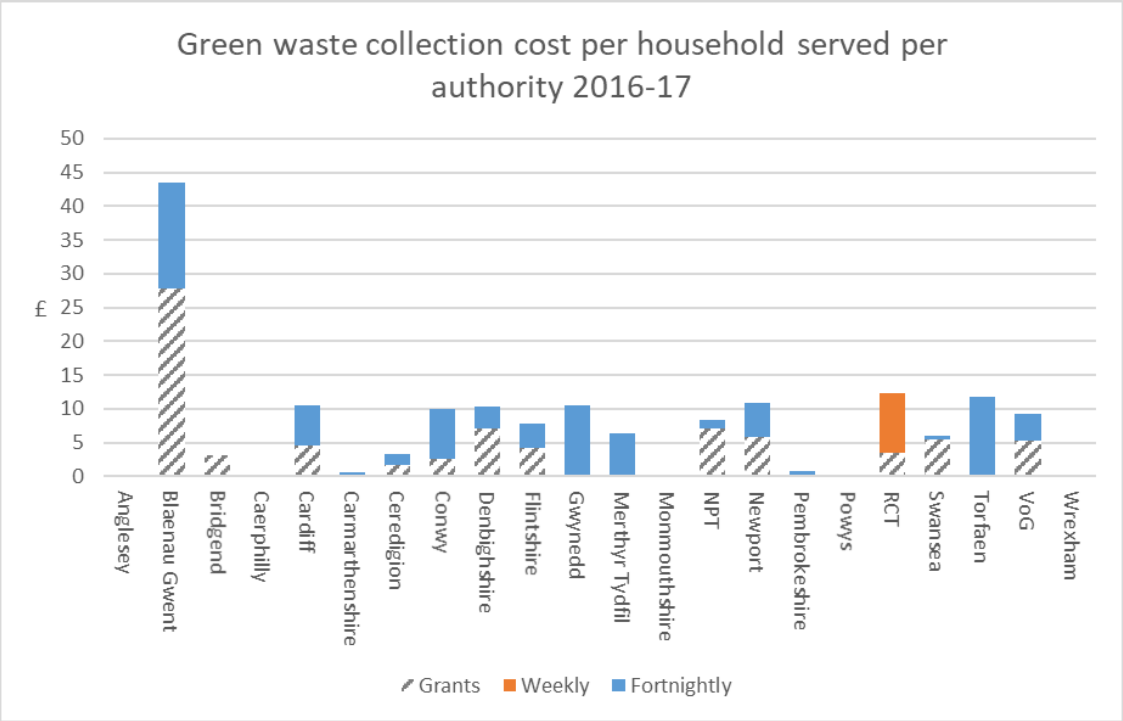

Figure 26 – Green waste collection cost per household served.

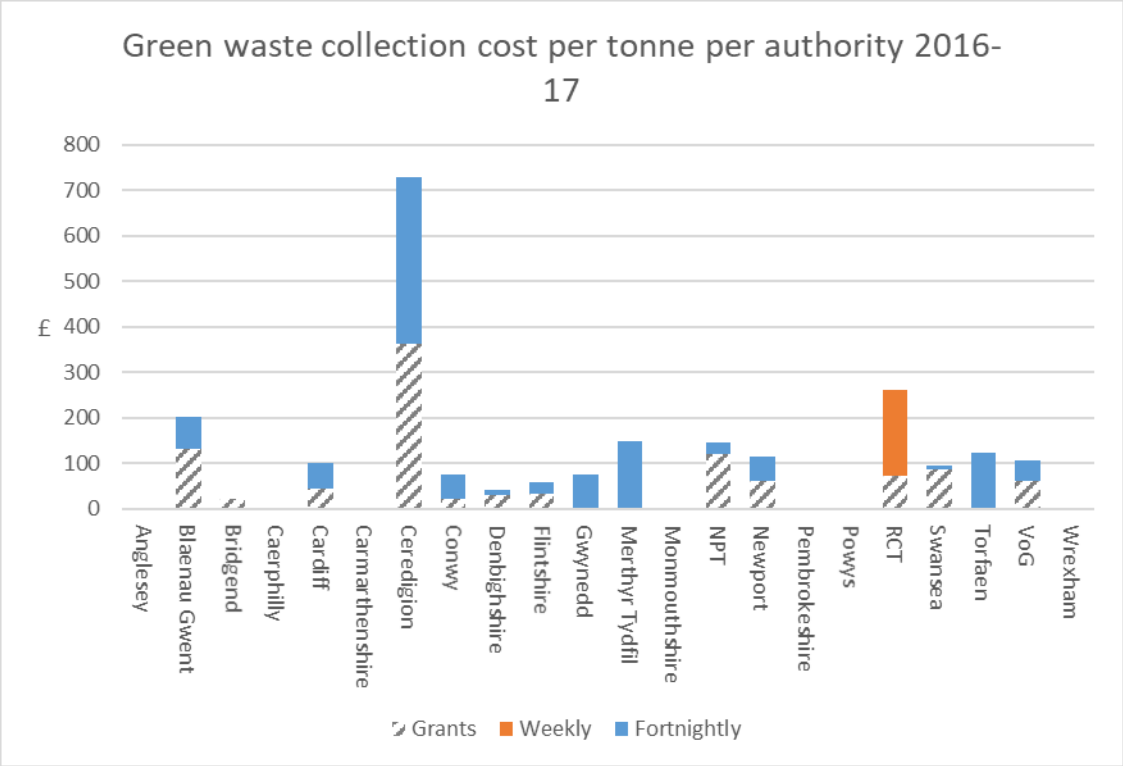

Figure 27 – Green waste collection cost per tonne

Combined food and green waste

48. Costs for authorities collecting food and green waste fractions together are shown in Figure 28 (cost per household served) and Figure 29 (cost per tonne collected). Colour coding denotes frequency of collection.

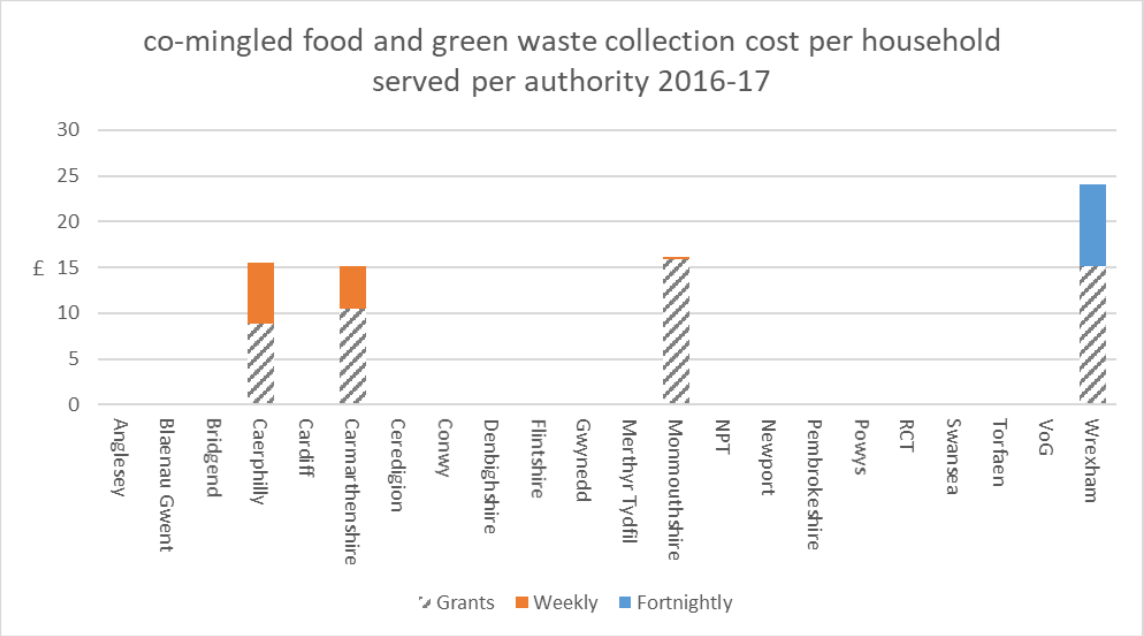

Figure 28 – Combined food and green waste collection cost per household served.

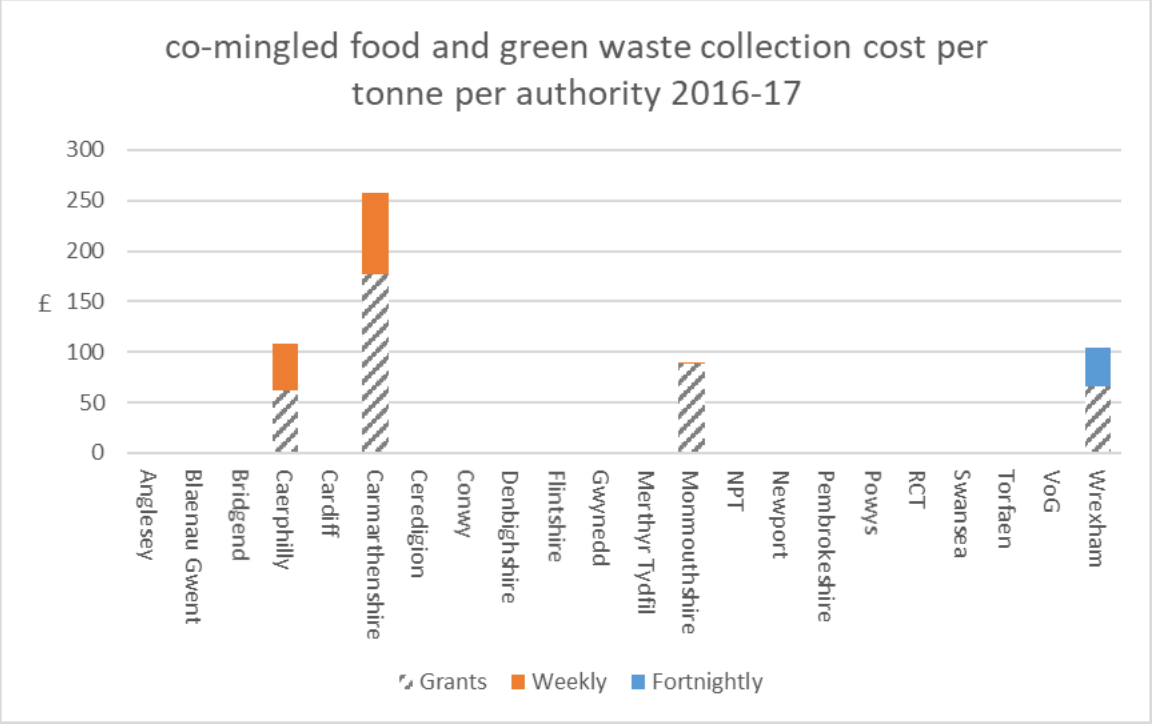

Figure 29 – Combined food and green waste collection cost per tonne

49. It can be seen that for all organic waste services, collection costs are by far the greatest contributor to overall service cost. It is also important to note that Caerphilly, Carmarthenshire and Wrexham began collecting food waste separately during this year and some seperatly collected costs are included in the commingled charts. Monmouthsire have also moved to separately collected food after this period.

Treatment Costs

50. Organic material collected at the kerbside will require some form of treatment. Costs incurred will be dependent on several factors including overall mass sent for treatment and treatment methodology employed. Additional regulation applies to food waste requiring in-vessel treatment to be undertaken. This additional requirement is likely to result in higher unit treatment costs for both food waste and combined food and green waste services compared with those for segregated green waste.

Separate food waste

51. The food waste treatment cost is shown in Figure 30 (cost per household served) and Figure 31 (cost per tonne collected).

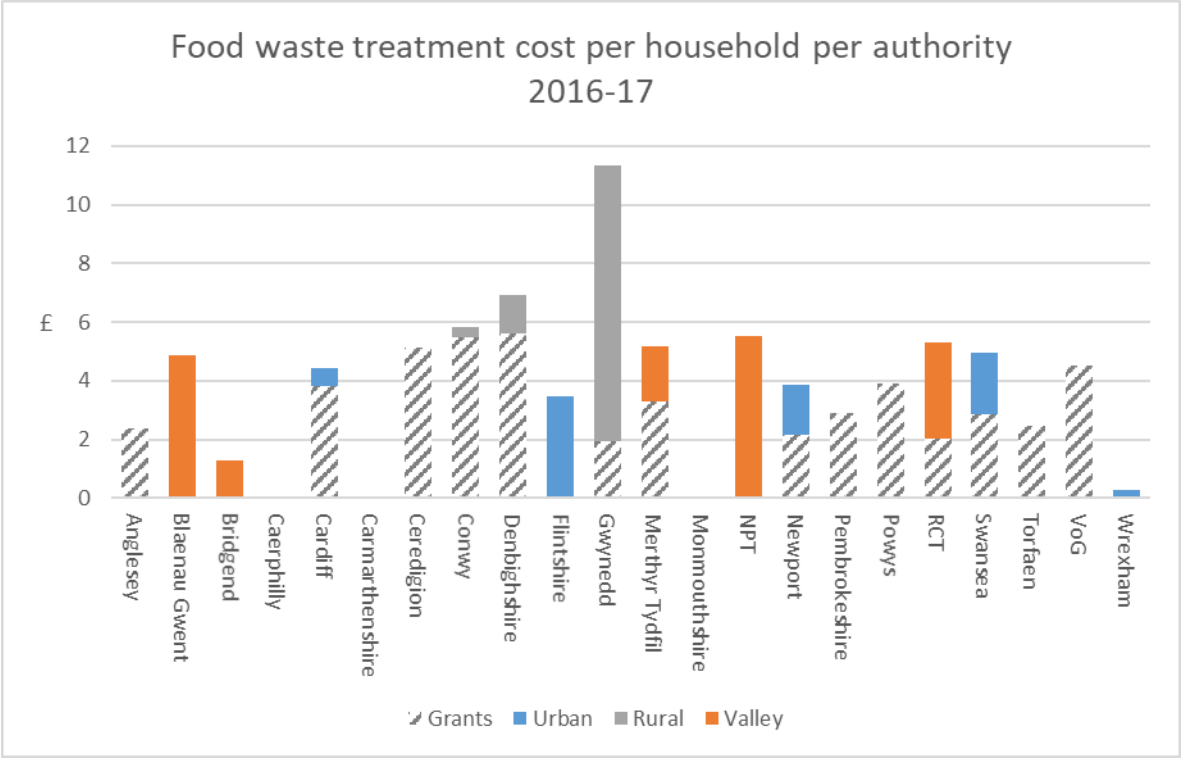

Figure 30 – Food waste treatment cost per household served.

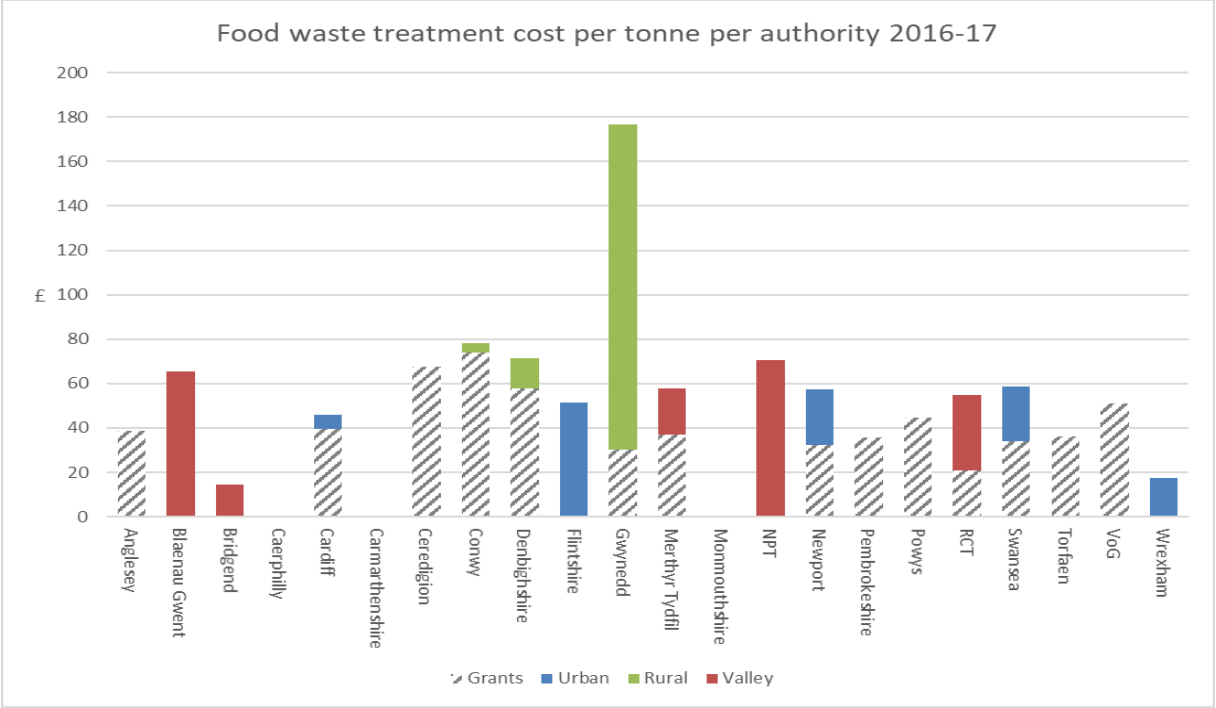

Figure 31 – Food waste treatment cost per tonne

Separate green waste

52. The green waste treatment cost is shown in Figure 32 (cost per household served) and Figure 33 (cost per tonne collected).

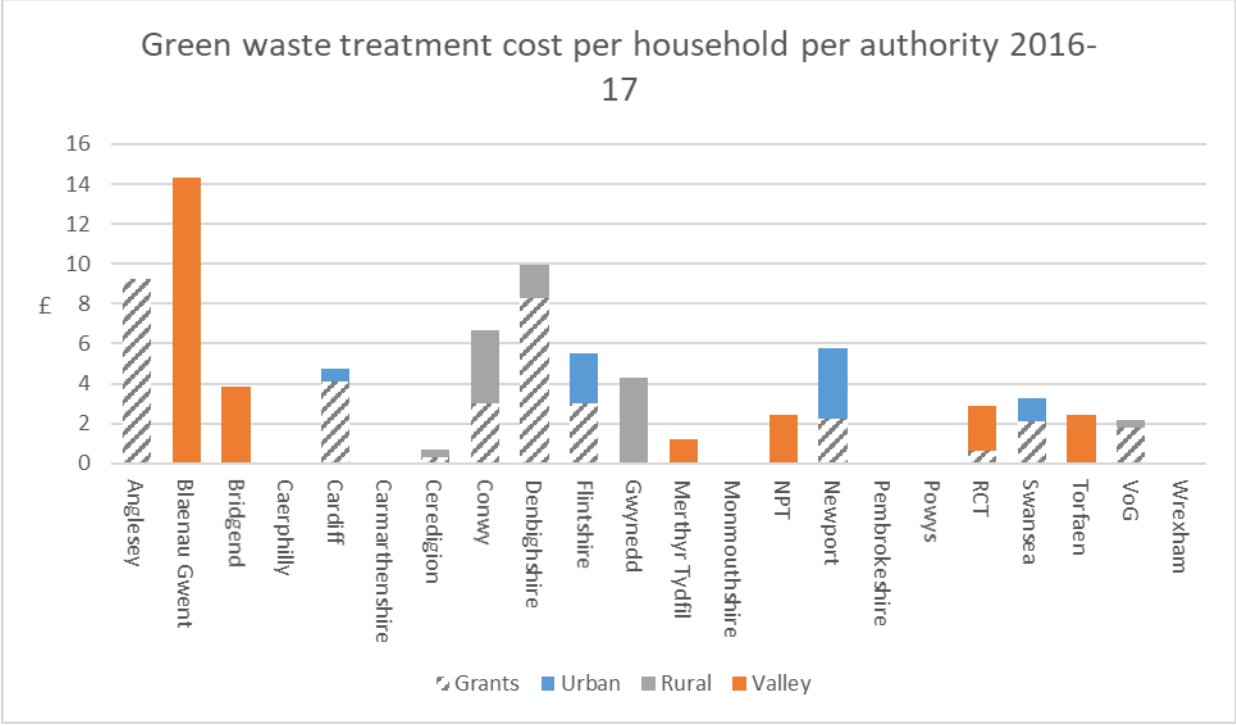

Figure 32 – Green waste treatment cost per household served.

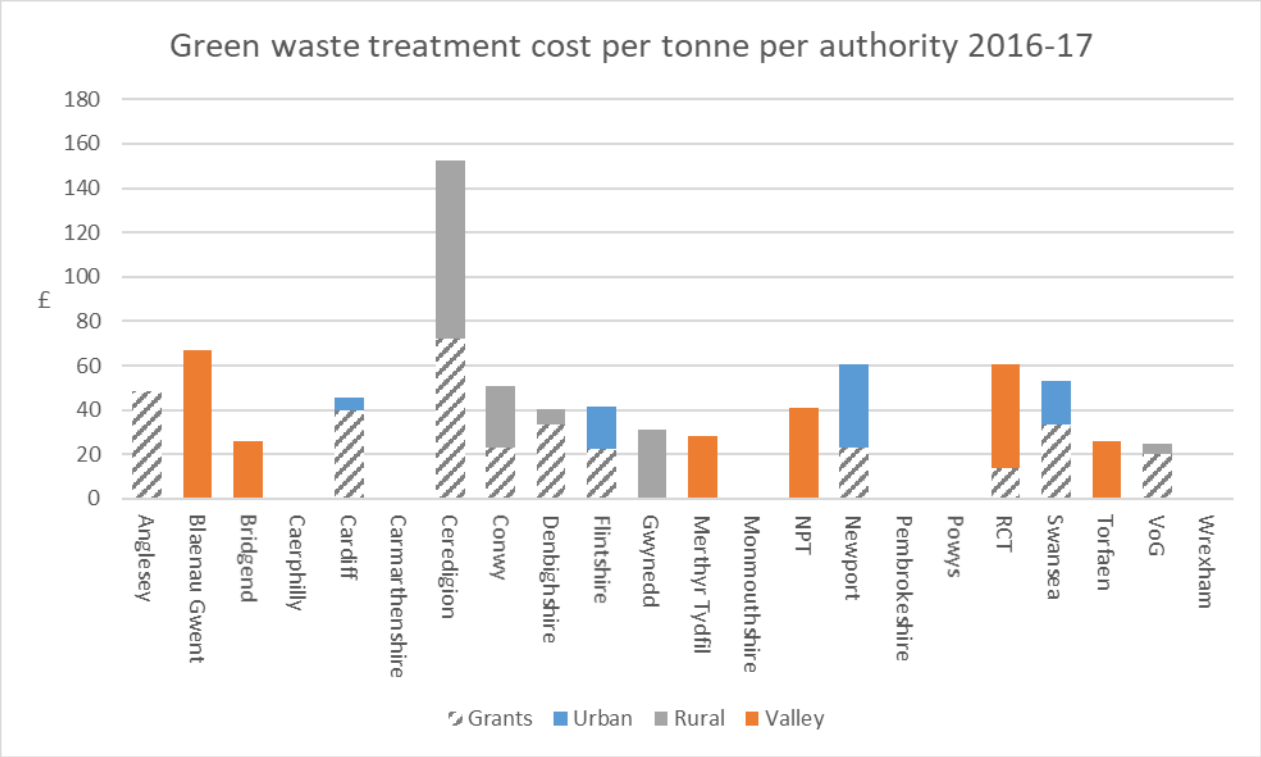

Figure 33 – Green waste treatment cost per tonne

53. Wide variation exists across the group for green waste treatment costs, mainly due to the variation in tonnage collected between LAs the group average at £52.10 per tonne.

Combined food and green waste

54. Treatment Costs for authorities collecting food and green waste fractions together are shown in Figure 34 (cost per household served) and Figure 35 (cost per tonne collected).

55. It is worth noting that the high costs shown against Wrexham's treatment activity is due to the PFI contract which entered a new phase in 2016/17.

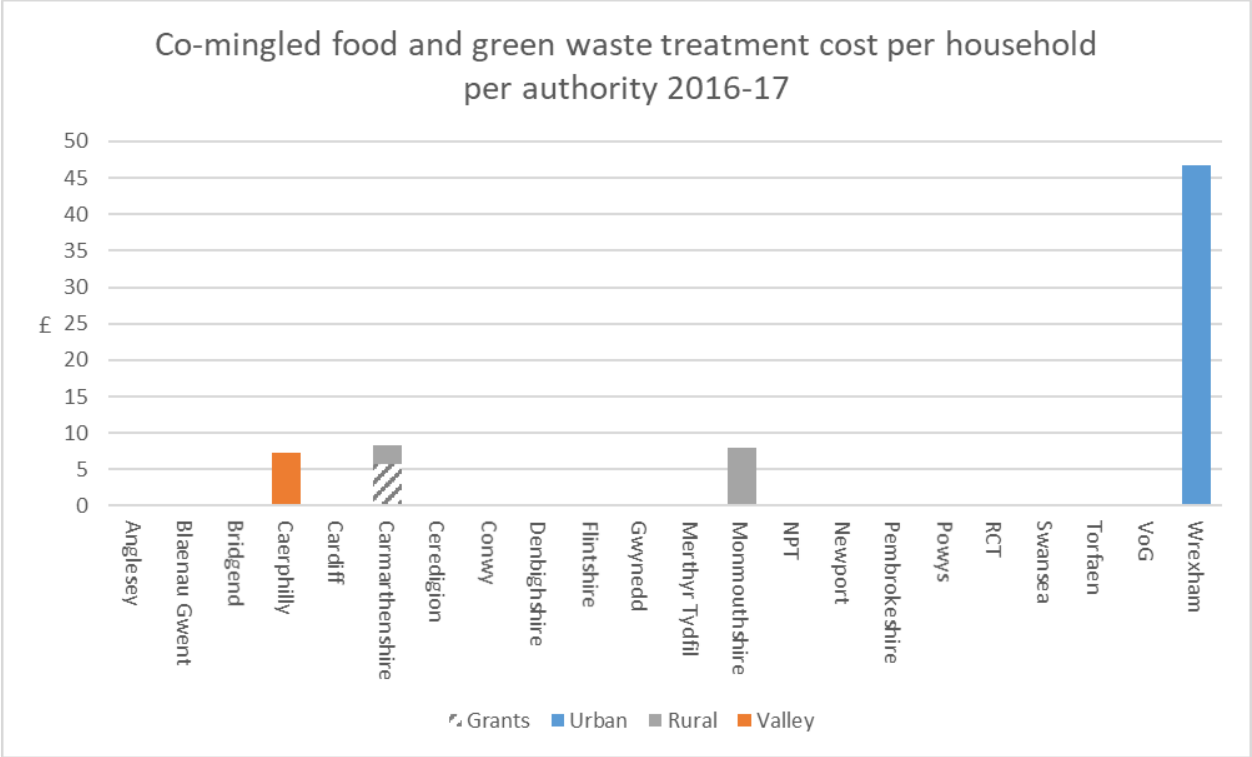

Figure 34 – Combined food and green waste treatment cost per household served.

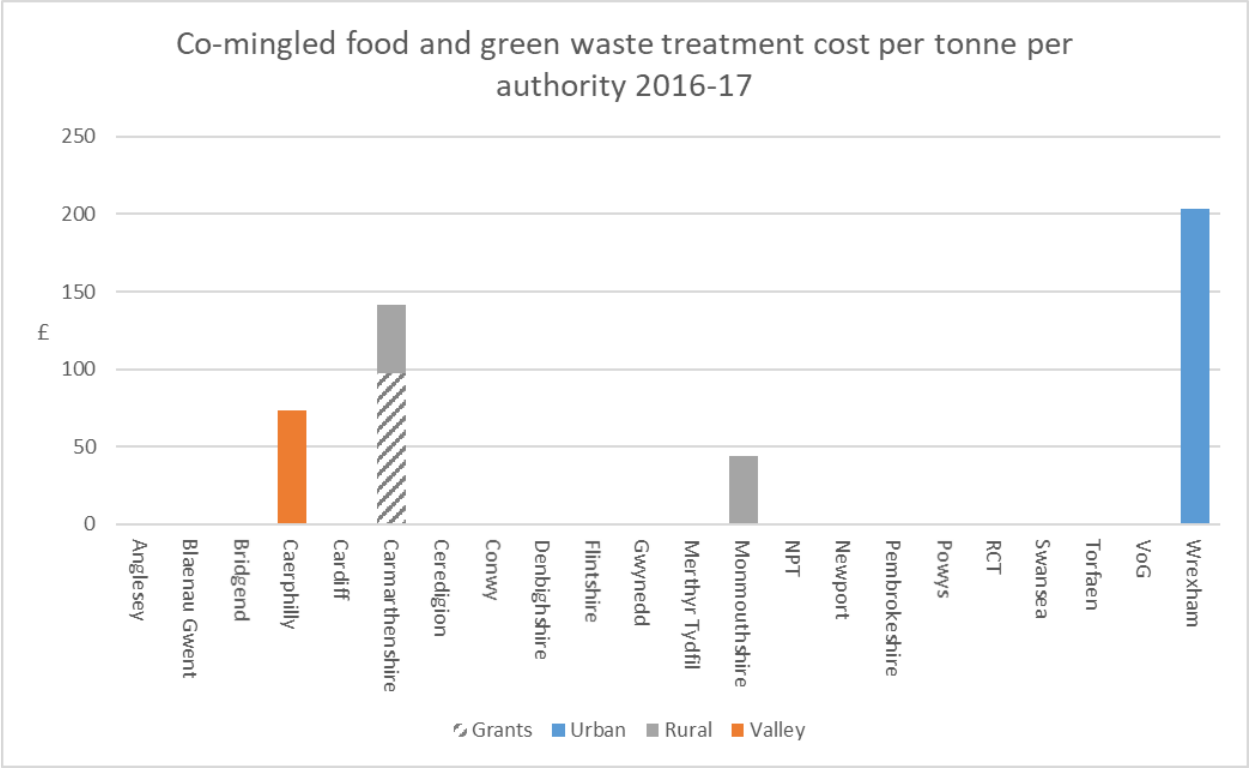

Figure 35 – Combined food and green waste treatment cost per tonne

Transfer, disposal and Income

56. A number of authorities are required to transfer collected material to treatment facilities. Costs incurred are relatively low in comparison with overall service cost, so for brevity are not included in main report. Similarly, costs incurred from disposal of non-compostable material (contamination) and incomes generated by organic waste services are low, data is therefore not included in main report.

Combined kerbside recycling & composting services

57. In order to provide efficient services many authorities offer collections of more than one waste stream using the same vehicles and crew. For example, many authorities routinely collect food waste and dry recyclate together, albeit in separate compartments, on the same vehicle. As costs for more than one service area are shared as a result, local authorities are required to make a reasonable apportionment of costs between services to enable them to complete their annual financial returns. Whilst the apportionments made are reasonable, there is a potential for error to occur. It is therefore useful to consider the combined costs of all services delivered at the kerbside in order to mitigate any potential error from apportionment.

58. Figure 36 and 37 below show the aggregated costs for all kerbside recycling services offered by Local authorities. i.e. the aggregated total cost of dry recycling, food waste, green waste and combined food & green waste services. Not included are residual waste services and other smaller scale activities such as bulky waste, trade waste and clinical waste collections.

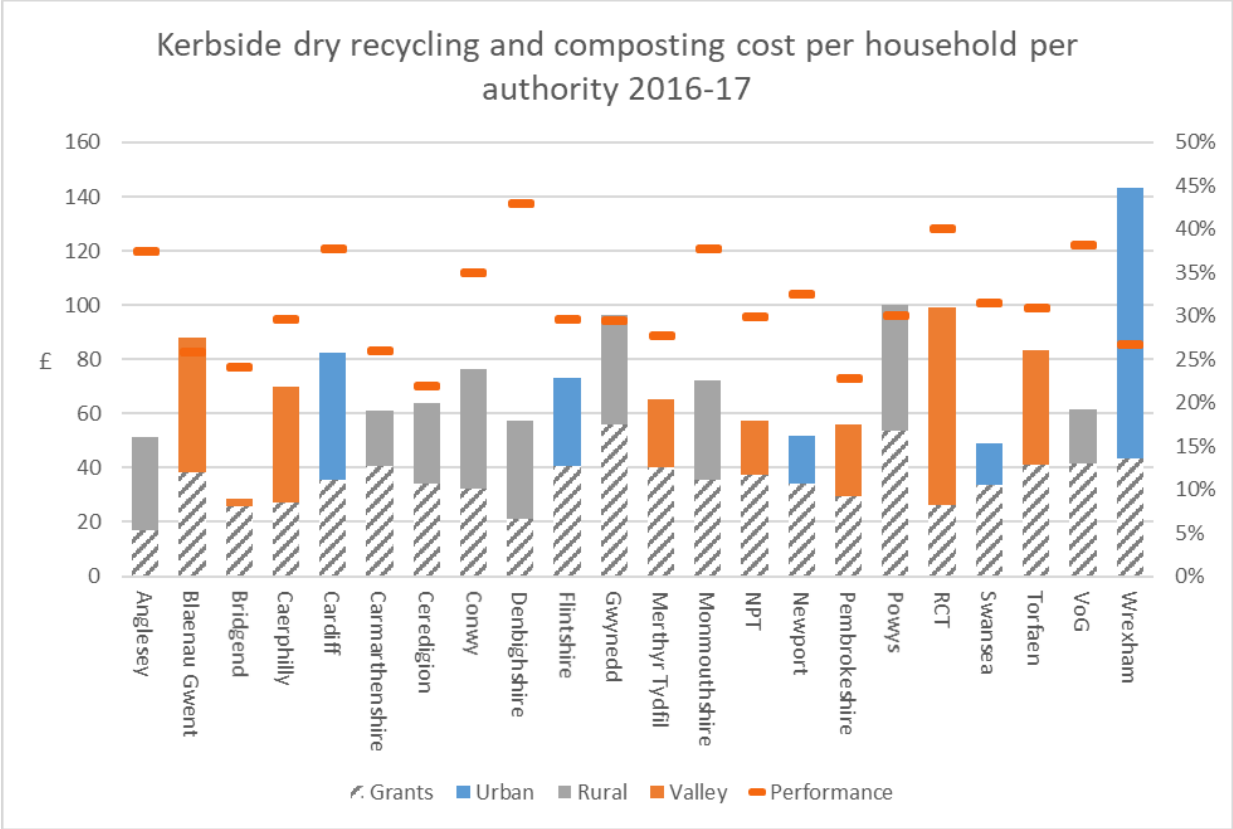

Figure 36 – Kerbside recycling and composting services – per household

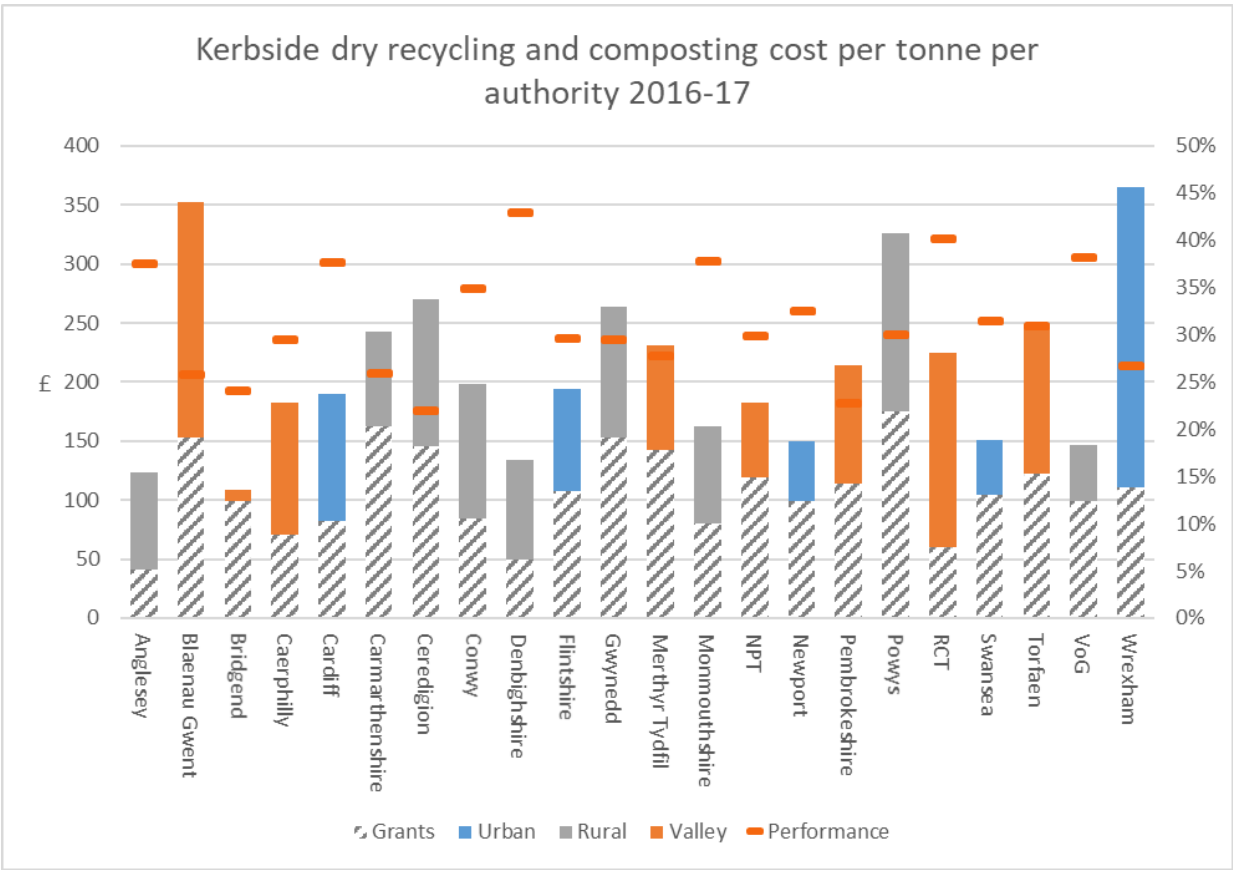

Figure 37 – Kerbside recycling and composting services – per tonne

59. Some variations in costs can be seen across the group, though most authorities are exhibiting combined service costs of less than £70 per household with agroup median of £67.54. Performance also varies across the group with between 22% and 43% of total MSW diverted via kerbside collection of material.

Residual Waste

60. The charts below show the aggregate cost of providing collection, transfer, treatment and disposal of residual waste. They show service costs net of any income (where applicable).

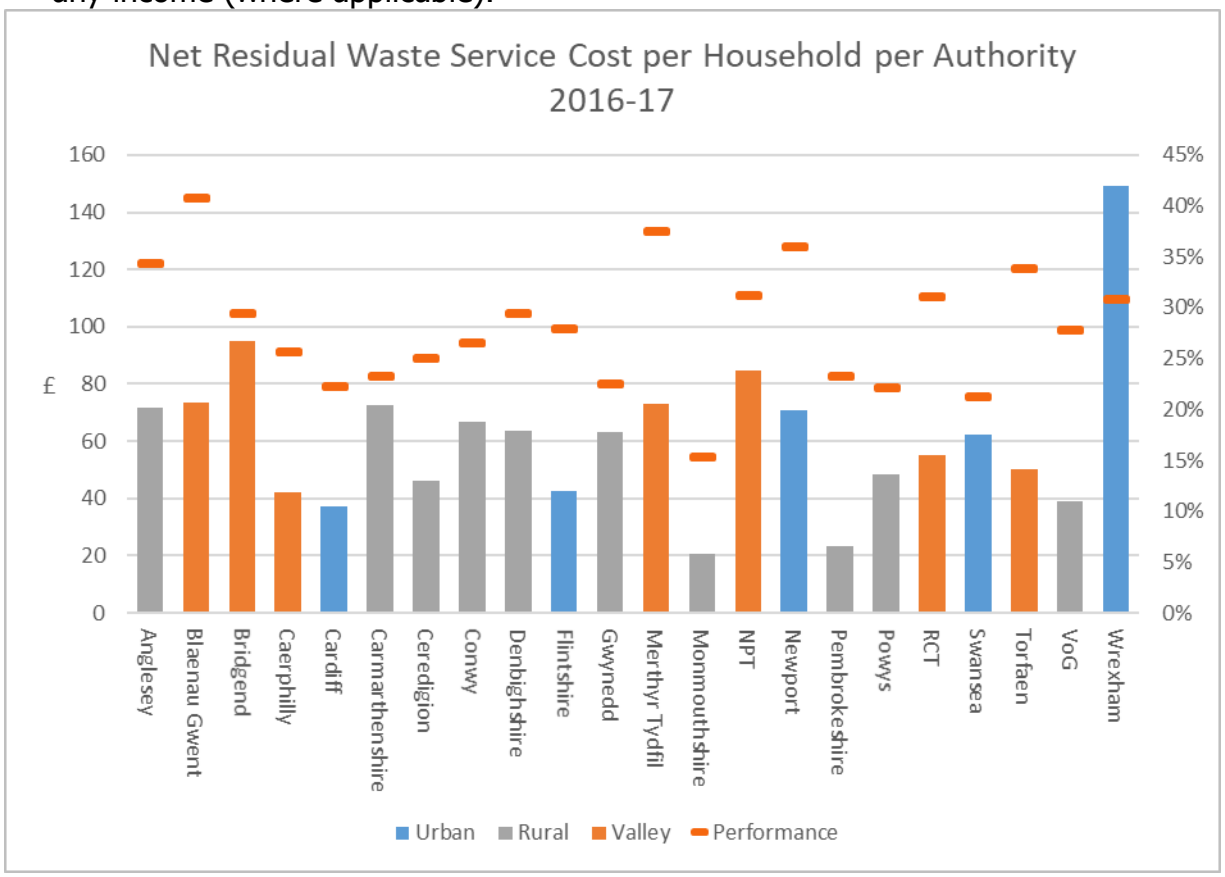

Figure 38 – Residual waste service cost per household

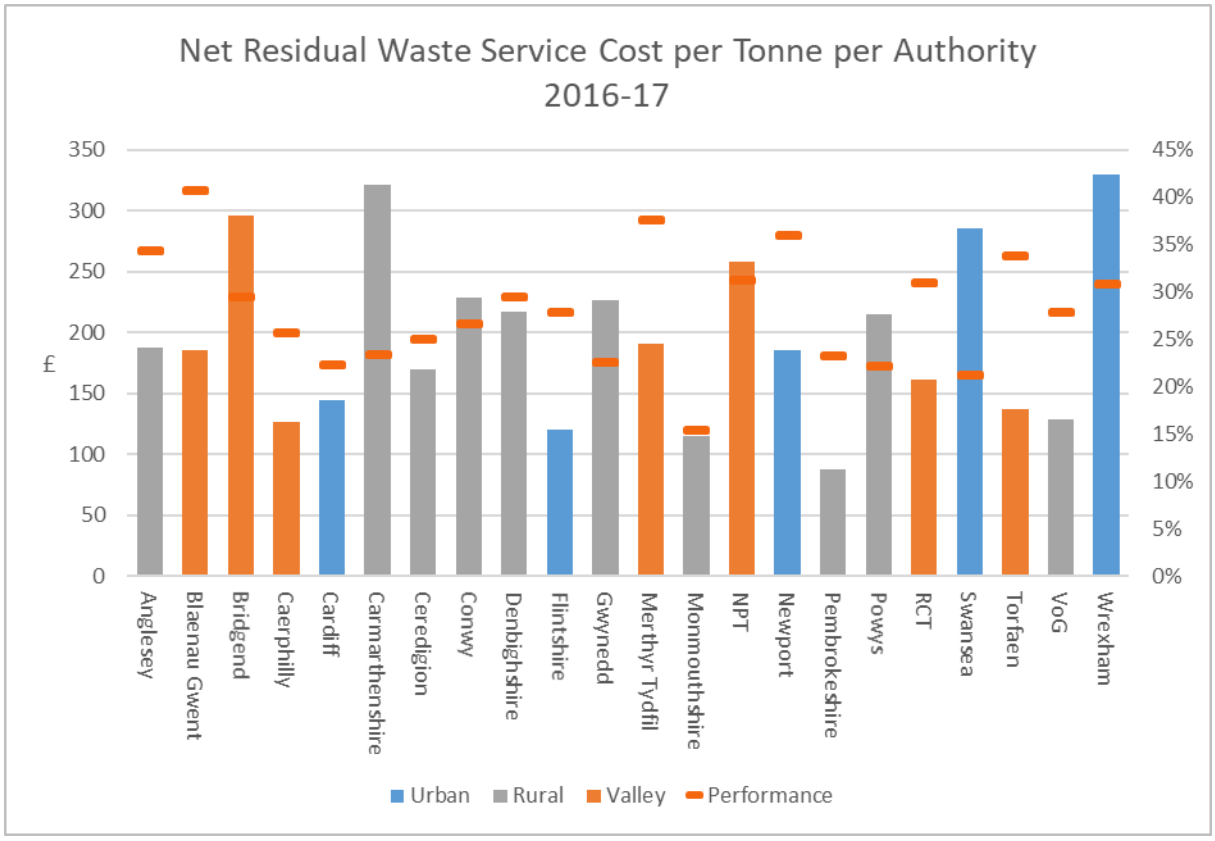

Figure 39 – Residual waste service cost per tonne

61. Performance data shows the proportion of MSW collected from the kerbside that is residual waste. Therefore, lower figures indicate a better performing service overall i.e. greater proportion of the total waste arisings is recycled. For example, Monmouthshire operated a low cost residual waste collection service relative to the group. Performance data indicates that the proportion of total MSW that is residual is one of the lowest across the group.

62. From the core data it is also possible to compare 2016/17 overall residual waste service expenditure with that of 2015/16:

	15/16	**16/17**	**% change**
Residual waste	£82,983,217	£84,753,568	2.1%

63. 2016/17 saw an increase residual waste service costs, with net expenditure rising by more £1.77 m when compared to the previous year. However in 2016/17 the mass of residual waste collected decreased significantly following a rise between 2014/15-2015/16. Residual waste collected fell by 21,145 tonnes compared to 2015/16. By 2016/17 all 22 Welsh authorities are collecting residual waste on at least a fortnightly basis, with Gwynedd, Blaenau Gwent, Powys, Anglesey and Conwy (with a four weekly trial) introducing a three-weekly collection county wide.

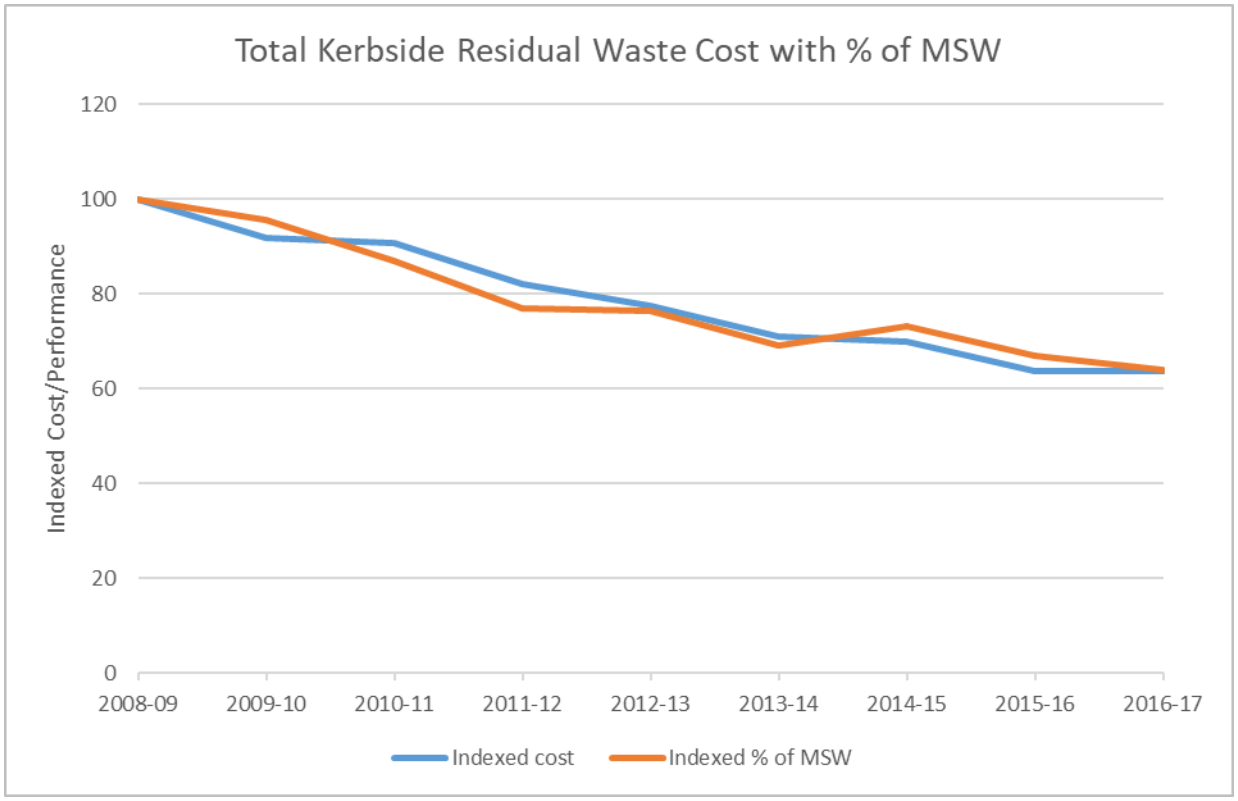

Figure 40 – Kerbside residual waste cost since 2008/09

64. The trend over the last six years is shown in Figure 40. It can be seen that cost residual waste collection has dropped significantly since 2008/09.

Collection costs

65. The following graphs show residual waste collection costs.

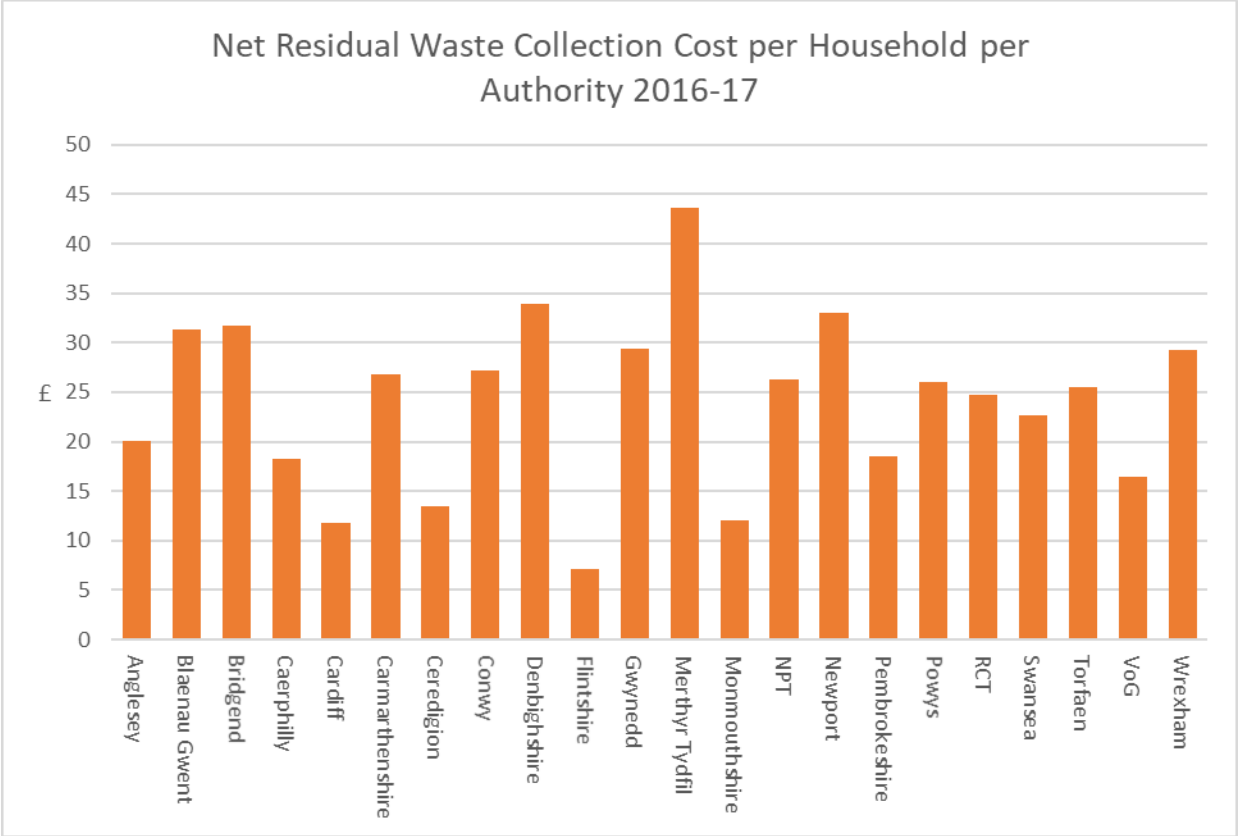

Figure 41 – Residual waste collection cost per household

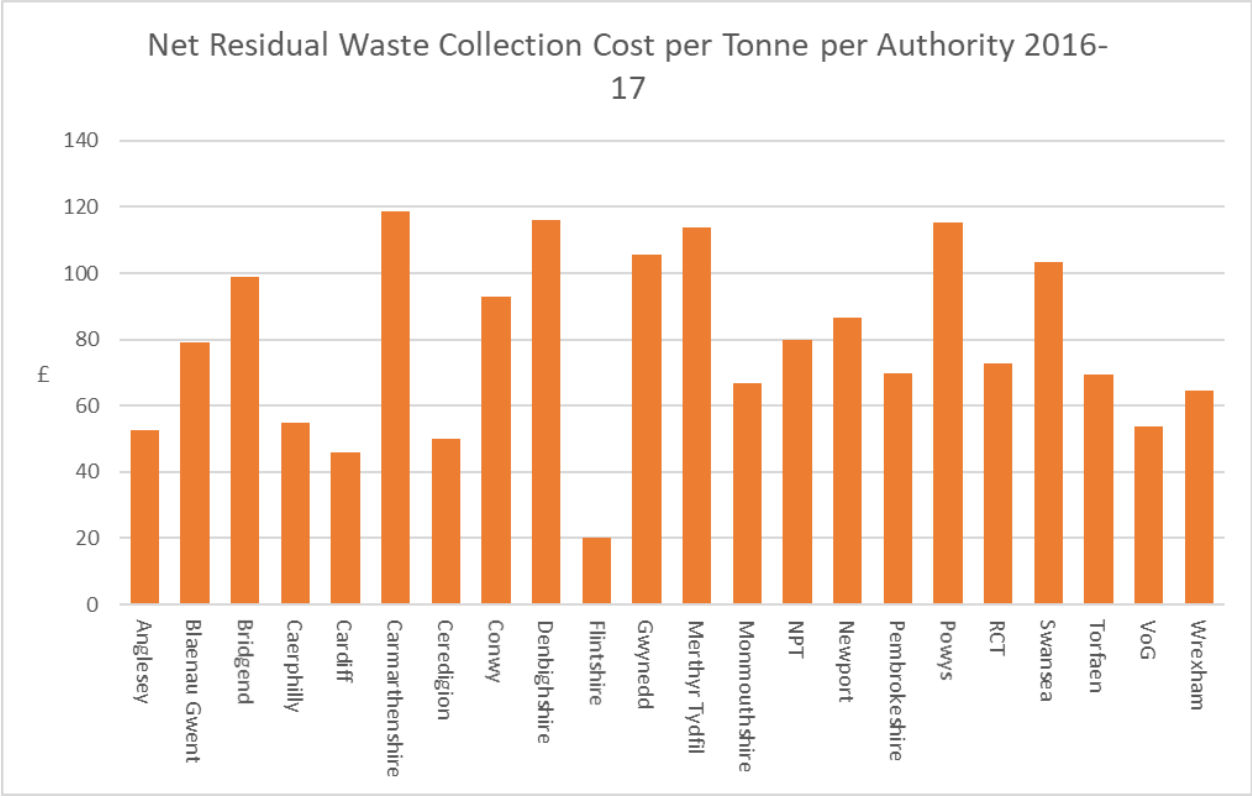

Figure 42 – Residual waste collection cost per tonne

Transfer costs

66. A significant number of authorities are required to transfer residual waste collected prior to onward treatment or disposal. Costs incurred are shown in Figure 43 and 44.

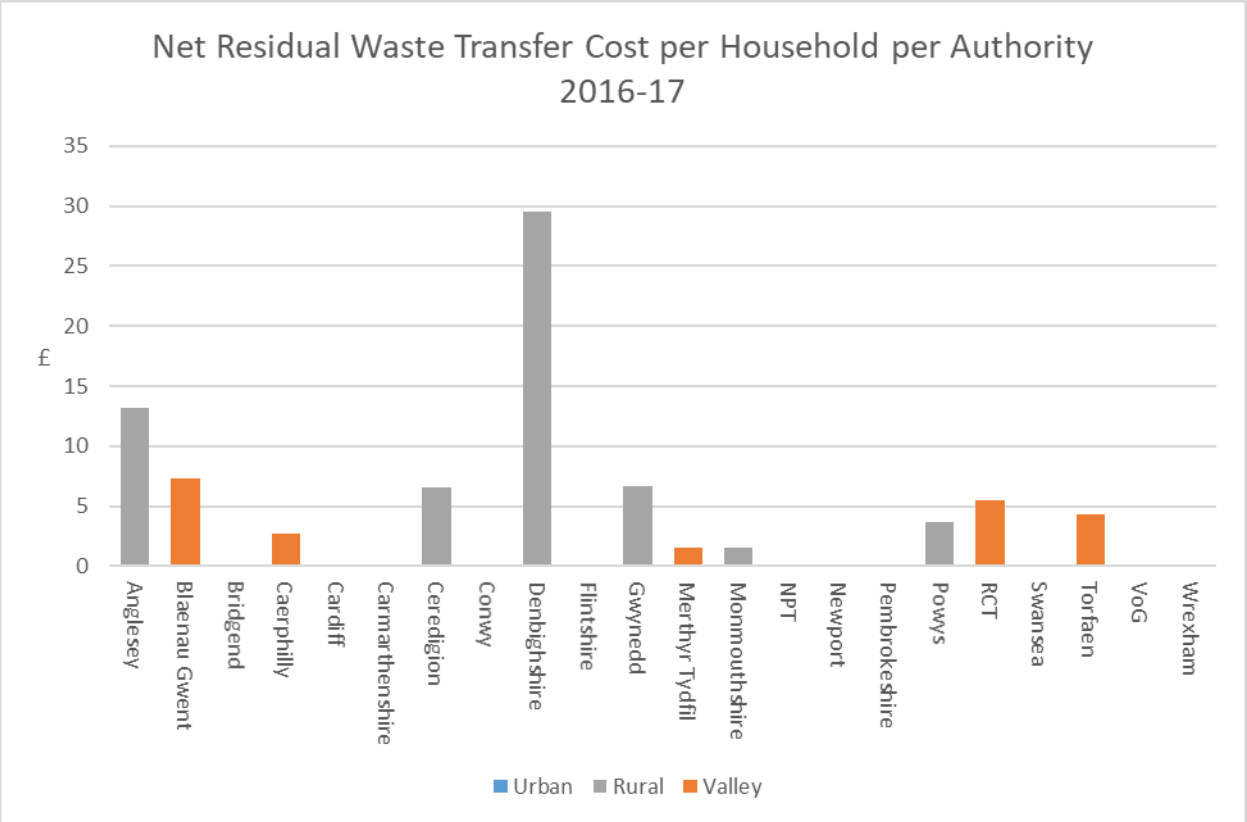

Figure 43 – Residual waste transfer costs per household

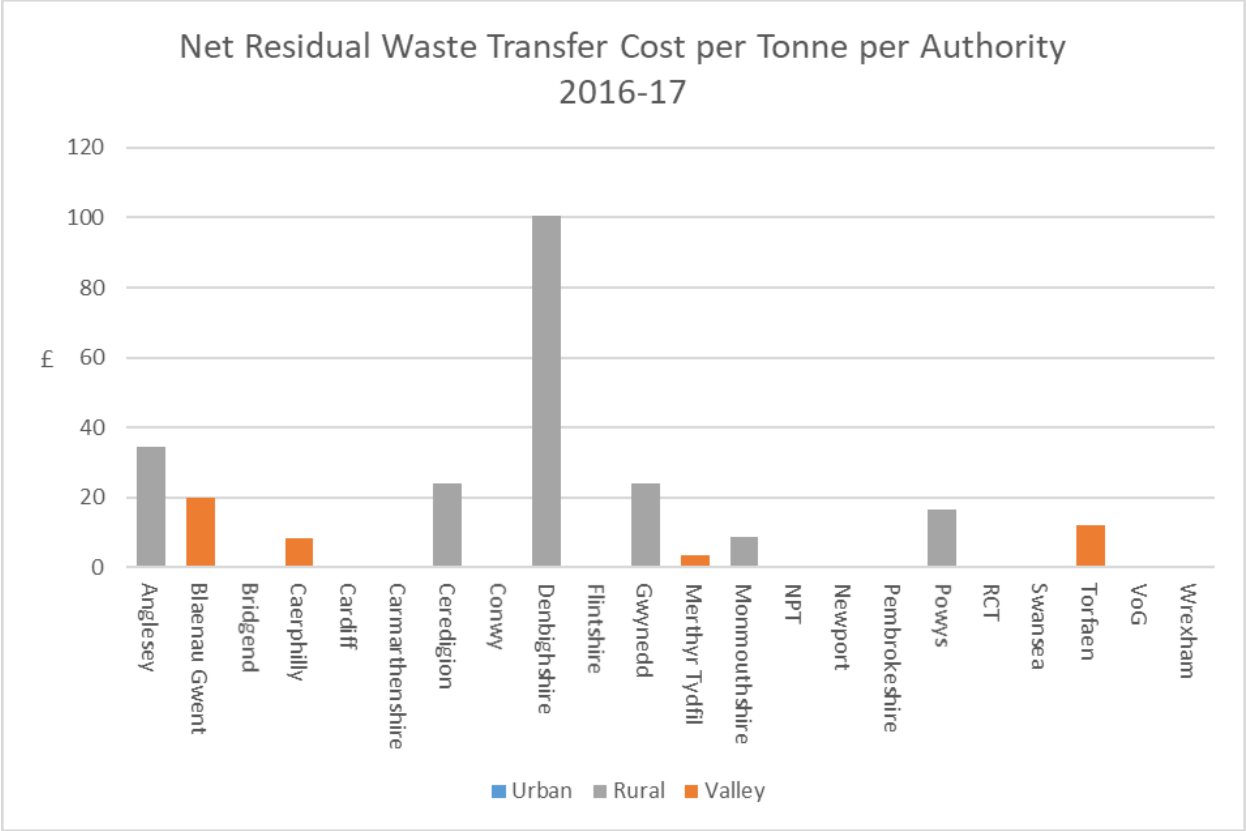

Figure 44 – Residual waste transfer cost per tonne

Treatment / processing costs

67. A growing number of authorities are adopting treatment technologies for managing their residual waste. Those authorities which exhibit treatment costs are shown in Figure 45 &46.
68. The cost of treatment or processing waste is shown. At present 17 authorities occur costs for treatment of residual waste at a combined net cost of £33.7m compared to 11 authorities spending around £20.2m. In some cases not all residual wastes are treated. The ongoing procurement of treatment facilities will mean that a continuing growing number of authorities are likely to incur waste treatment costs in the future.

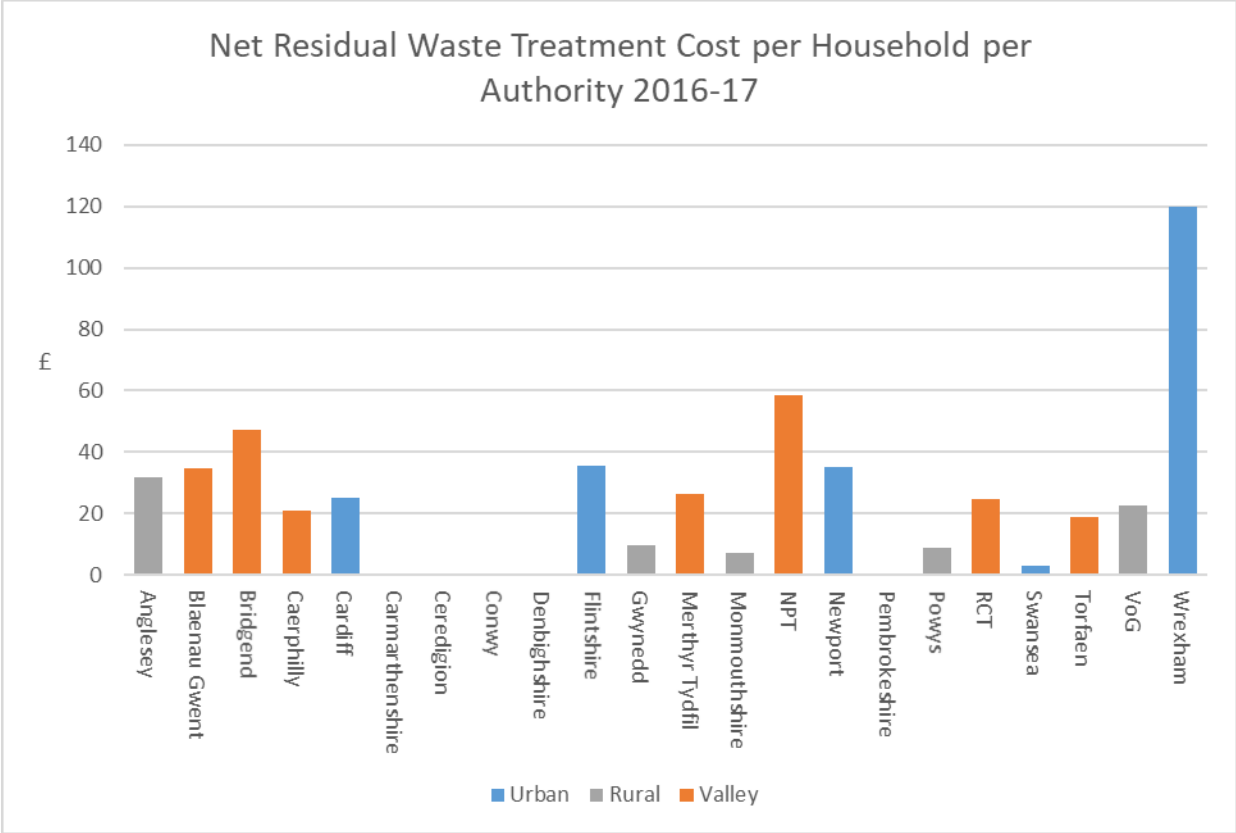

Figure 45 – Residual waste treatment cost per household

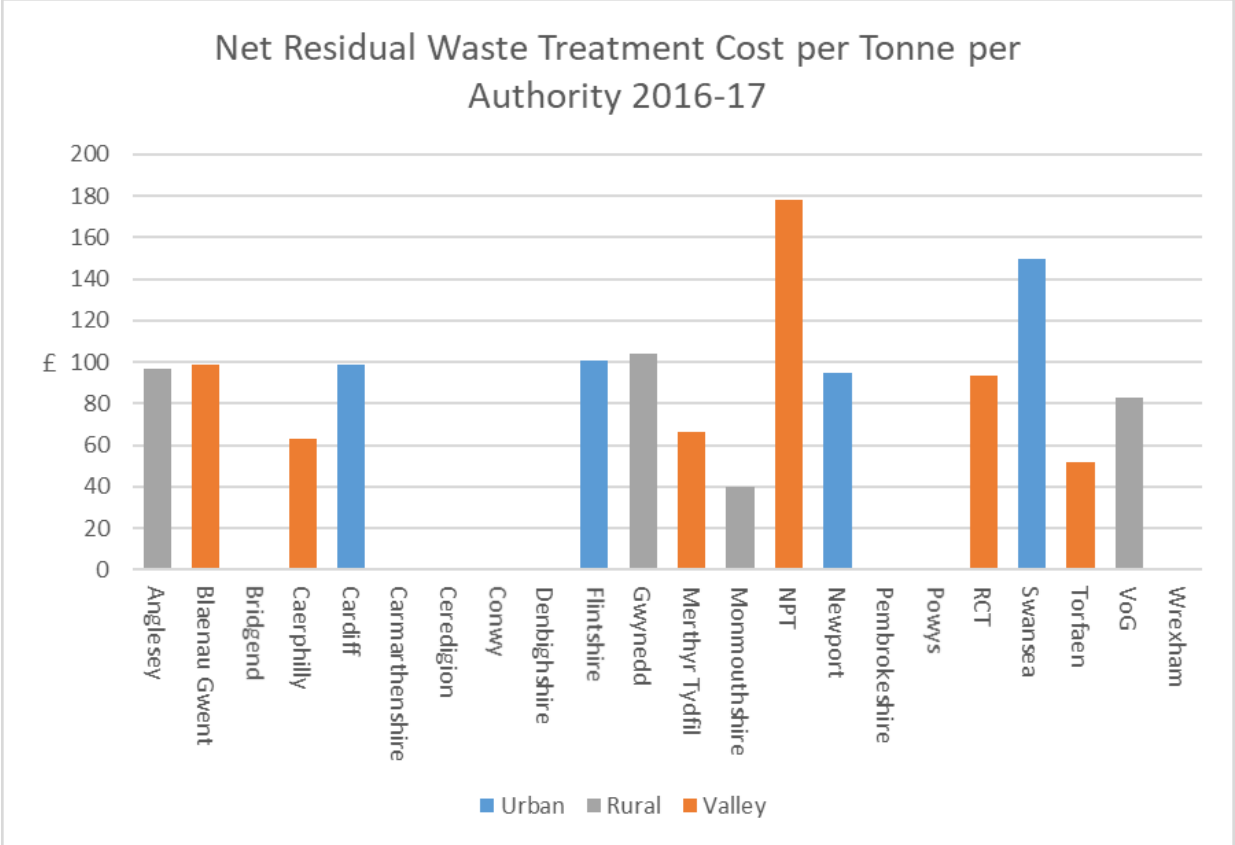

Figure 46– Residual waste treatment cost per tonne

Disposal

69. Figure 47 & 48 show the cost of disposing of the residual waste collected. These are generally based on fixed price contracts and costs will vary based upon local circumstances (such as availability of landfill options nearby), length of contract and date of contract commencement. Data is shown on a cost per household basis and as a cost per tonne

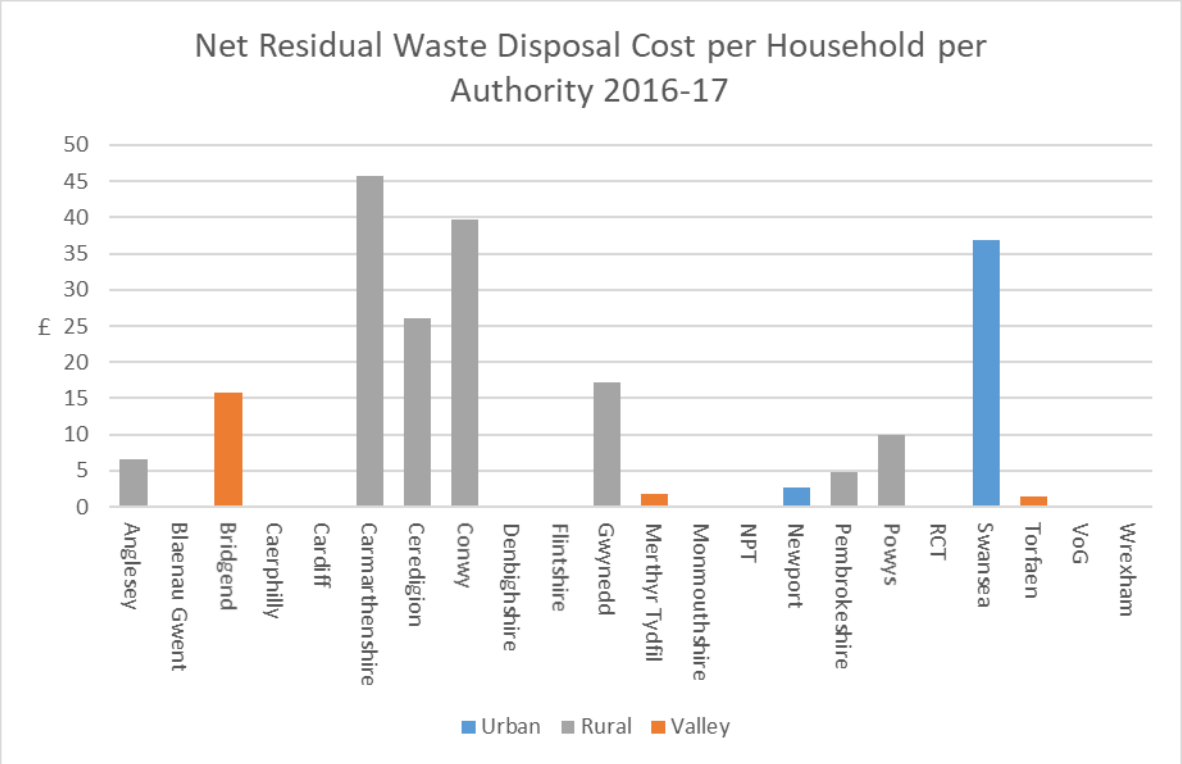

Figure 47 Disposal cost per tonne of Residual waste

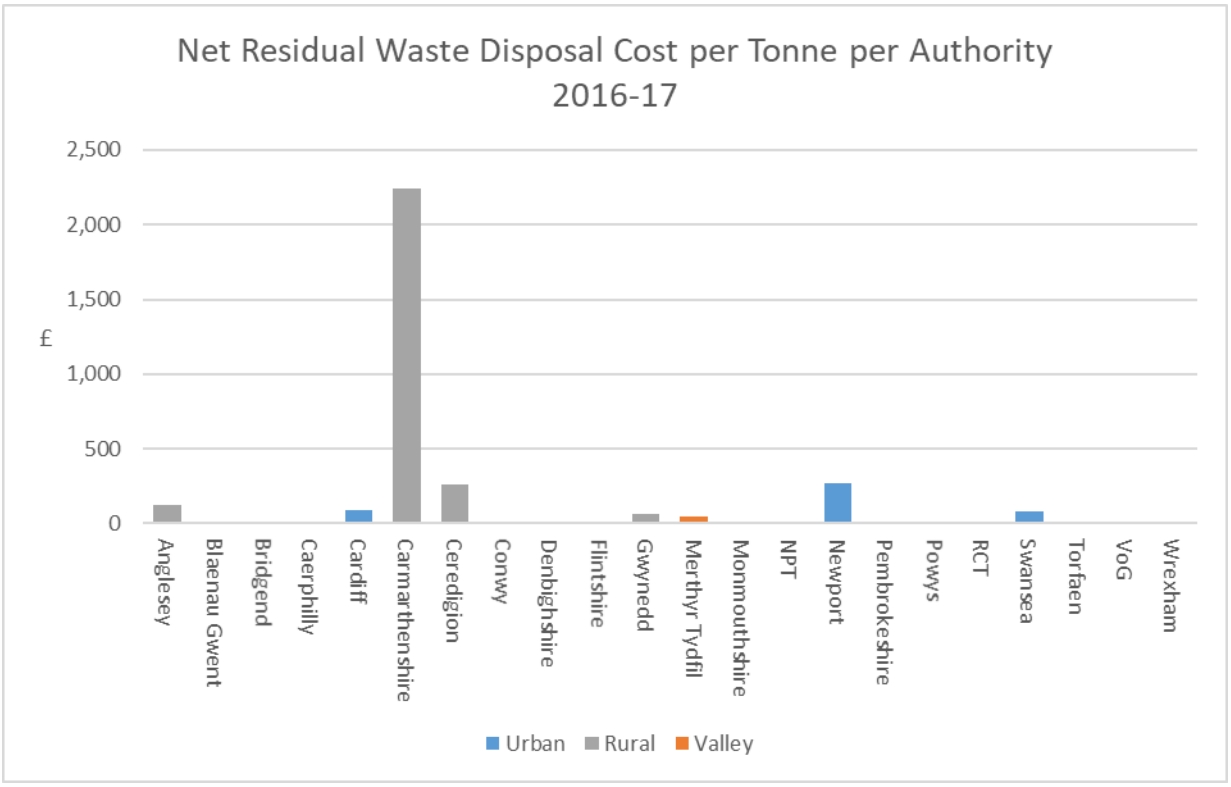

Figure 48 Disposal cost per tonne of Residual waste

Household Waste Recycling Centres

70. As before, cost is shown on the left-hand axis whilst performance, in terms of mass recycled via HWRC network as a proportion of total MSW, is shown on the right. Costs shown include both recycling and residual fractions dealt with at HWRCs.

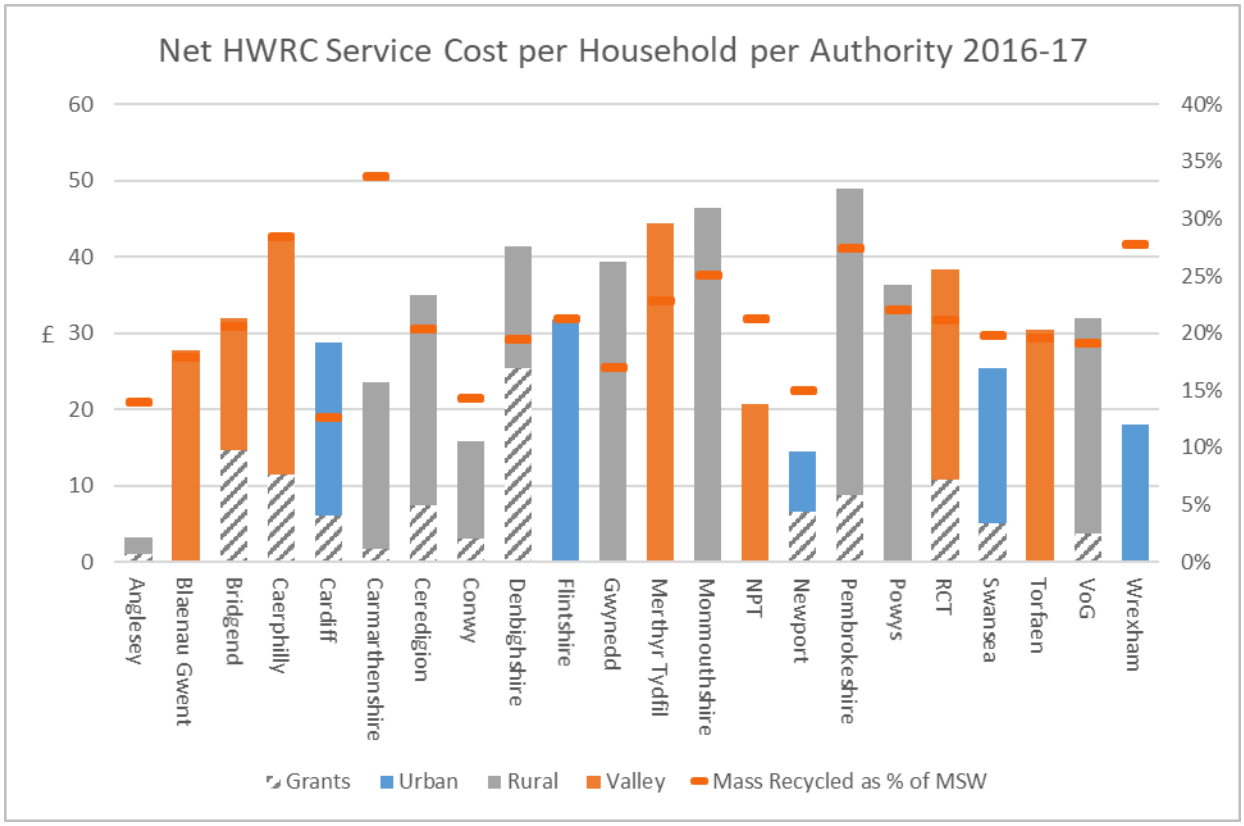

Figure 49 – HWRC site service cost per household

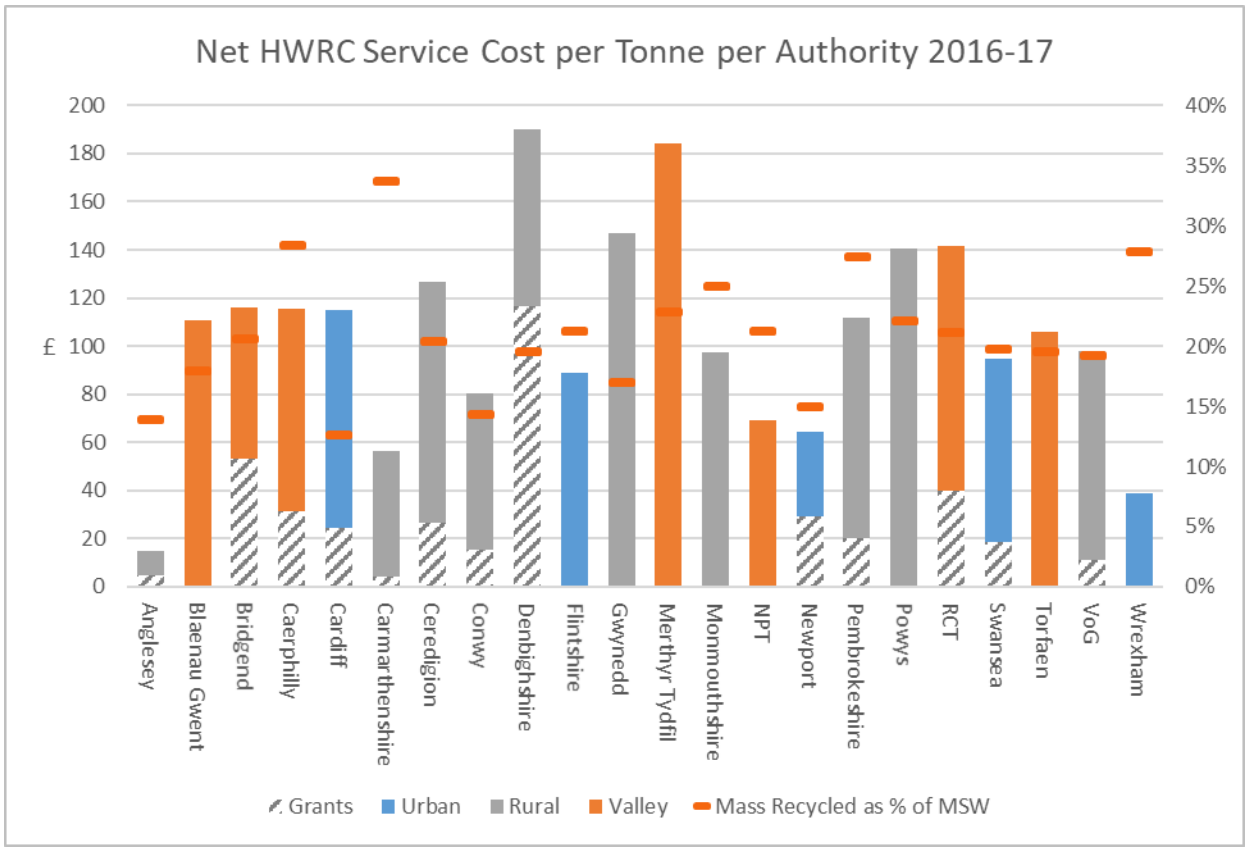

Figure 50 – HWRC service cost per tonne

71. Performance data indicates that contribution made by HWRCs to overall recycling rates can be considerable. In the case of Carmarthenshire, , Pembrokeshire,Monmouthshire Wrexham around more than 25% of total MSW is recycled via HWRCs. Once again, divergence between cost and performance bars is likely to indicate a more efficient service. Wrexham, where cost per household and cost per tonne indicators are around the second lowest, yet with almost 30% of total MSW recycled through HWRC site network, they are amongst the highest performing authorities.

72. From the core data it is possible to compare 2016/17 overall HWRC service expenditure with that of 2015/16:

	15/16	16/17	% change
HWRC	£ 39,669,963	£43,226,539	8.2%
Grant (SRG)	£ 7,332,102	£7,395,356	0.9%

73. It can be seen that expenditure on HWRCs increased in 2016/17. During this time the proportion of waste received at HWRC increased slightly from 30% in 2015/16 to 31% 2016/17.

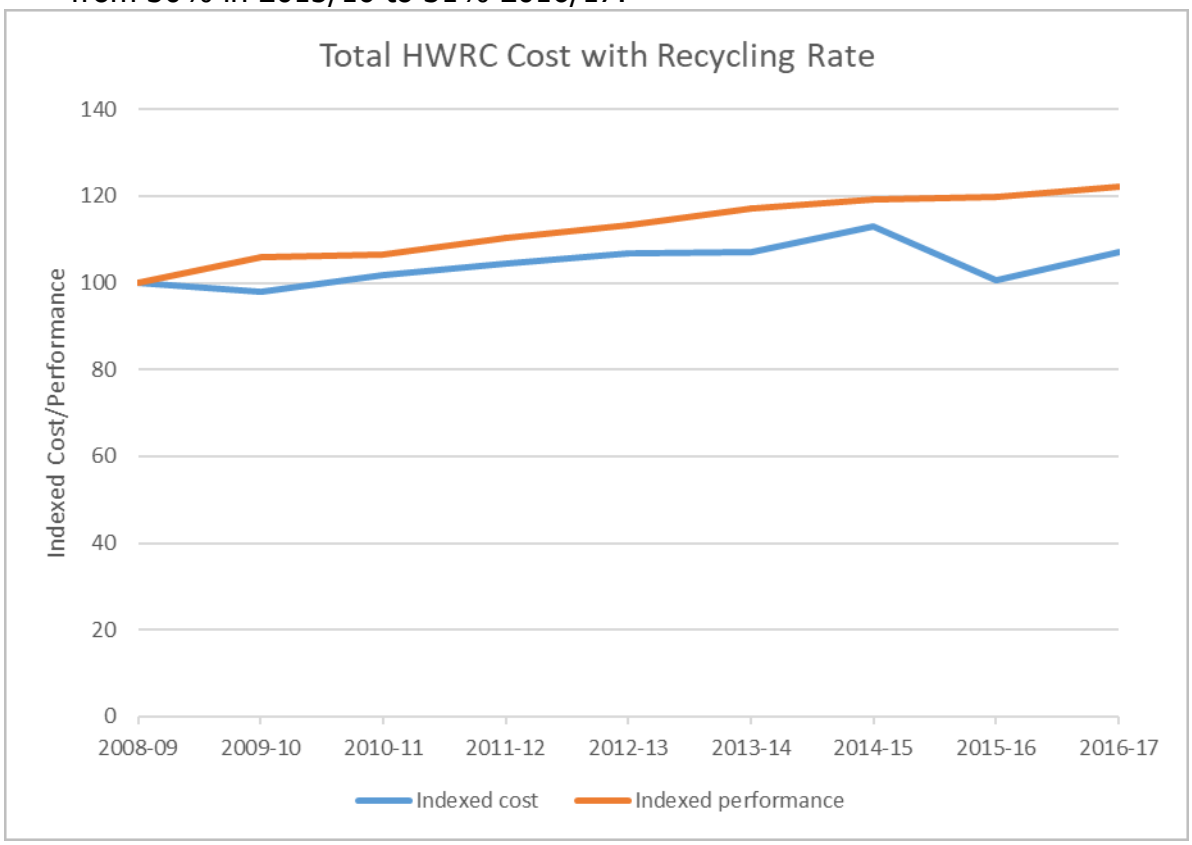

Figure 51 – HWRC site expenditure since 2008/09

74. Over the longer term, it can be seen that expenditure in 2016/17 is close to the 2008/09 baseline. The mass of material re-used, recycled or

composted via the HWRC site network as a proportion of total MSW has improved over the same period.

Bring Sites

75. The figures shown reflect the service cost divided by number of households (Figure 52) and by mass collected (Figure 53).

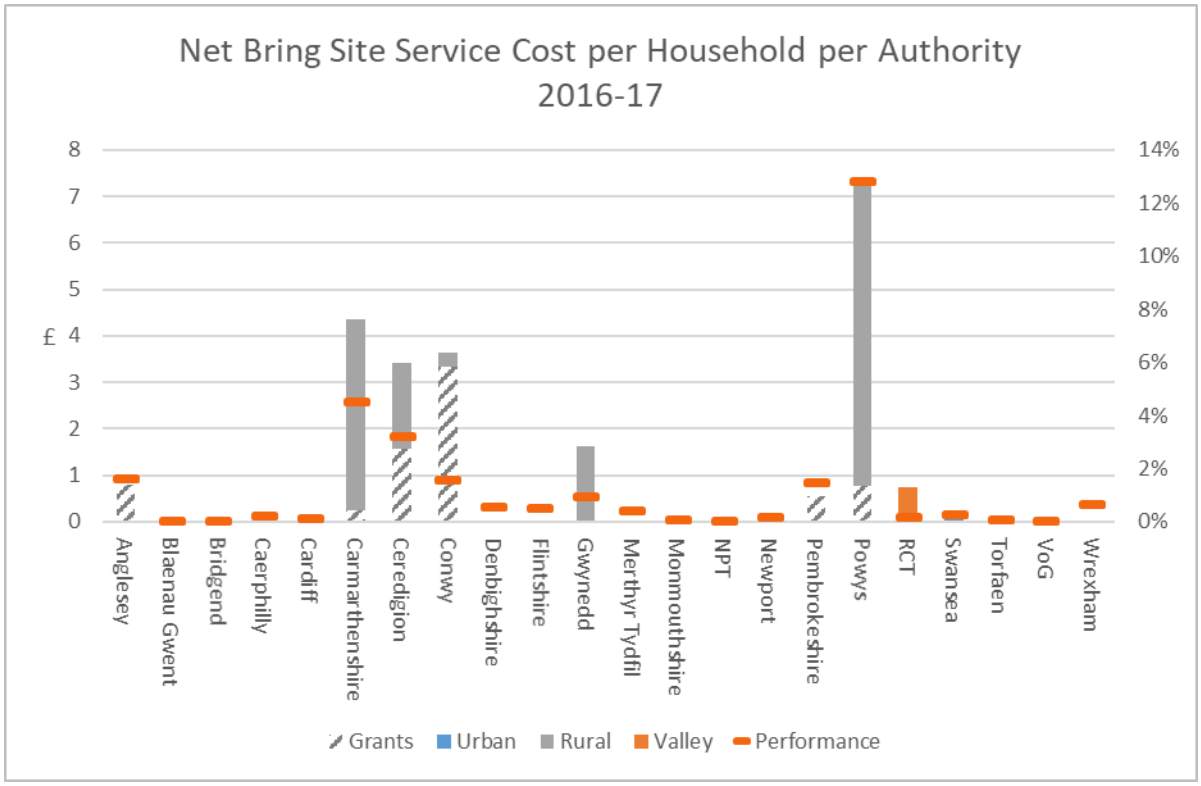

Figure 52 – Bring site costs per household

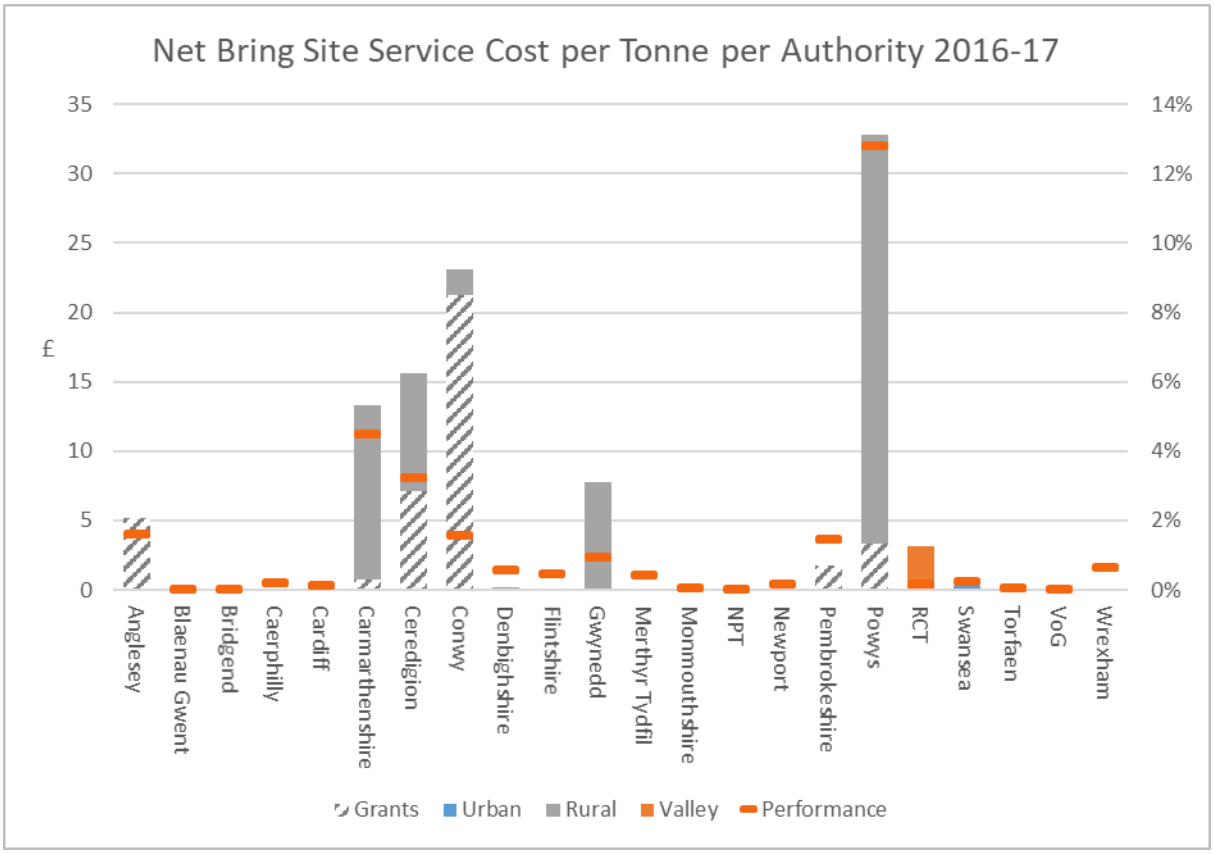

Figure 53 – Bring site costs per tonne

76. It can be seen that both cost and performance vary widely across group. This largely reflects the differening levels of provision across authorities. However in some cases the costs of collecting these waste are included by other services such as HWRC.

77. From the core data it is possible to compare 2016/17 overall Bring site service expenditure with that of 2015/16:

	15/16	**16/17**	**% change**
Bring	£ 1,553,752	£1,419,204	8.7%
Grant	£ 336,252	£451,427	-25.5%

78. It can be seen that there was a slight decrease in bring site expenditure during 2016/17. During the same period, mass collected via the bring site network reduced by 96 tonnes continuing a longer term trend.

79. It is likely that mass of material collected via bring site network is reducing due to comprehensive kerbside collection system however Bring sites do continue to make a significant contribution to recycling rates for some authorities. Powys and Carmarthenshire collected 5% and 14% of

MSW respectively from Bring sites and the tonnages collected actually increased between 2015/16 and 2016/17.

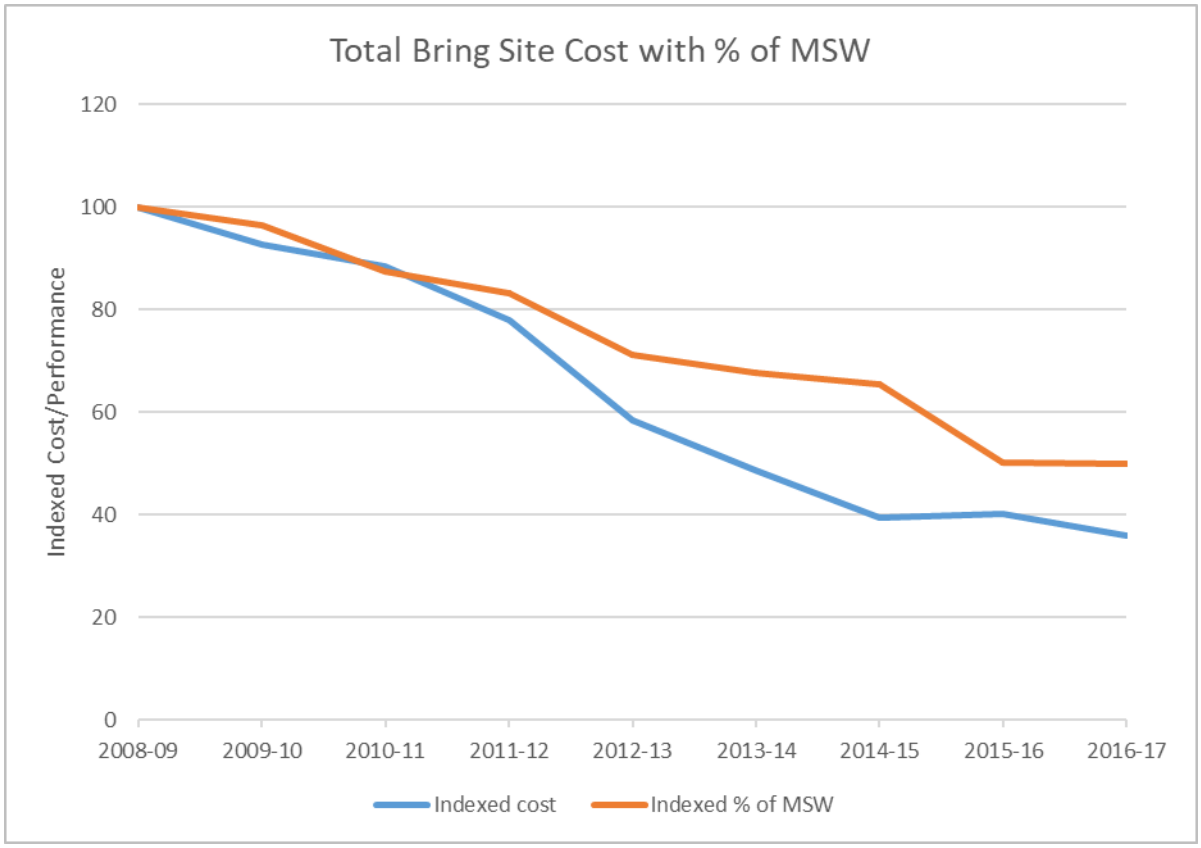

Figure 54 – Bring site expenditure since 2008/09

80. Once again the trend over the longer term can be examined. Both expenditure and mass recycled via the bring site network have fallen steadily since 2008/09.

Trade Waste Service

Figure 55 shows the total trade waste service cost (net of income).

Figure 55 – Trade waste service cost[7]

81. Some trade waste services are operated by collecting trade waste co-mingled with household waste: tonnages and associated costs are often apportioned from average bin weights therefore costs shown above may not be wholly representative of true service cost.

Nappy and other AHP Collections

82. Currently 4 authorities provide a collection service for nappies and other AHP that is separate from residual waste and other hygiene/clinical collections. Costs associated with such services are shown in Figure 56.

[7] More detailed information on Trade Waste services can be obtained from the Wales Audit Office Trade Waste Benchmarking Programme,

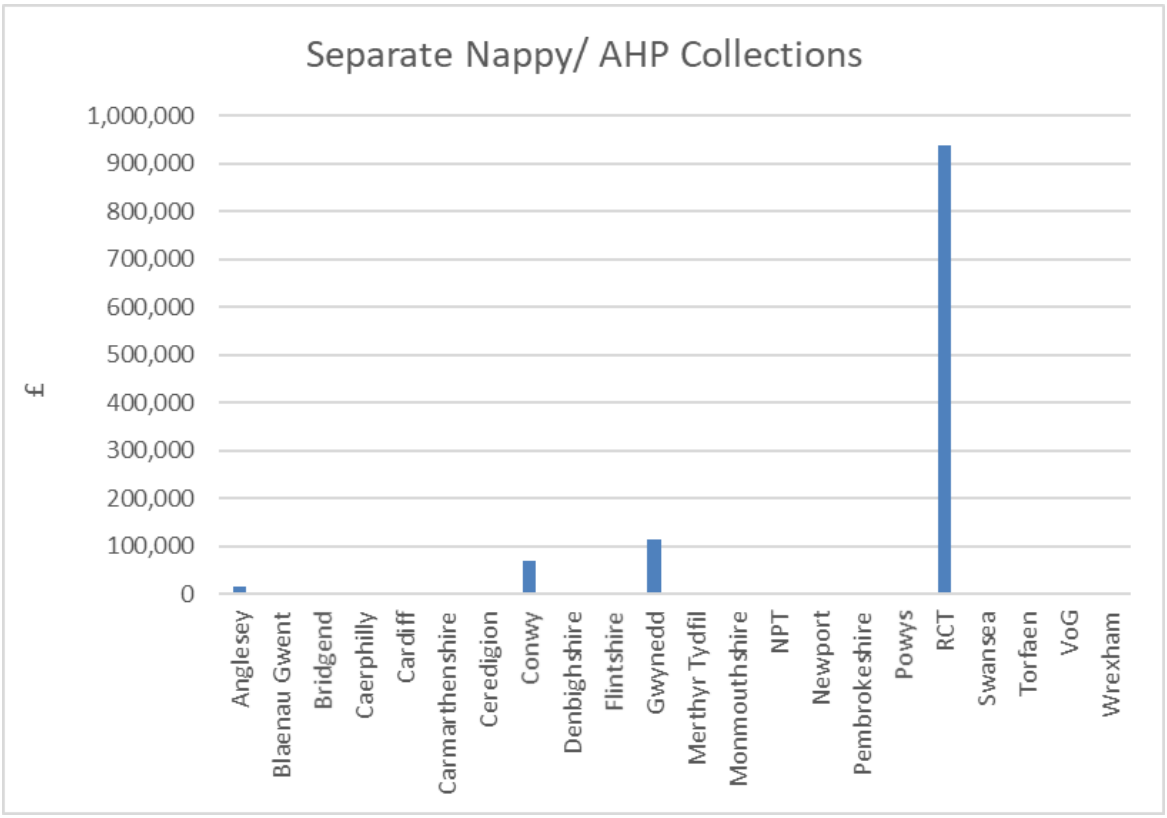

Figure 56 – Nappy/AHP waste service costs

Clinical Waste

83. Eight authorities provided clinical waste collection and these costs are included in Figure 57. These costs include clinical waste collections and behalf of Local Health boards as well as other separate hygiene collections.

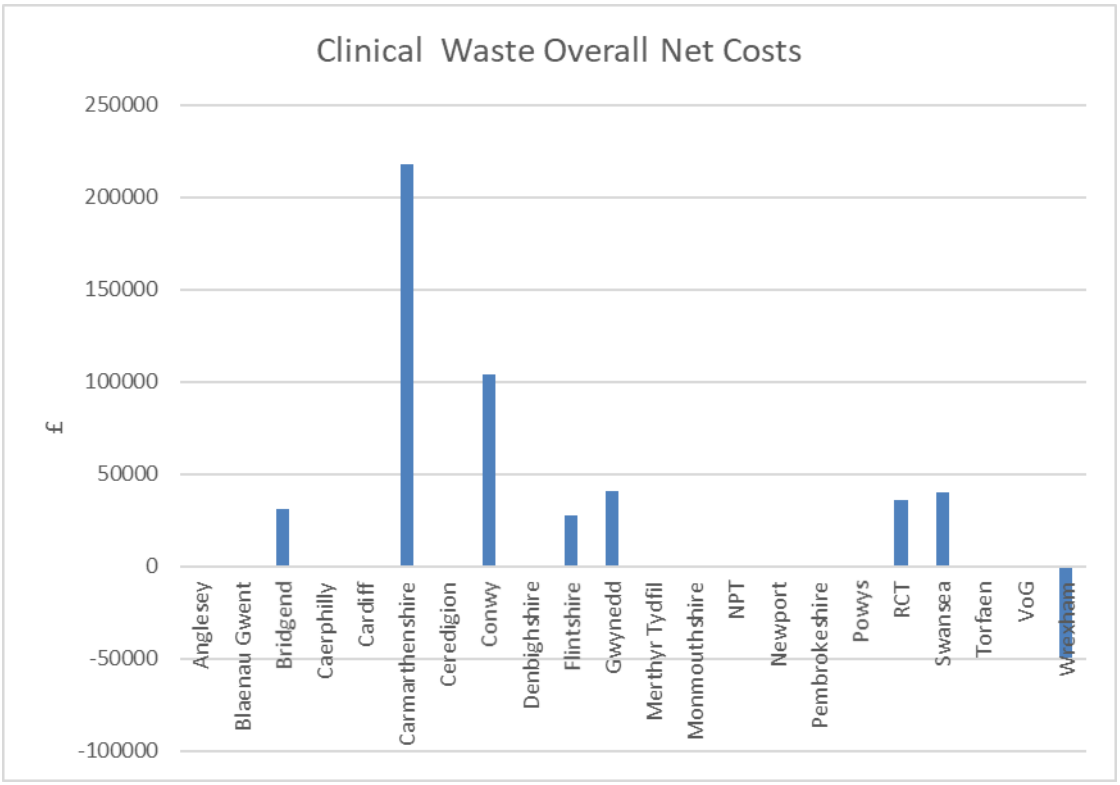

Figure 57- Clinical waste Costs

Project Development: the future of the national project

1. The data presented is in a purely quantitative form and is yet to undergo further qualitative analysis.

2. Additional qualitative analysis has been completed for 2008/09, 2009/10, 2010/11, 2011/12, 2012/13 and 2013/14 data. Recommendations applicable to all local authorities have been made based on findings of further analysis, and have been incorporated in annual WAO benchmarking reports (For summary of benchmarking recommendations see Appendix 1

3. Progress made by local authorities in addressing recommendations is currently monitored by WAO. Following discussions with WG and WAO a greater emphasis has been placed on the use of the data and ensuring it helps deliver improvements in services. To enable this from 2018 task and finish groups will be created to review specific issues in more detail, understand the changes/trends better and make recommendations to CSS. The first CSS meeting of 2017/18 will determine the nature of the improvement groups for this year.

4. As in previous years, data extracted from WasteDataFlow required a considerable amount of cleansing to remove anomalies. This process took place between September 2017 and January 2018. It is envisaged a similar period of data validation will be required in future years. Work is undertaken by Waste Improvement team in conjunction with individual local authorities.

5. WLGA in conjunction with its partners will strive to further improve the data gathering process, with the aim of gathering all the required data in the simplest way possible. Guidance provided by WLGA for local authorities on how to complete data return has been be reviewed and updated. In addition where anomalies are identified the WLGA will work with authorities to ensure the 2016-17 data reporting process is as free of data issues as possible.

6. All authorities will receive an individual financial summary report detailing their own authority's financial data and their position relative to the other Welsh local authorities.
7. can be reflected as well as evidencing meeting the Well being goals and ways of working.

Appendix 1

Summary of Benchmarking Recommendations – 2008/09

Listed below is a summary of recommendation made to local authorities as a result of the waste benchmarking undertaken in calendar year 2010:

Residual Waste

1. Each local authority should review the efficiency of all residual waste collection routes. This review should focus on maximising the mass collected by each collection crew and reducing the overall labour and transport requirement of the service.

2. Each local authority should explore if it is able to reduce the number of collection rounds by undertaking an objective and comprehensive route optimisation exercise. Local authorities should routinely re-evaluate this exercise to take into account changes to their residual waste stream, for example, following introduction of more comprehensive recycling services.

Civic amenity Sites

1. Establish an accurate baseline by reviewing the performance of all civic amenity/household waste recycling centres to determine the overall waste diversion rate and material throughput. Use this information, together with future quarterly reassessments, to plot performance trends.

2. Identify sites that are not operating at optimum usage or are diverting less than 65 per cent of the waste accepted into waste reuse, recycling or composting activities. For each of these sites, investigate the causes and put in place an action plan to increase diversion to at least this level within a specified timescale. Alternately, say why the authority has decided not to increase usage or diversion.

3. Review the local strategy for civic amenity/household waste recycling centres so that long-term plans (for at least 5 years) are in place for the future development of these facilities.

4. By June 2011, to work with colleagues within the CSS waste sub-group and to have established a system to share good practice with a view to improving the performance of civic amenity/household waste recycling centres.

5. Work with neighbouring local authorities to provide a more practical, efficient and cost effective network of civic amenity/household waste recycling centres that allow for a reasonable cross-border movement of wastes.

As part of longer term planning, all local authorities should:

1. Assess the suitability of civic amenity/household waste recycling centres to divert more than 70 per cent of wastes into waste reuse, recycling or composting activities.

2. Review contractual arrangements/agreements with the operators of civic amenity/household waste recycling centres to ensure optimum usage and promotion of waste diversion, including through the application of appropriate incentives.

3. Review the location of sites and investigate whether rationalisation of sites is possible without adversely affecting overall diversion of material from landfill. Following this review, to put in place plans to close unsuitable or underperforming sites and replace as required. These plans need to be realistic, particularly in terms of resources, site availability and timescale.

Summary of Benchmarking Recommendations – 2009/10

Listed below is a summary of recommendation made to local authorities as a result of the waste benchmarking undertaken in calendar year 2011:

Dry Recycling

1 Facilitate sharing of information relating to incomes from sale of recyclate and reprocessor/MRF costs. Utilise Information gathered to ensure value for money for authority in arrangements made with contractors and material re-processors.

2 Explore potential for collaboration between authorities and economies of scale in marketing recyclate.

3 Review performance of dry recyclate collection rounds, both in terms of cost and yield, to ensure maximum efficiency whilst retaining sufficient capacity to accommodate future increases in yield.

4 Where it can be seen that that relative staffing levels are significantly greater than average, review collection routes and staffing levels/working practices to facilitate reduction in costs from more efficient service

Food Waste

1 Assess performance of service in terms of average yield achieved per household. Determine proportion of available material captured by service

2 Composition analysis to be undertaken by authorities operating combined food & green waste services in order to more accurately calculate mass of food waste collected. Consideration should be given as to how this analysis is funded, whether by individual local authority or collectively.

3 Periodically monitor householder participation in food waste services.

4 Using available information (including yields, capture rates and participation rates), and taking account of previous benchmarking recommendations where applicable (Dry recycling & residual waste), assess efficiency of food waste services provided.

5 Where applicable, and in conjunction with co-dependant services, optimise collection routes to ensure greatest possible efficiency whilst retaining sufficient capacity to meet future recycling targets.

Summary of Benchmarking Recommendations – 2010/11

Listed below is a summary of recommendation made to local authorities as a result of the waste benchmarking undertaken in calendar year 2012:

Benchmarking Process

1 Restrict scope of each benchmarking exercise to a single service area or topic only.
2 Extend sample size by undertaking benchmarking across all 22 local authorities at a time
3 Reduce number of benchmarking cycles from three to two each year. Reducing overall burden on individual local authorities and enabling benchmarking work to be undertaken outside key busy periods during year. (E.g. Financial year end)

Dry Recycling

1 Review performance of dry recyclate collection rounds, both in terms of cost and yield, to ensure maximum efficiency whilst retaining sufficient capacity to accommodate future increases in yield.

2 Facilitate sharing of information relating to incomes from sale of recyclate and reprocessor/MRF costs. Utilise Information gathered to ensure value for money for authority in arrangements made with contractors and material re-processors.

3 Where it can be seen that that relative staffing levels are significantly greater than average, review collection routes and staffing levels/working practices to facilitate reduction in costs from more efficient service

Organic Waste Services

4 Review performance of Organic waste collection rounds, both in terms of cost and yield, to ensure maximum efficiency whilst retaining sufficient capacity to accommodate future increases in yield. Due consideration should be given to effects on any co-dependant services.

5 Investigate average yields to determine extent of capture of available material.

6 Monitor householder participation in food waste collection schemes.

CA/HWRC

Many of findings from previous CA site benchmarking are equally pertinent in this instance. However, subsequent research commissioned by WLGA into CA sites network in Wales would suggest that significant progress has been made in terms of diversion rate, and that a number of authorities are achieving diversion rates in excess of 80% at their facilities. Recommendations have been revised to take the latest guidance into account.

7 Establish an accurate baseline by reviewing the performance of all civic amenity/household waste recycling centres to determine the overall waste diversion rate and material throughput. Use this information, together with future quarterly reassessments, to plot performance trends.
8 Identify sites that are not operating at optimum usage or are diverting less than 70 per cent of the waste accepted into waste reuse, recycling or composting activities. For each of these sites, investigate the causes and put in place an action plan to increase diversion to at least this level within a specified timescale. Alternately, say why the authority has decided not to increase usage or diversion.
9 Review the local strategy for civic amenity/household waste recycling centres so that long-term plans (for at least 5 years) are in place for the future development of these facilities.

As part of longer term planning, all local authorities should:

10 Making use of available guidance, assess the suitability of civic amenity/household waste recycling centres to divert more than 80 per cent of wastes into waste reuse, recycling or composting activities.

11 Review the location of sites and investigate whether rationalisation of sites is possible without adversely affecting overall diversion of material from landfill. Following this review, to put in place plans to close unsuitable or underperforming sites and replace as required. These plans need to be realistic, particularly in terms of resources, site availability and timescale.

Bring

12 Where appropriate, review contractual arrangements in place to determine whether services offer value for money

13 Where possible, share data relating to incomes from sale of recyclate and reprocessor/contractor costs with other Welsh local authorities. Utilise information gathered to evaluate efficiency of current bring site arrangements.

Kerbside Residual

14 Each local authority should review the efficiency of all residual waste collection routes. This review should focus on reducing the resource required to collect a given quantum of waste.

15 Each local authority should explore if it is able to reduce the number of collection rounds by undertaking an objective and comprehensive route optimisation exercise. Local authorities should routinely re-evaluate this exercise to take into account ongoing reductions in household residual waste.

Awareness Raising

1 WDF guidance document for question 154 should be amended so that all authorities are asked to include staff costs as part of awareness expenditure. A number of authorities' awareness activities are solely coordinated by specific staff members. Therefore staff costs should be included to allow a more holistic picture of costs and make comparison fairer.

2 In order to better understand the impact that awareness activities have on recycling and composting rates, and to enable resources to be effectively targeted and prioritised, local authorities should be encouraged to conduct a greater degree of monitoring and evaluation of their awareness activities.

3 Monitoring and evaluation should be delivered in a two strand approach:
   a. To measure the success of the activity itself i.e. number of audience targeted / reached; and
   b. To measure the impact on recycling and composting rates.

Summary of Benchmarking Recommendations – 2011/12

Listed below is a summary of recommendation made to local authorities as a result of the waste benchmarking undertaken in calendar year 2013:

Food Waste

Local authorities should:

1 Using available information and taking account of previous benchmarking recommendations where applicable, assess efficiency of food waste services provided.

2 In order to better understand food waste capture rates, consider undertaking compositional analysis of collected food waste and food waste remaining in residual waste stream. It is recognised that compositional analysis can be expensive so authorities may wish to consider collaborating with others to share costs. Alternatively the analysis of a representative sample of authorities across Wales could be undertaken. Options to be discussed by local authorities at CSS Waste group.

3 Where applicable, and in conjunction with co-dependant services, optimise collection routes to ensure greatest possible efficiency whilst retaining sufficient capacity to meet future targets.

4 Review current prices paid to suppliers for compostable liners and other consumable items.

WLGA to work with local authorities and the WPC to establish a procurement framework for compostable food waste caddy liners.

Dry recycling

1. Facilitate sharing information and best practice relating to incomes from sale of recyclate and re-processor / MRF costs. Utilise information gathered to ensure value for money for authority in arrangements made with contractors and material re-processors.

2. Investigate any potential for partnership working between authorities to achieve economies of scale in marketing recyclate.

3. Review performance of dry recyclate collection rounds, both in terms of costs and yield, to ensure maximum efficiency whilst retaining capacity to accommodate future increases in yield.

4. Where relative staffing levels are significantly greater than average, review collection routes and staffing levels / working practices to facilitate reduction in costs from more efficient service.
5. Facilitate a discussion group around route optimisation, including any routing software packages used. Enable authorities to share experiences and learn from each other to provide support in going through the process of optimising collection routes.

Summary of Benchmarking Recommendations – 2012/13

Listed below is a summary of recommendation made to local authorities as a result of the waste benchmarking undertaken in calendar year 2014:

HWRC

Local authorities should:

1. Establish an accurate baseline by reviewing the performance of all HWRCs to determine the overall waste diversion rate and material throughput. Use this information, together with future quarterly reassessments, to plot performance trends.

2. Identify sites that are not operating at optimum usage or are diverting less than 65 per cent of the waste accepted into waste reuse, recycling or composting activities. For each of these sites, investigate the causes and put in place an action plan to increase diversion to at least this level within a specified timescale. WLGA published a CA site guidance document and toolkit to help authorities plan, develop and improve performance of HWRCs.

3. Review the local strategy for HWRCs so that long-term plans (for at least 5 years) are in place for the future development of these facilities.

4. Investigate opportunities to introduce secondary sort of residual waste and pre-sort of black bag materials arriving on site, work with colleagues within the CSS waste sub-group to share good practice in these areas. This should help authorities to improve the performance of civic amenity/household waste recycling centres and overall MSW performance.

Dry recycling

1. Each local authority should review the efficiency of all residual waste collection routes. This review should focus on maximising the mass collected by each collection crew and reducing the overall labour and transport requirement of the service.

2. Authorities that reduce capacity of residual waste collection receptacles achieve significant savings. Authorities should consider reducing the capacity of residual waste collection receptacles.

3. Significant savings have been achieved through moving frequency of residual waste collection towards alternate week collection. Authorities may wish to consider further changes to frequency of collection, for example Gwynedd has recently (October 2014) introduced three weekly collections.

4. Each local authority should explore if it is able to reduce the number of collection rounds by undertaking an objective and comprehensive route optimisation exercise. Local authorities should routinely re-evaluate this exercise to take into account changes to their residual waste stream, for example, following introduction of more comprehensive recycling services.

Summary of Benchmarking Recommendations – 2013/14

Listed below is a summary of recommendation made to local authorities as a result of the waste benchmarking undertaken in calendar year 2015:

Food waste

1 Each authority should assess the performance of its food waste/ food & green waste service to determine the average yield achieved per household, and the proportion of available material captured by this service.

2 Each authority should periodically monitor the householder participation in food waste collection services.

3 Using available information (including yields, capture rates and participation rates), and taking account of previous benchmarking recommendations where applicable (Dry recycling & residual waste), each authority should assess the efficiency of the food waste services it provides. This could be done by measuring capture rates of food waste collected i.e. percentage collected from available food waste.

4 Where applicable, and in conjunction with co-dependant services, each authority should optimise its collection routes to ensure the greatest possible efficiency whilst retaining sufficient capacity to meet future targets.

5 Each authority should review the current prices paid to suppliers for compostable liners and other consumable items, and consider taking advantage of the National Procurement Service Joint Procurement framework[8] for the purchase of plastic sacks and biodegradable liners.

Fees and Charging

1. Local Authorities should consider introducing a charge for garden waste collections to cover cost of collections. To do so Authorities need to be aware of the provisions of the Local Government Act 2003. This requires authorities to establish a 'robust methodology' when setting the level of the charge. It also places a duty on authorities to ensure that income from a charge does not exceed the cost of providing that service. Therefore to meet this requirement, authorities need clear understanding of the current service costs and the likely effect of a charge on take-up of a new service.

2. Given that the introduction of a charge will most likely reduce the tonnage collected some Local Authorities may want to consider public consultation to decide on a suitable charge for garden waste collection. This could help to set a reasonable charge that residents are willing to pay.

3. Authorities to investigate opportunities to involve Local 3rd sector organisations to increase recycling and preparation for reuse in bulky waste collections, this could also help reduce collection & transfer/treatment costs.

4. Authorities to consider expanding charges for bins bags etc. to cover some material purchase and distribution costs and as a possible alternative to charging for the service itself.

5. Authorities to assess the competitive market for trade waste in their locality and use this information to consider developing their trade waste collection service Local Authorities should understand the full cost of their service to help set charges that will cover the cost of service provision

Summary of Benchmarking Recommendations –2014-15

HWRC

1. Authorities to continue to develop residual restrictions especially more indirect restrictions that encourage recycling by making it more convenient than depositing residual waste.

2. Authorities to investigate the possibility of shared use of sites where sites in neighbouring authorities are better located for residents. This could take the form of permits for non-residents to use sites or charging at sites.

[8] NPS framework should be in place from June 2016.

3. Authorities to keep neighbouring authorities informed on major service changes that may have implications for HWRCs.

4. Given the importance of staff in limiting residual waste and increasing diversion rates consider training for HWRC staff. Also where possible consider deploying additional staff at sites during major service changes.

5. Expand reuse activity to help achieve wider well-being goals and raise income from sales.

6. Monitor patterns of use at sites and use this information to investigate possibility of reducing costs by rationalising the days/hours of operation as an alternative to closing sites.

Dry Recycling

1. Investigate factors that influence fluctuations in labour costs

2. Authorities to share good practice on achieving higher yields.

3. Further investigate opportunities for authorities to share best practice on generating income.

4. Consider the possibility of expanding the range of materials collected such batteries, textiles and WEEE possibly by involving local 3rd sector partner in collections.

Appendix 2

Background to the Annual Waste Finance Report

The Waste Improvement Programme began in 2008 with the aim of supporting Local Authorities in gathering and reporting their waste management financial data in line with individual practices. Whilst these practices have followed CIPFA's Best Value Accounting Code of Practice (BVACOP – now SerCOP), the apportionment of costs was not consistent across authorities; i.e. what one authority defined as recycling collection; another might define as recycling transfer. As such effective comparison between services was not possible. Additionally, some authorities included both revenue and capital depreciation in their data reporting, further compounding inaccuracy. Due to these issues, and despite considerable efforts by the Wales Audit Office to 'cleanse' provided data, the All Wales Waste Management Benchmarking Group (AWWMBG) historically has had limited impact in identifying transferable efficiencies.

However the WLGA engaged in the process of publishing an annual waste finance report for three main reasons:

- To provide annual finance reports on waste management undertaken by local authorities. A significant proportion of recycling activities were funded through Sustainable Waste Management Grant (SWMG), having recently been superseded by the Single Revenue Grant and WG rightly wants to identify whether this is being used to its greatest efficiency.
- Cost modelling for the review of the national waste strategy. This was needed to provide a baseline for financial planning for the delivery of Towards Zero Waste and the planned refresh during 2016/17.
- To allow for greater comparisons between authorities; allowing the sharing of best practice, bringing service improvement and efficiencies.

In February 2008 the WLGA brought together a working group of officers; finance and waste management officers of various levels from within local authorities, the Wales Audit Office and WG officials to develop the financial reporting methodology. All costs are based around the waste management Revenue Outturn (R/O) of each authority, giving a control figure to cross reference to; discrepancies (such as capital depreciation) must be identified in a separate section of the datasheet. The form differentiates between grant income (Sustainable Waste Management Grant and others) and funds provided directly by the authority, which allows analysis of gross service costs. A separate line is also included to capture capital depreciation which makes reporting of costs more equitable (those authorities which made capital investment previously appeared to have lower costs when only revenue budgets were assessed). When sent out to authorities, the datasheet was supported by a guidance document setting out precisely what costs were to be included in the datasheet and where they must be entered; this ensured consistency in data entry within each authority.

Building upon the work carried out previously, further refinements were made to data gathering process resulting in an overall improvement in the quality of data included in the report. Additional questions relating to mass of material collected by local authorities further improved the accuracy of cost per tonne comparisons. Household numbers and collection frequency data was updated to reflect the changing complexion of collection services offered by local authorities in Wales.