Cymdeithas Llywodraeth Leol Cymru
Welsh Local Government Association

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Welsh Local Government Association
Waste Improvement Programme

Waste Finance Data Report 2019-20

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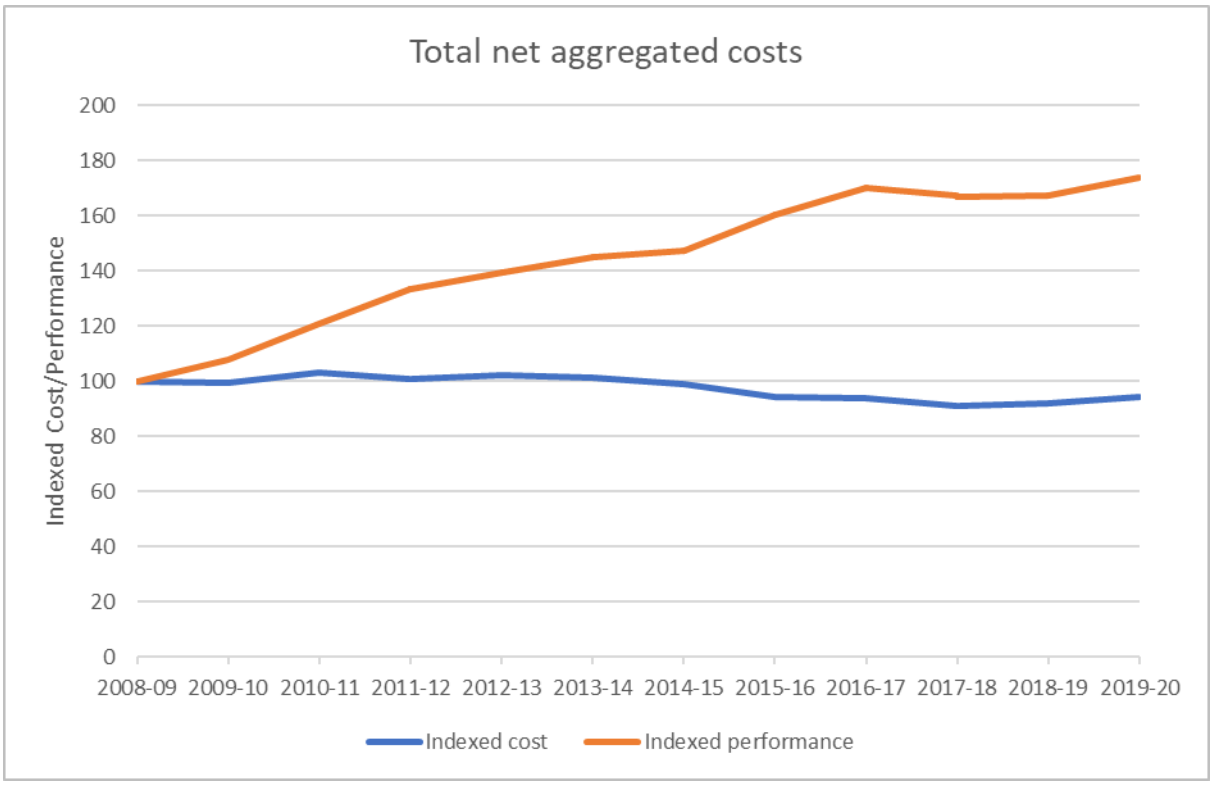
Executive Summary

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 2019-20.

2. Due to the usual lag in data, this report analyses 2019/20 data and therefore pandemic effects are not seen in this report. Next years' finance report (2020/21) will seek to pick up any pandemic effects.

3. The 2019-20 finance data shows that the recycling rate for Wales increased from 62.8% in 2018/19 to 65.1%. During this time Net costs increased by 4.4% and Gross costs increased by 3.7%. The graph below plots the indexed net cost of MSW waste services from 2008/9 to 2019/20 with indexed performance over the same time period.



4. 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.

5. Whilst a high-level analysis is provided in some places the report does not analyse national or local differences. Explaining *why* changes have occurred is a

role for the benchmarking process. The 2019/20 Waste Improvement Programme benchmarking reports will primarily focus on food waste services, dry recycling services and household waste recycling centres (HWRCs)[1]. These reports will be made available on the waste services financial benchmarking hub.

Key Findings

6. Between 2018/19 and 2019/20 recycling performance has increased by 2.3 percentage points. Expenditure in real terms (adjusted for inflation) increased over the same time period.

7. In 2019/20, gross expenditure increased from £289m to £299.8m[2], an increase of 3.7%. CPI for the 12 months to April 20 was 1.74% so this represents a smaller increase in expenditure in real terms (1.99%).

8. Net expenditure on waste services was £261m, increasing by £11m compared to 2018/19.

9. The difference in gross and net expenditure was smaller in 2019/20 mainly due to less income being received from residual trade waste services.

10. Overall net expenditure on household waste services[3] (Dry Recycling, Organic, Residual, CA and Bring) increased by 4.6% in 2019/20 to £250.1m. This represents an increase in expenditure of £11.1m compared to the 2018/19 figure of £239m.

11. Investment in organic waste services increased in 2019/20, increasing by 7% to £52.5m. During this period an additional 12,300 (10%) tonnes of food waste was collected compared to 2018/19. Green waste tonnage also increased by 7,400t with expenditure increasing by £1m[4]. 2019/20 saw the second consecutive annual net expenditure increase in organic waste services since 2012/13, when the introduction of food waste services began to be rolled out in Wales.

12. Expenditure on residual waste services increased from £84.6m to £88.3m, an increase of 4.4%. However, 22,790 tonnes less was collected in 2019/120 when compared to the 2018/19 figure of 403,888t.

[1] More information on the waste benchmarking project can be found here.

[2] All financial figures quoted in this report are in money terms unless otherwise referred to as 'real terms' (adjusted for inflation)

[3] 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.

[4] Co-mingled (food and green) mass collected decreased by 5,302t due to Monmouthshire moving from a co-mingled collection system to separate collection services.

13. Kerbside dry recycling costs increased by £5.1m overall to £66.2m in 2019/20, an increase of 8%. During the same period, the mass of dry recyclate collected also increased, increasing by more than 10,000t.

14. HWRC expenditure decreased from £43m to £42.2m in 2019/20. At the same time the proportion of Household waste received at HWRCs decreased by 1% to 29%.

15. Between 2018/19 and 2019/20 bring site expenditure decreased by £484,000, a decrease of 35.8%. During the same period mass collected via the bring site network reduced by 5,686 tonnes (36.43%) due to the number of sites continuing to fall.

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

	18-19	**19-20**	**% Change**
Dry recycling	£61,009,263	£66,154,691	8.4%
Residual waste	£84,624,422	£88,329,826	4.4%
Organic waste	£49,057,353	£52,488,906	7.0%
CA/HWRC	£42,993,932	£42,248,897	-1.7%
Bring	£1,353,003	£869,046	-35.8%
Total	**£239,037,973**	**£250,091,364**	**+4.6%**

17. The table below demonstrates the difference in tonnage collected between 2018/19 and 2019/20 on the household service elements.

	18/19 tonnages	19/20 tonnages	Performance change
Dry	279,297	289,375	2.61%
Residual	403,888	381,089	-5.64%
Organic	218,479	232,820	6.56%
CA site	416,016	390,549	-6.12%
Bring site	15,610	9,924	-36.43%
Total	1,333,290	1,303,765	-2.21%

18. Overall re-use, recycling and composting rates have increased from 62.8% in 2018/19 to 65.1% in 2019/20.

19. The amount of material recycled at the kerbside (i.e. from household recycling collections) has increased. These changes are summarised below.

	Tonnes Recycled & recycling % points contributed to MSW recycling performance 18-19	**Tonnes Recycled & recycling % points contributed to MSW recycling performance 19-20**	**% Point Change**
Dry	283,869t 18.4%	294,370t 19.5%	+1.1%
Food	119,215t 7.7%	131,498t 8.7%	+1.0%
Green	93,767t 6.1%	101,126t 6.7%	+0.6%
Co-mingled food and green	5,498t 0.4%	196t 0.0%	-0.4%
TOTAL Kerbside Dry recycling & Composting	502,349t 32.6%	527,190t 34.9%	+2.3%

Contents

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 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). 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.

The data entered into WasteDataFlow by authorities is compared against the waste management Revenue Outturn (R/O) figures.

As in previous years, data extracted from WasteDataFlow required a cleansing to remove anomalies. This process took place between September 2019 and March 2020. It is envisaged a similar period of data validation will be required in future years. Work is undertaken by the Waste Improvement team in conjunction with individual local authorities.

In some cases, Local Authority figures in isolation may appear anomalous and may not present the whole picture; this can be due to apportionment. Apportionment may take place between shared services and between the collection, transfer and treatment process.

Detailed Findings

Total Service Data

1. From the data it can be seen that overall gross expenditure on waste services during 2019/20 was £299,808,903 (£261,358,496 net of income). This represents an increase of £10,789,345 when compared to the 2018/19 figure of £289,019,558, a rise of 3.7%.

2. Total expenditure increased for the second consecutive year, following 6 years where expenditure decreased year on year.

3. Between 2018/19 and 2019/20 the income local authorities received from selling dry recyclables increased by 11.9% from £5,816,514 to £6,506,344 in 2019/20.

4. Figure 1 shows how net expenditure on all waste services has changed in the twelve 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 expenditure in real terms has remained fairly stable with expenditure falling slightly each year between 2013/14 – 2017/18. However, the last two years (2018/19 - 2019/20) has seen a slight increase in expenditure. During the same period recycling rates have increased significantly, from 35.6% in 2008/09 to 65.1% in 2019/20.

5. The recycling rate increased by 2.3% between 2018/19 and 2019/20. Similarly, the percentage points of waste recycled and composted from the kerbside increased by 2.3%.

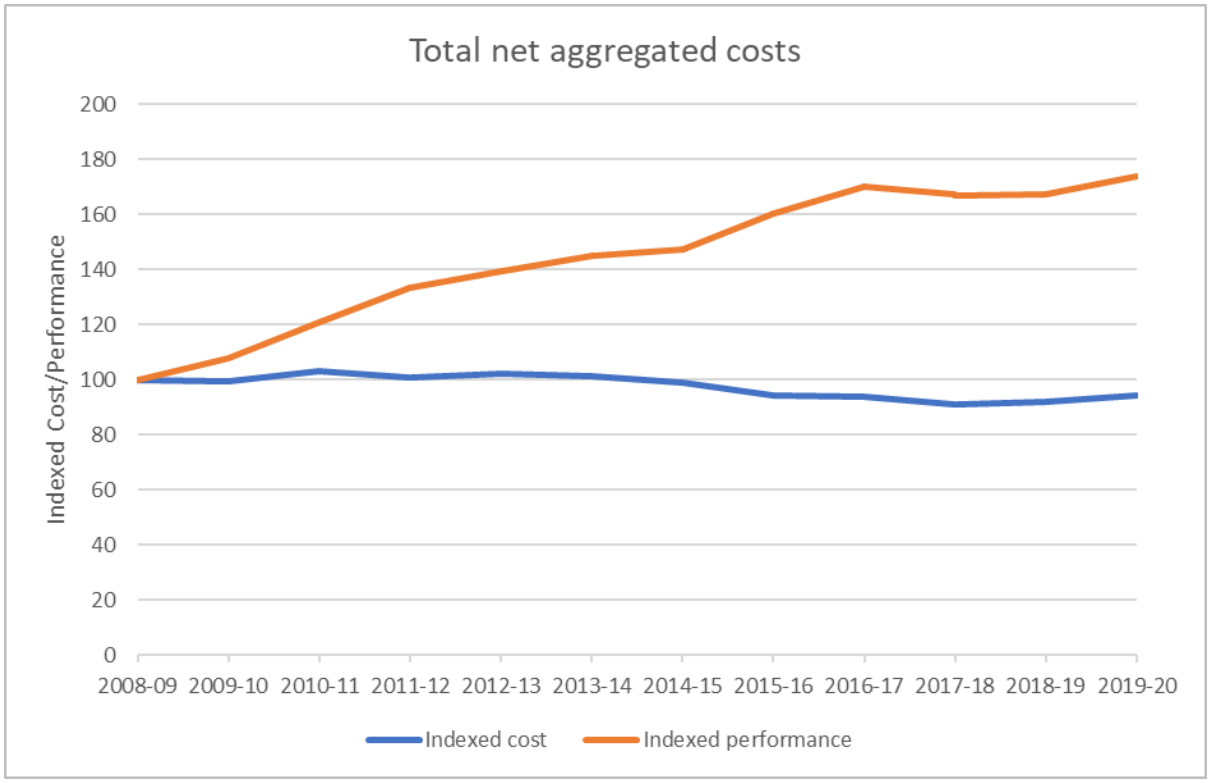


Figure 1 – Total net costs

6. The total amount of SWMG allocated against waste services to local authorities in 2019/20 remained unchanged at £18.2m.

7. Five out of twenty-two local authorities have demonstrated a reduction in household waste service net expenditure and seventeen out of twenty-two demonstrated an increase compared to 2018/19. 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[5]

8. The graph in Figure 2 below shows total net expenditure on waste services for each local authority during financial year 2019/20. Contribution made by grant allocation is represented as 'hatched' area. Expenditure is shown on a cost per household basis.

[5] Grants = Sustainable Waste Management plus other grants received e.g. procurement support, SCIF, RCAF

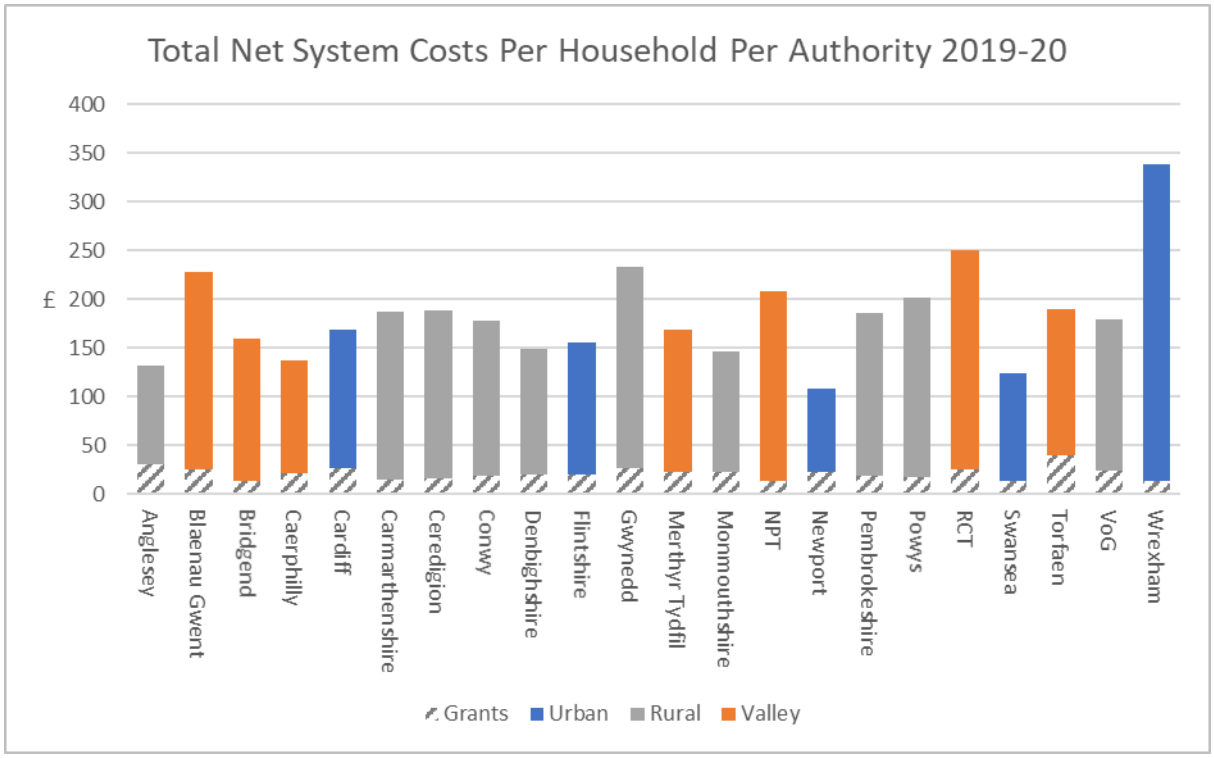


Figure 2 – Total System Costs per household 2019/20

9. 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 Sustainable Waste Management Grant (SWMG) 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.

10. The balance of the net expenditure comes from the discretionary Revenue Support Grant allocated to each local authority by Welsh Government. Due to the level of funding through SWMG remaining unchanged between 2018/19 and 2019/20, and the overall increase on waste services in 2019/20, local authorities have put more resources into the service themselves.

11. The majority (96%) of total net 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

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

13. Kerbside residual waste and waste collected from HWRC (Residual and Recycling) are the largest sources of household waste. Residual accounting for 29%, and

HWRC 30%. Figure 3 below shows the proportion of total waste collected per household of each of the household waste service areas.

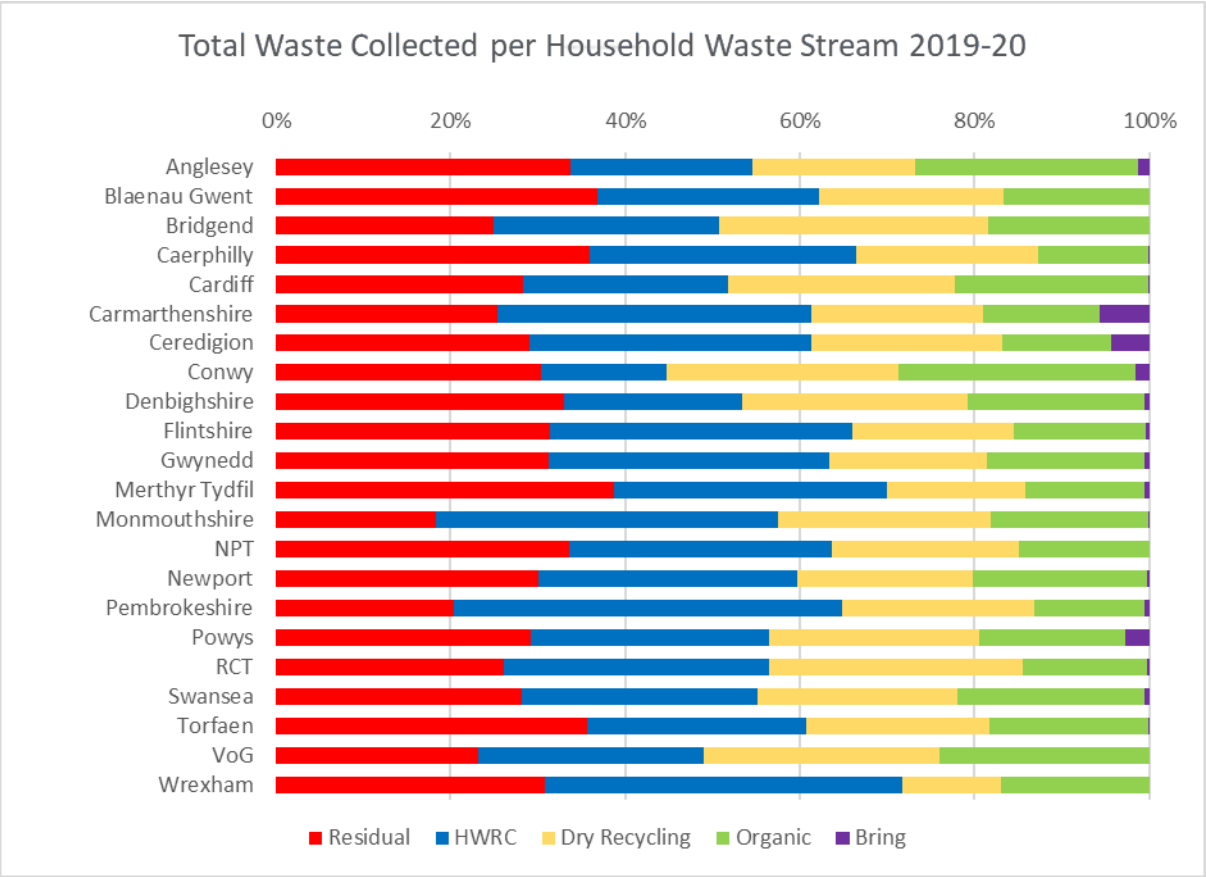


Figure 3 - Source of waste collected[6]

14. 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 16% and 58%. This wide variation is 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 during 2019/20 and was able to send all residual waste to EfW plants. HWRC accounts for 18% of total expenditure whilst handling a significant proportion (30%) of all household waste collected. This suggests that HWRC is proportionally the most cost-effective way of collecting material.

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

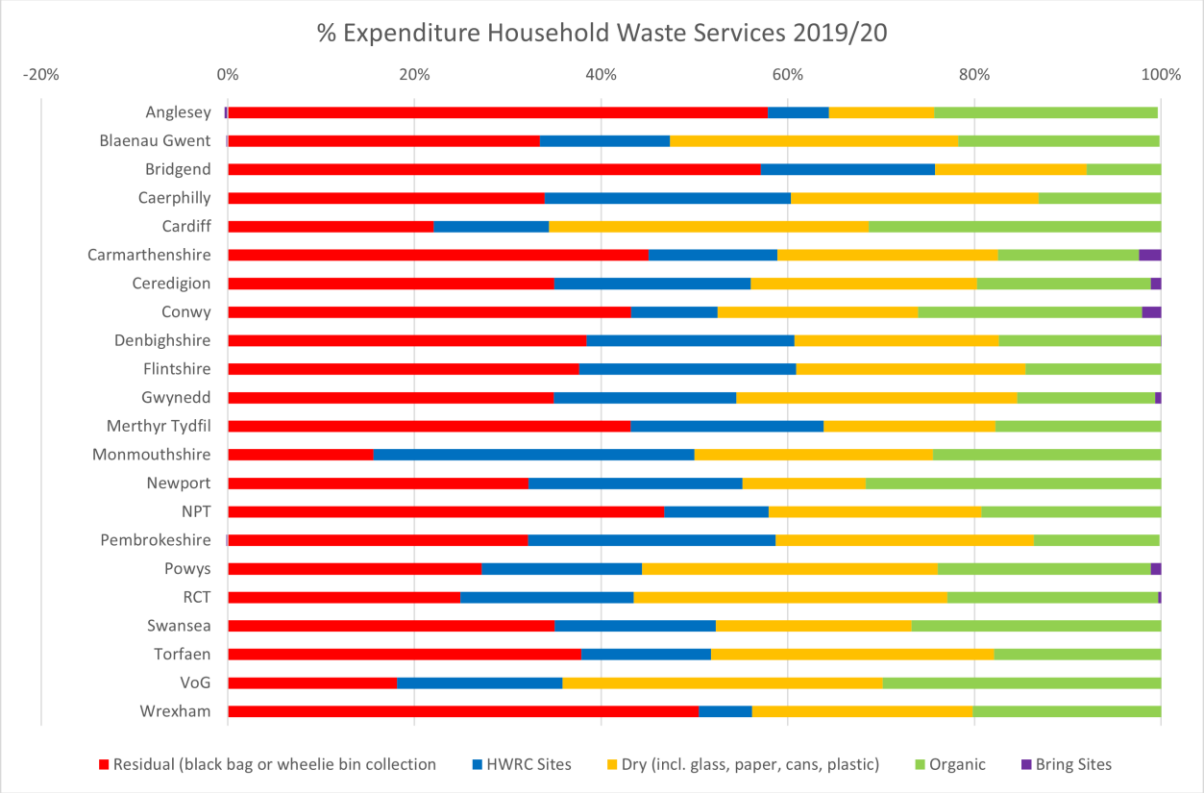


Figure 4 Expenditure by waste service

Household Waste Service Costs

15. 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.

16. 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.

17. It is not possible to differentiate between SWMG grant and other smaller grants when allocated against service area in WDF. Therefore, grant contribution shown in the following graphs may include other grants in addition to SWMG.

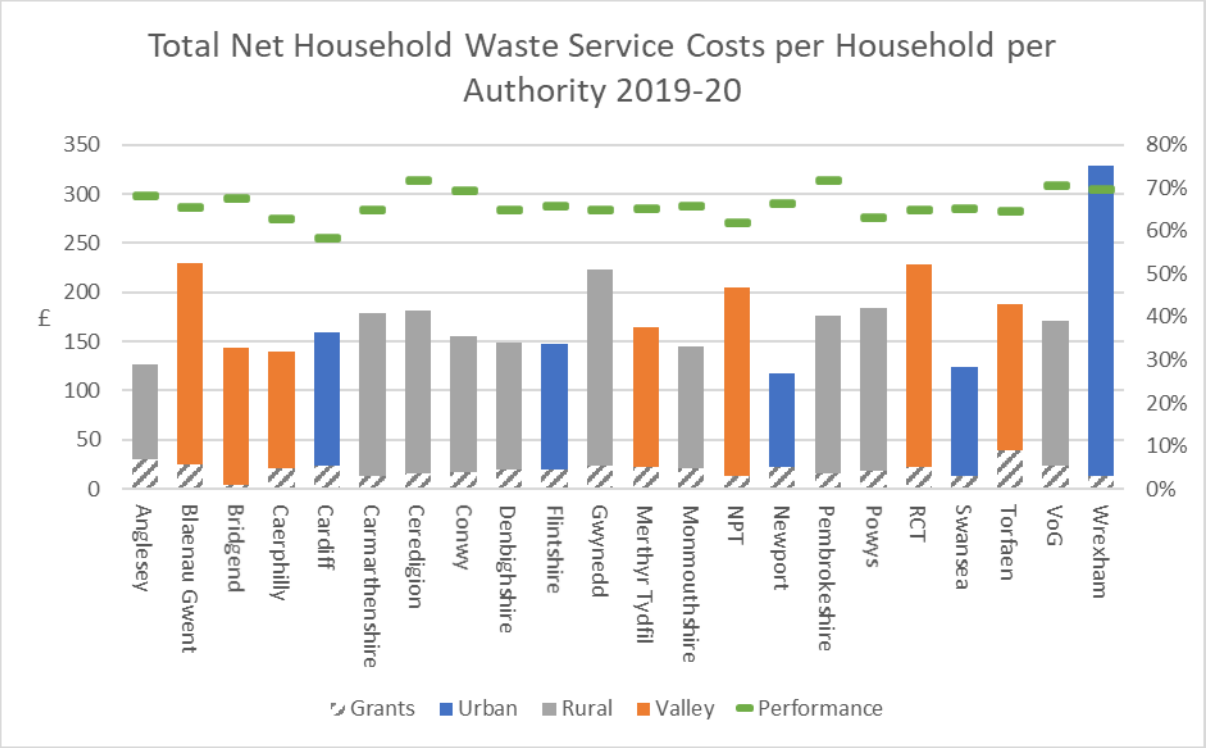


Figure 5 - Total household waste service cost per household

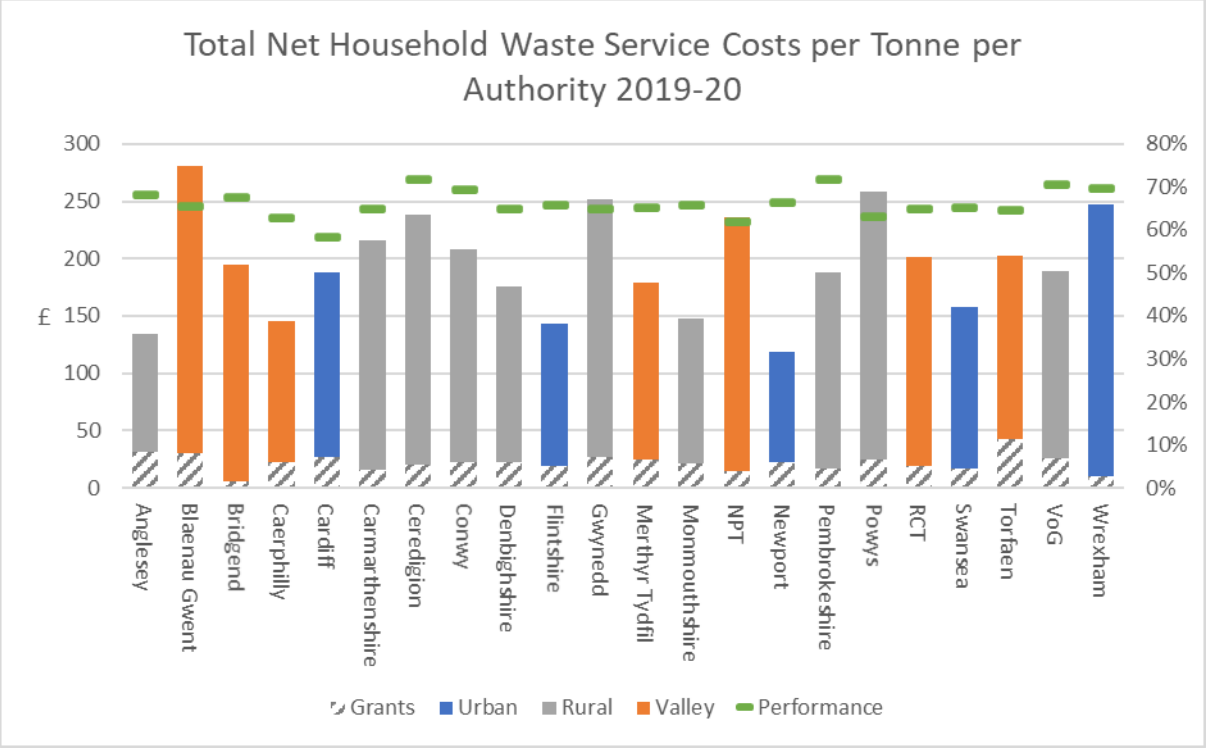


Figure 6 – Total household waste service cost per tonne

18. Overall net expenditure on household waste services during 2019/20 was £250,091,364. This represents an increase in expenditure of £11,053,391, 4.6% when compared to 2018/19. 17 out of 22 authorities saw an increase of

expenditure in 2019/20. During the same period, the overall recycling rate for Wales increased from 62.8% to 65.1%.

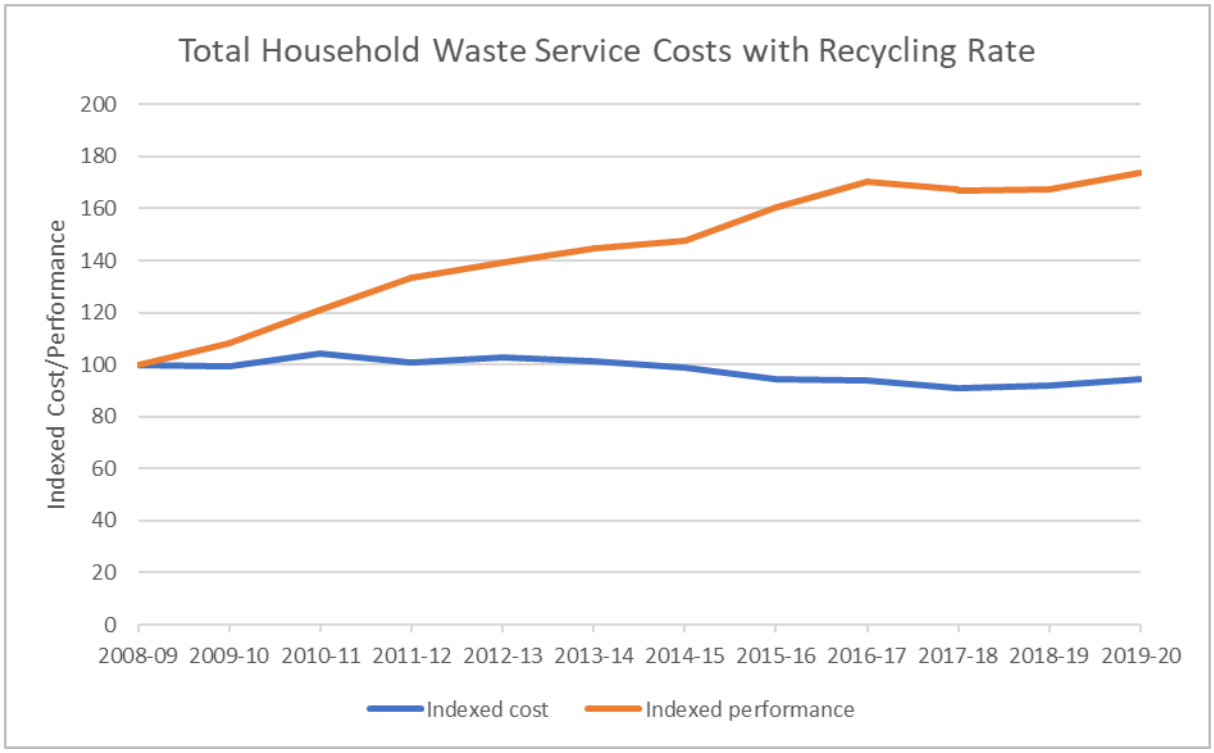


Figure 7 – Household waste service cost since 2008/09

19. The longer term trend in household waste service costs is shown in Figure 7. It can be seen that costs, adjusted for inflation, have remained fairly stable since 2008/09, however, in 2018/19 costs increased for the first time since 2012/13 and 2019/20 saw an increase for the second consecutive year. Recycling rates have increased significantly over the same period from 35.6% in 2008/09 to 65.1% in 2019/20.

Dry Recycling

20. 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 orange lines on the chart, plotted using the axis on right hand side of graph.

Total dry recycling service cost

21. 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.

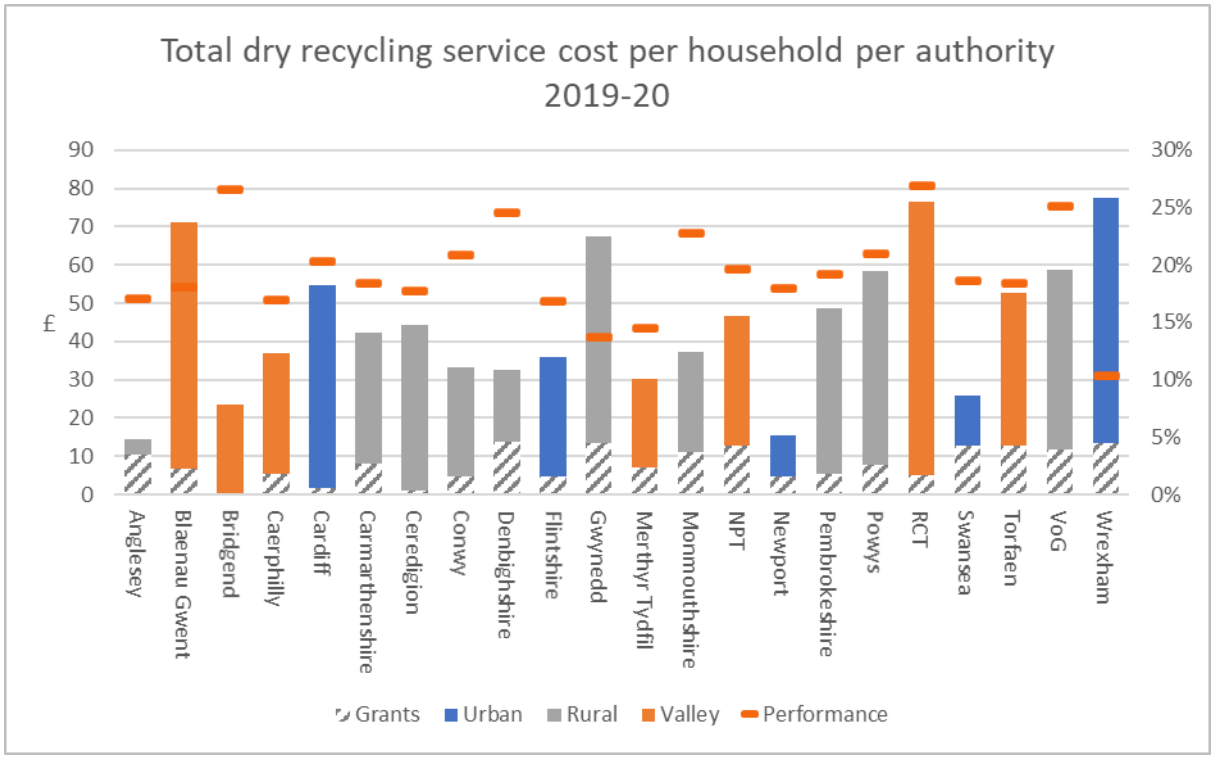


Figure 8 – Dry recycling service cost per household

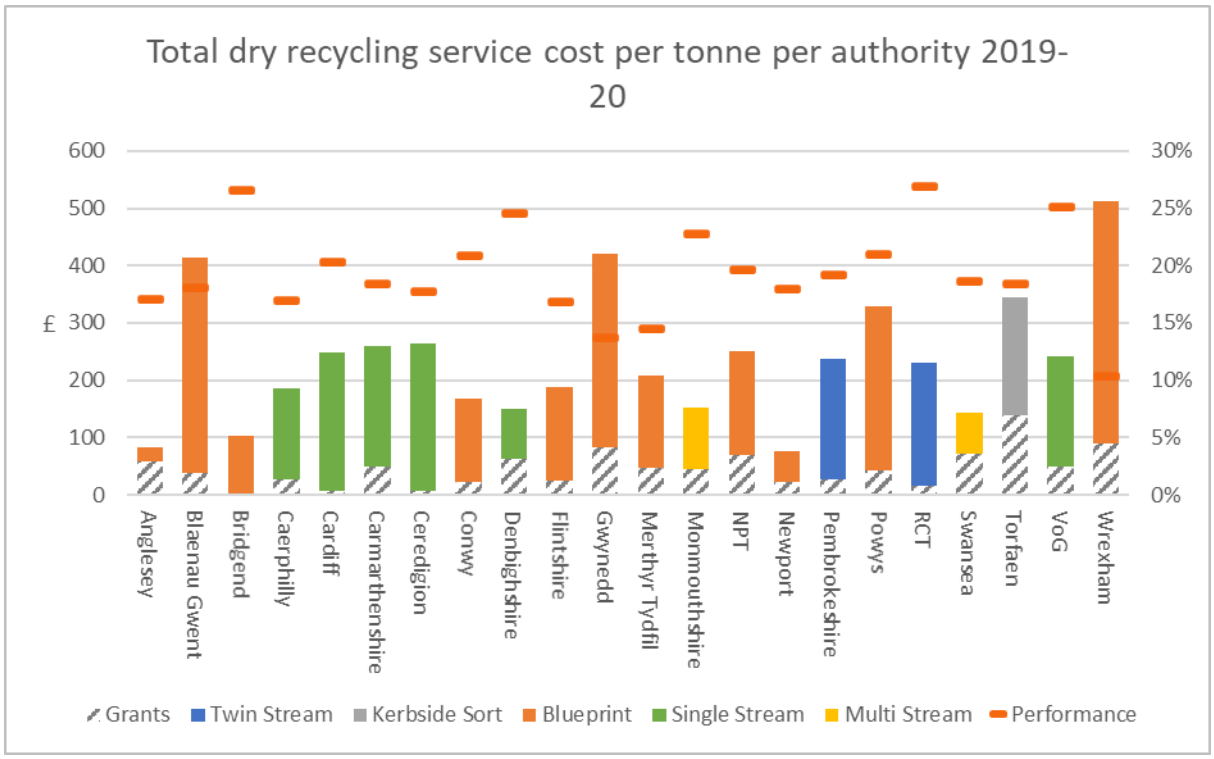


Figure 9 – Dry recycling service cost per tonne

What are the graphs telling us?

22. Both cost and performance vary significantly. Ideally, services should deliver high performance, in terms of mass recycled, whilst exhibiting the lowest cost possible. For example, Bridgend's dry recycling service makes a significant contribution to their overall recycling rate, with 26.5% of total MSW being collected via their kerbside collection scheme, whilst service cost is one of the lowest seen across the group at £23.34 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.

23. 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.

24. The range of values seen in the data is larger than in 2018/19. The median cost per household has increased from £39.15 to £43.21per household. The median cost per unit mass also increased from £218.25 to £233per tonne.

25. From the core data it is also possible to compare 2019/20 overall dry recycling service expenditure with that of 2018/19:

	18/19	**19/20**	**% Change**
Dry recycling	£61,009,263	£66,154,691	+8.4%

26. Expenditure on dry recyclate services increased by 8.4% during 2019/20. Whilst expenditure increased, the mass of material collected also increased over the same period. Mass collected increased by 10,000 tonnes, an increase of 3.6%.

27. The longer term trend in kerbside dry recycling costs is shown in Figure 10. It can be seen that expenditure in 2019/20 has seen the largest increase since 2013/14. This graph shows that recycling performance appears to be linked to expenditure on the service.

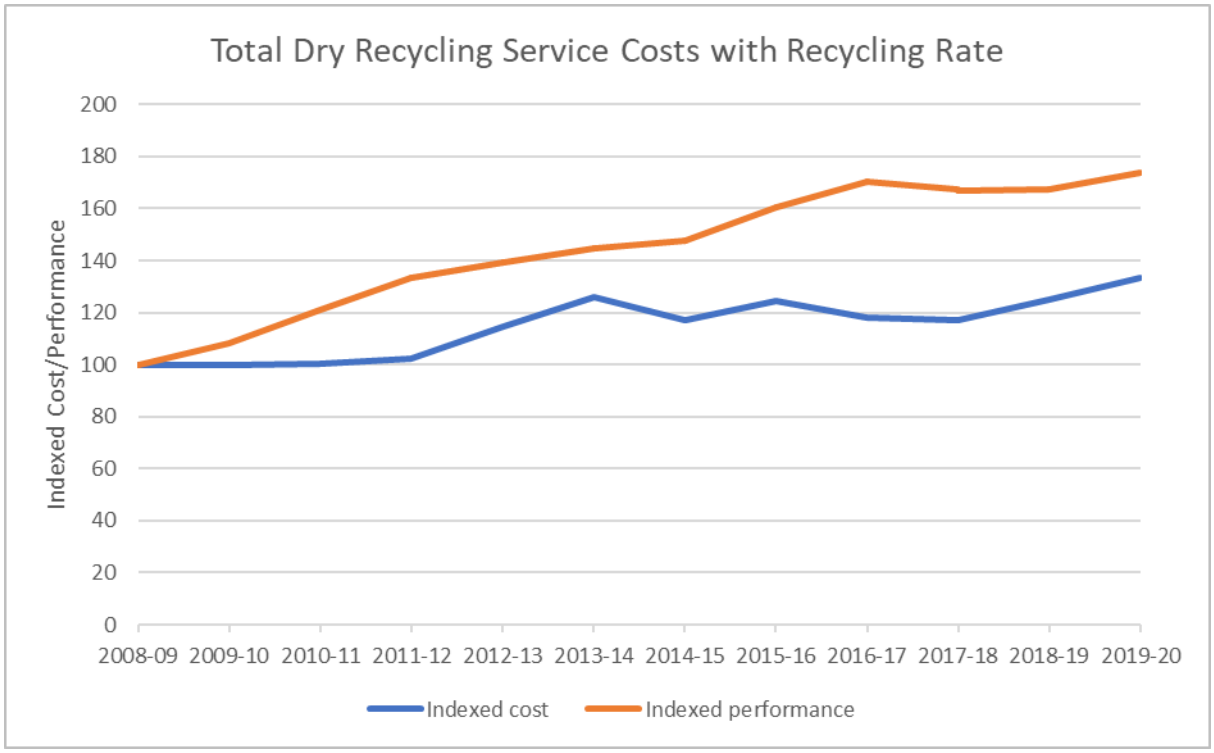


Figure 10 – Kerbside dry recycling cost since 2008/09

Collection

28. 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 2019/20. In 2019/20 Monmouthshire introduced a multi-stream collection system. The Vale of Glamorgan and Pembrokeshire also introduced new kerbside services; however, this was for part year / rolled out to specific areas. The following graphs are based on the collection systems that were in place for the majority of the year to the majority of households.

29. Costs arising from the collection of the dry recyclate itself makes up the majority of overall service cost; accounting for 76% of the service cost in 2019/20.

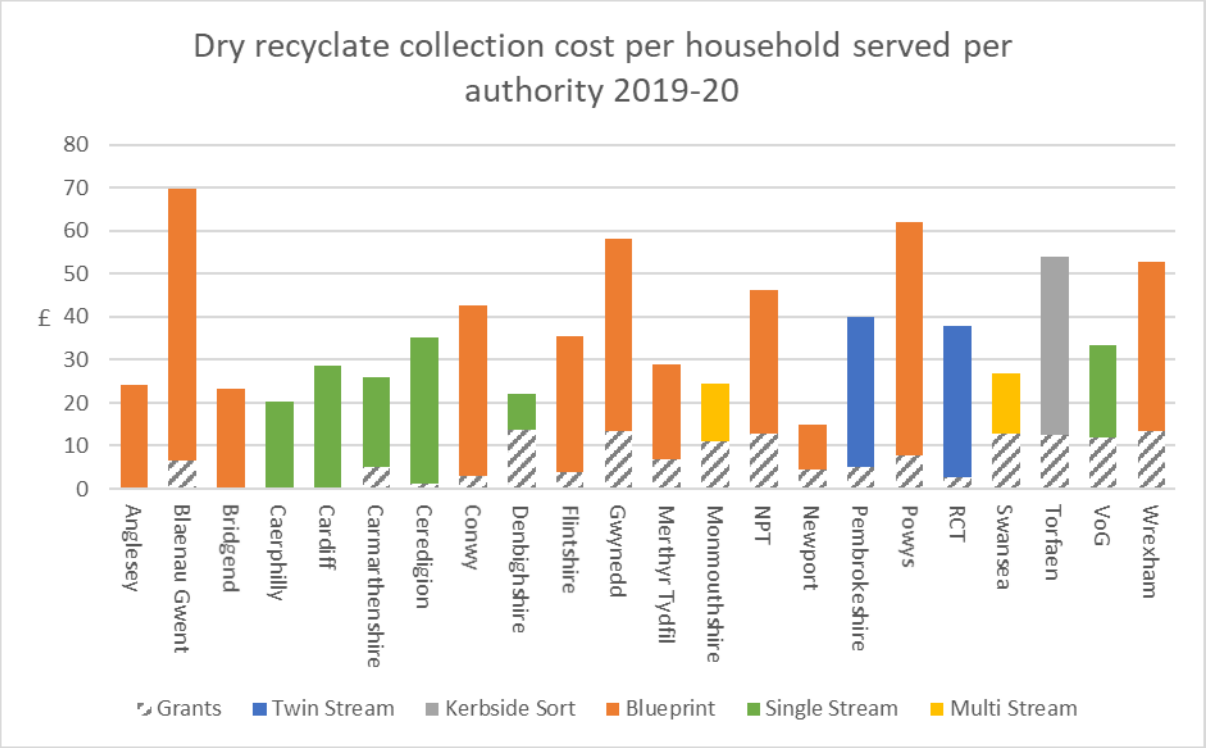


Figure 11 – Dry recyclate collection cost per household served.

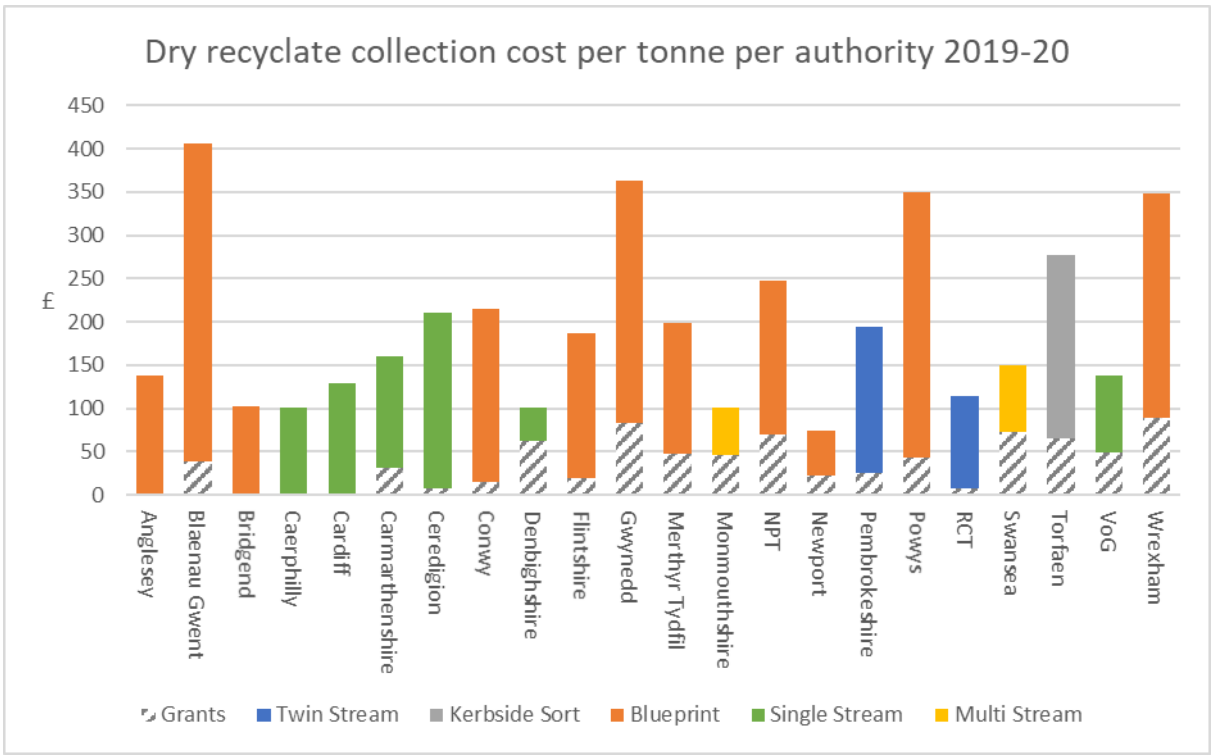


Figure 12 – Dry recyclate collection cost per tonne collected.

Transfer costs

30. 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 but are available on request.

Treatment costs

31. 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.

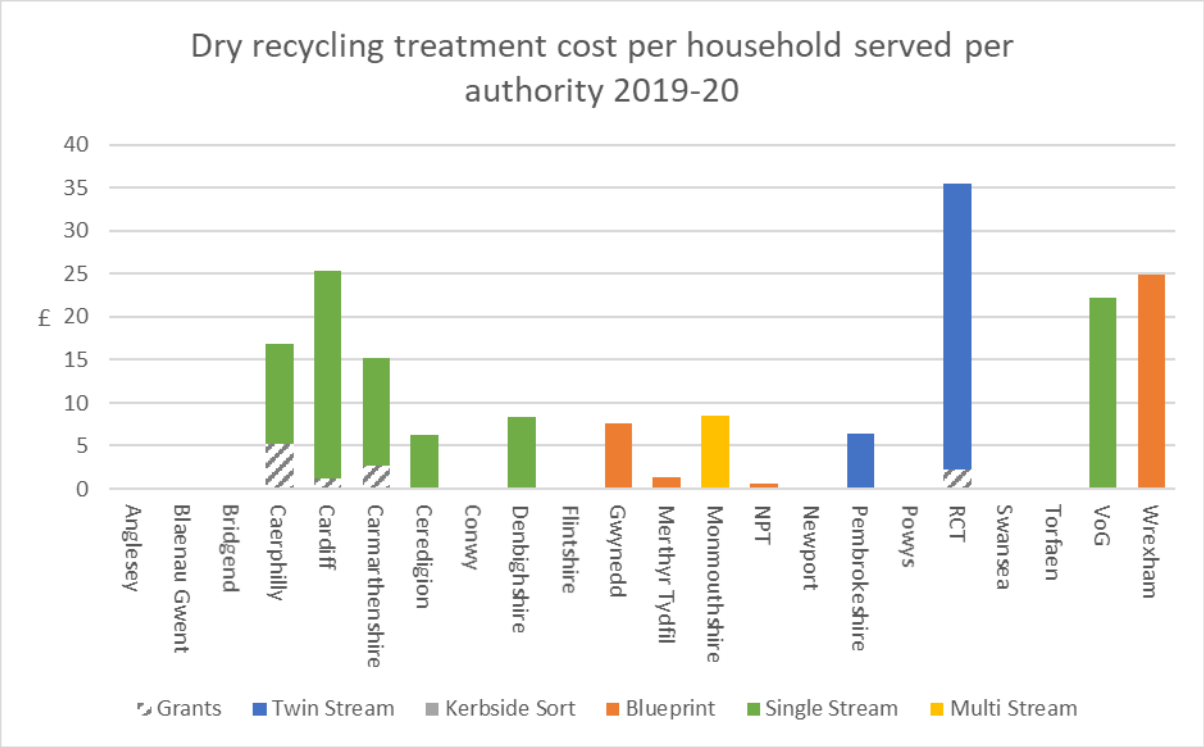


Figure 13 – Dry recycling treatment cost per household served

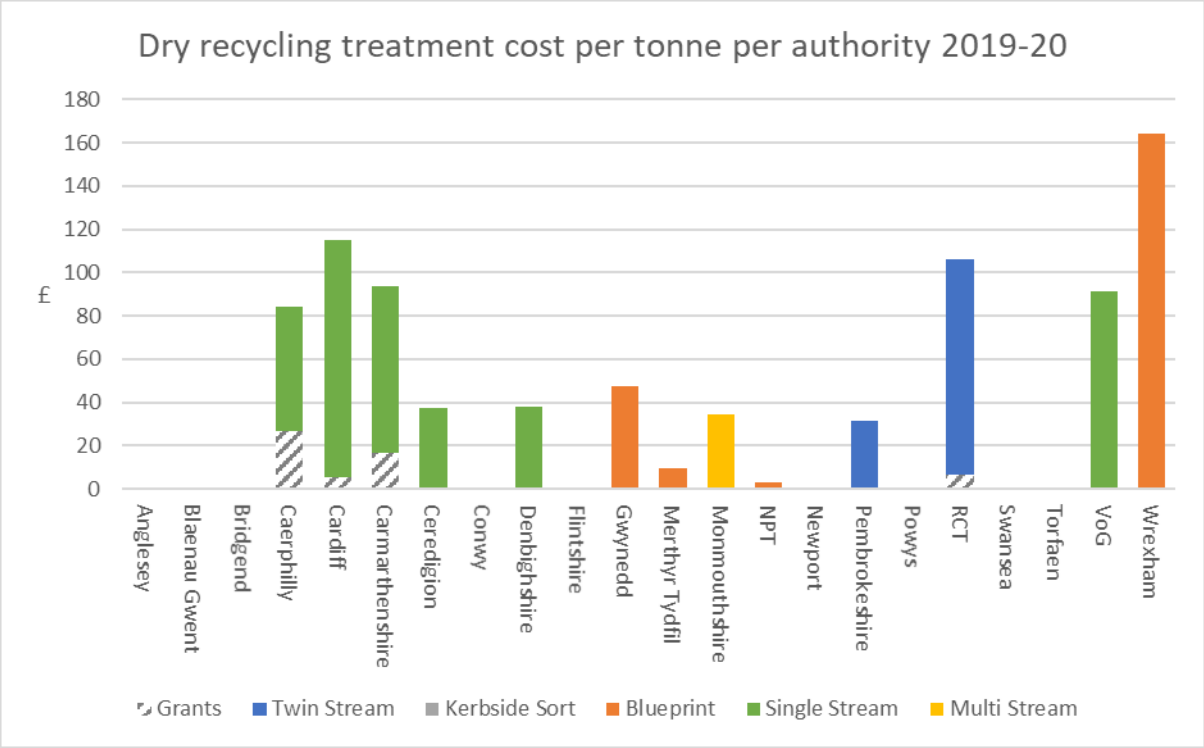


Figure 14 – Dry recycling treatment cost per tonne

32. It can be seen that there is a wide variation in treatment costs across the group. This likely reflects the differing recycling systems and contractual arrangements in place across Wales, with authorities employing differing treatment, methodologies depending on the collection system used. (e.g. MRF, Sorting/Bailing only etc).

33. Several authorities exhibit a negative cost for treatment activities and therefore no bar is present (these are Anglesey, Blaenau Gwent, Conwy, Flintshire, Powys, Swansea and Torfaen). This occurs when the income received from the sale of the recyclate treated is greater than the cost of treatment activities themselves. Dry recycling treatment costs are unavailable for Bridgend and Newport and therefore not included.

Income

34. 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. Some authorities may have netted off their dry recyclate income when recording the figures and therefore showing as no income in figures 15 and 16. Overall income from the sale of dry recyclate increased by 12% (£690k) compared to 2018/19. This follows a reduction of 18% in 2018/19 compared to the previous year.

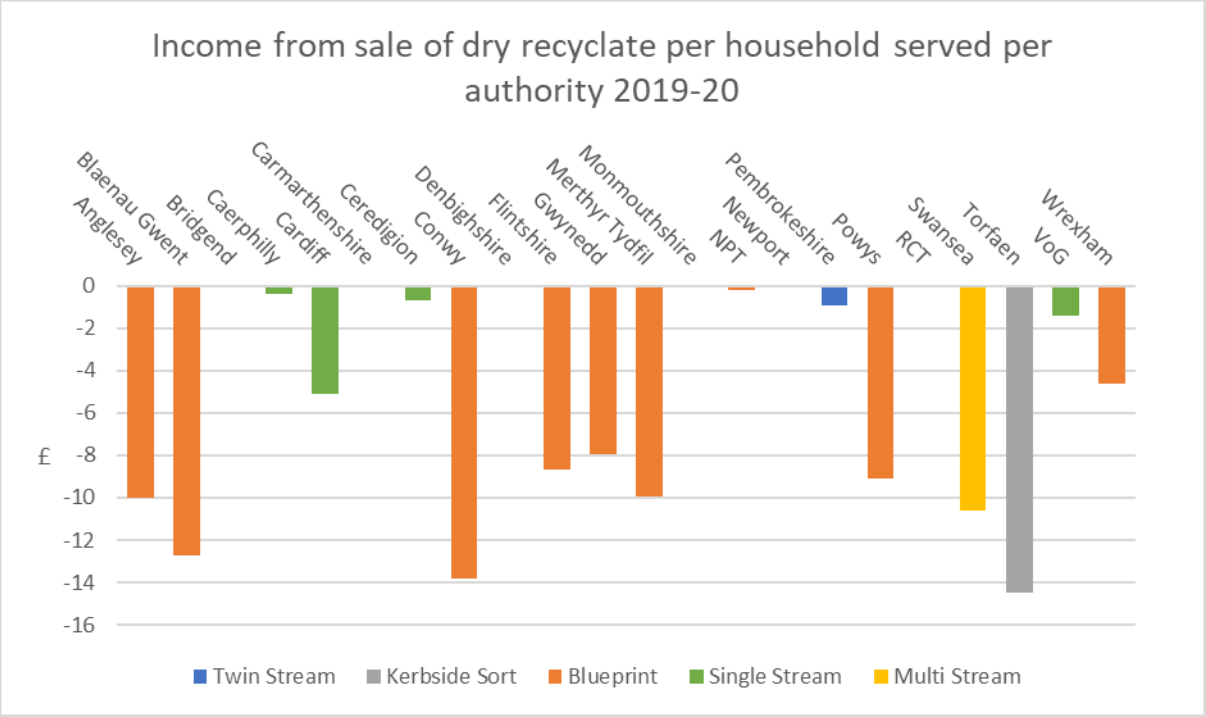


Figure 15 – Income from sale of dry recyclate per household served

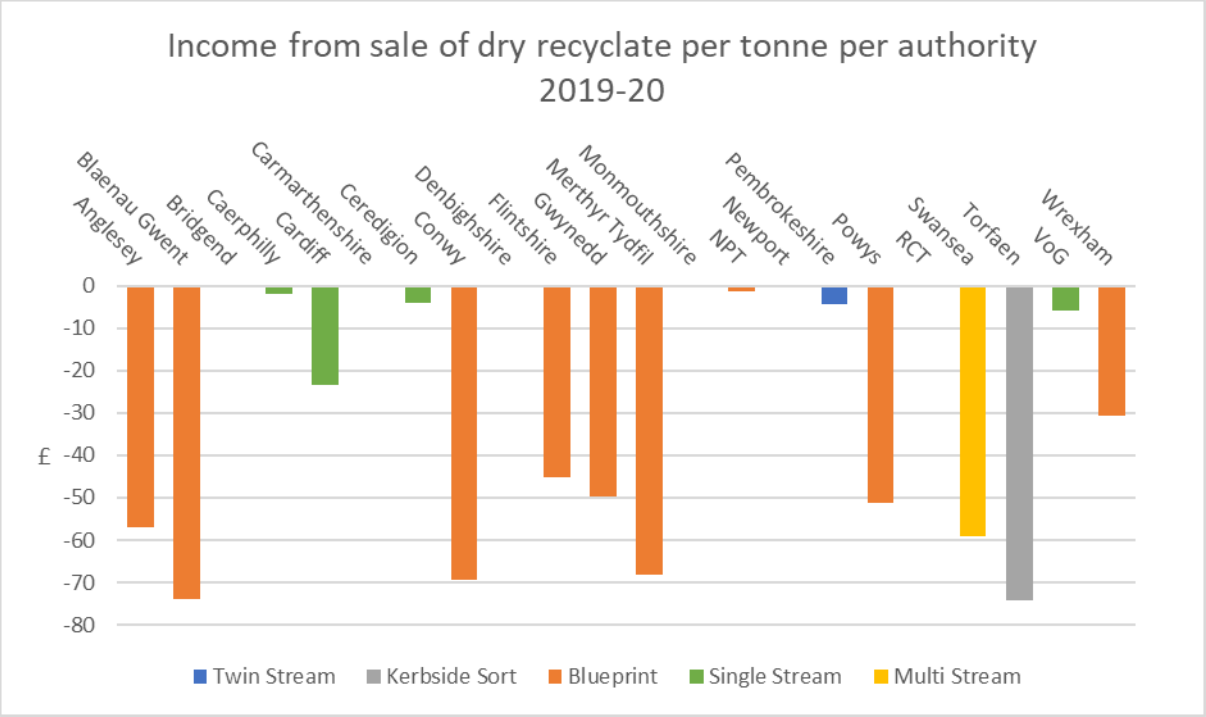


Figure 16 – Income per tonne from sale of dry recyclate

Organic Waste Services

35. Previous annual waste finance reports have split organic waste data across three headings to include co-mingled food and green collections. During 2019/20 all 22 authorities collected food and green separately (other than Caerphilly and Cardiff

which co-collected food and green waste for a very small number properties), therefore, Organic waste data is split across two headings; food-only collections and green-only collections.

Food waste only

36. The total cost of providing food waste collection is shown in Figure 17 (cost per household served) and Figure 18 (cost per tonne collected). The performance of the service (i.e. the contribution of recycled food to overall recycling performance) is shown on the right-hand axis and can be seen as the orange lines on the chart. It should be remembered that in practice food waste is often collected with other waste streams- usually Dry Recycling for kerbside sort authorities. In these cases the figures are calculated using apportionment.

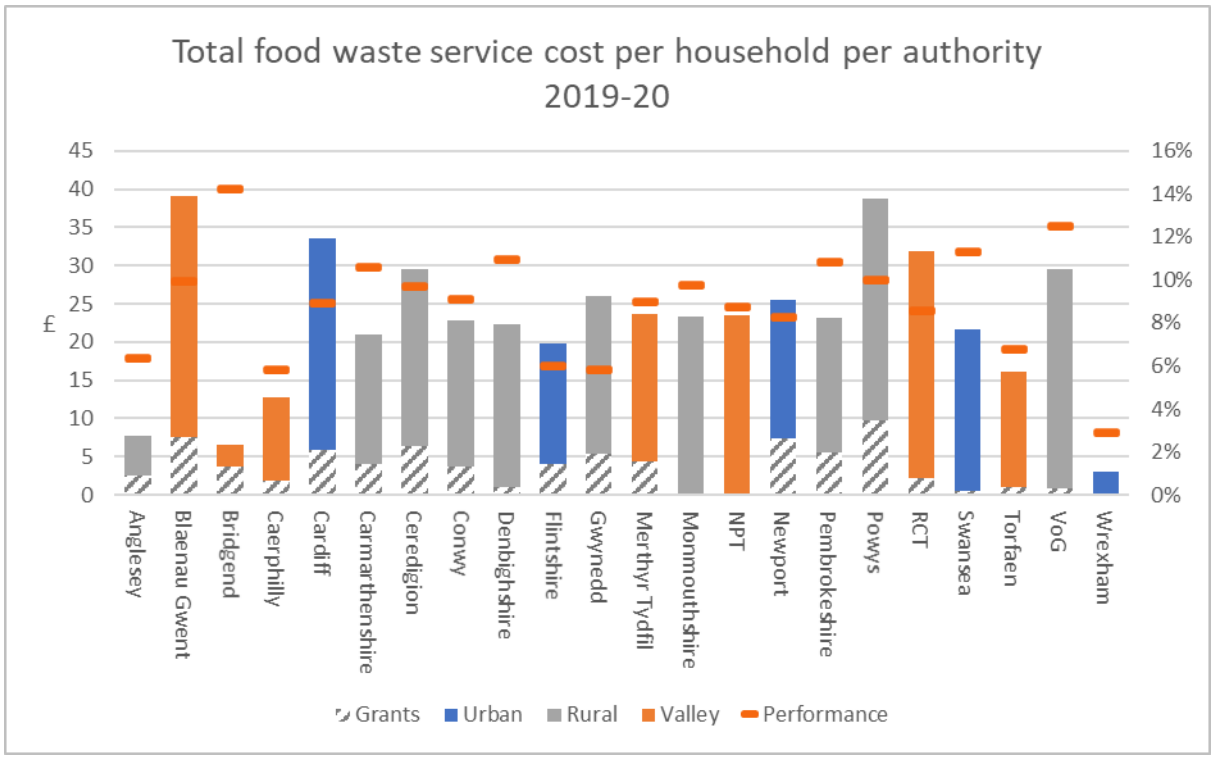


Figure 17 – Food waste service cost per household served.

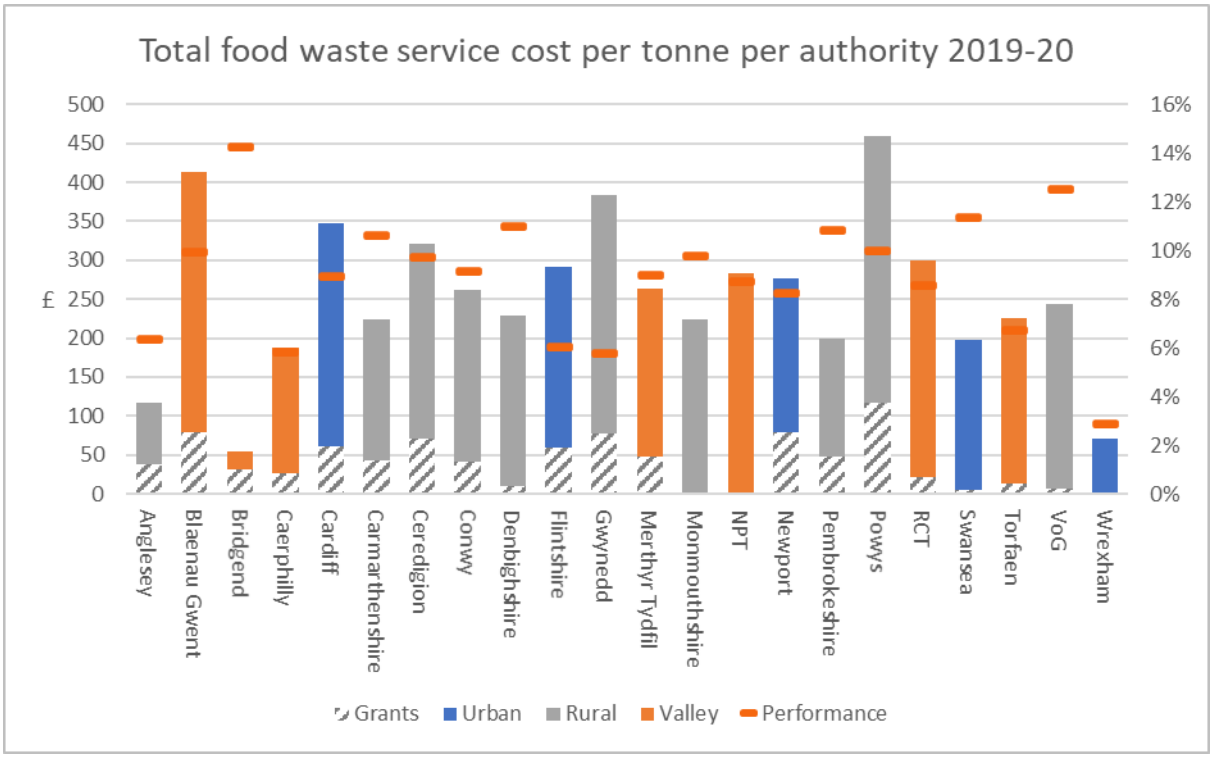


Figure 18 – Food waste service cost per tonne

37. Both cost and performance vary across the group. There is wide variation in yield as % of total MSW, from 3% to 14%, a slight difference to 2018/19. However, food waste recycled as % of MSW has continued to increase overall. Greater divergence between cost bar and performance bar is likely to signify a higher performing service. For example, the service operated by Bridgend, exhibits both a low cost and high yield.

38. Food waste increased its contribution to overall recycling from 7.7% in 2018/19 to 8.7% in 2019/20. Tonnage increased by 12,283t and similarly median costs also increased suggesting a rise in the cost of food waste services when compared to 2018/19. Monmouthshire are now able to record food waste separately and not co-mingled with green as previously the case in 2018/19.

Green waste only

39. The total net cost of providing separate green waste collections is shown in Figure 19 (cost per household served) and 20 (cost per tonne collected). It is important to note that the cost is divided by the total number of households not the number of users or subscribers. The performance, in terms of the contribution of recycled green waste to overall recycling performance is shown on the right-hand axis and can be seen as the orange line on the chart.

40. During 2019/20 Bridgend, Carmarthenshire, Denbighshire, Flintshire, Gwynedd, Monmouthshire, and Pembrokeshire were charging residents for the kerbside

collection of garden waste. Powys introduced a chargeable kerbside garden waste service collection during 2019/20.

41. In 2019/20 overall green waste service costs increased by £1m. Overall tonnage increased similarly by 7,359 tonnes. This is likely to be linked to Powys introducing a green waste collection service and Monmouthshire moving from co-mingled to a green-only collection service in 2019/20. It is worth noting that over the last few years an increasing number of authorities have reduced their collections to include seasonal restrictions. Eight authorities have introduced charging via annual subscriptions and some authorities charge for the receptacles.

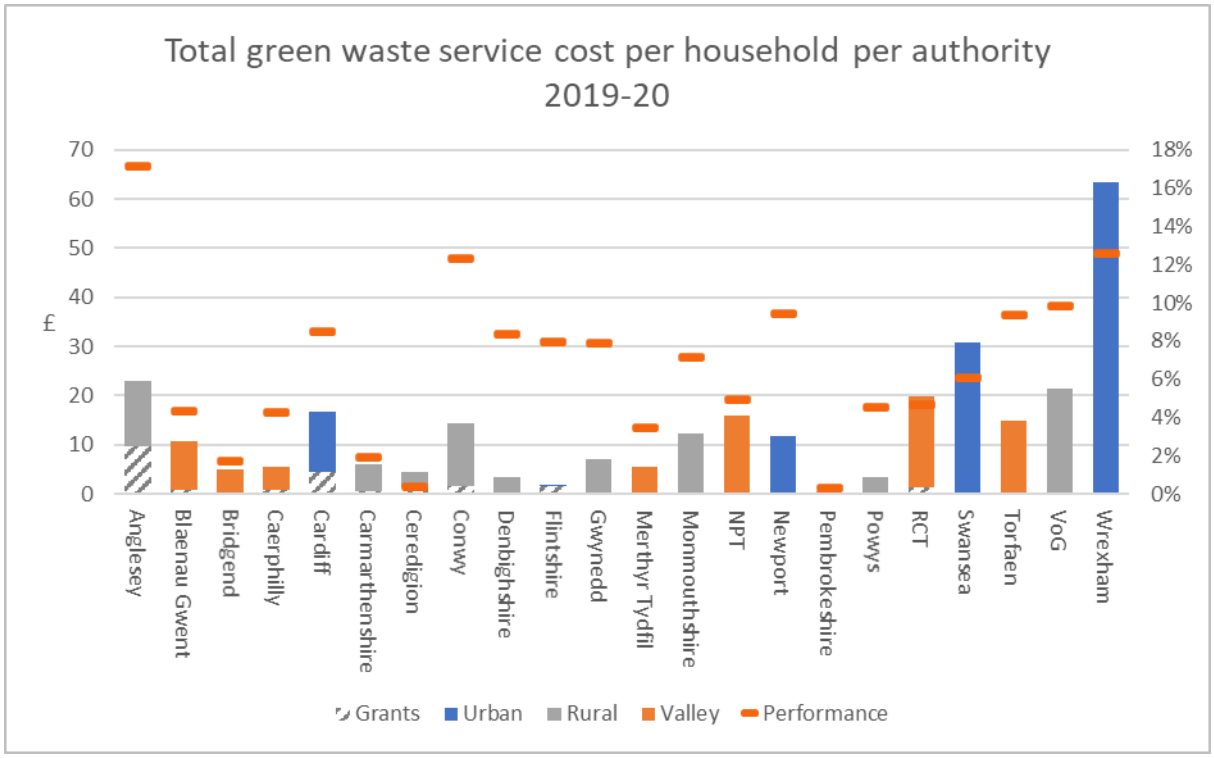


Figure 19 – Green waste service cost per household served.

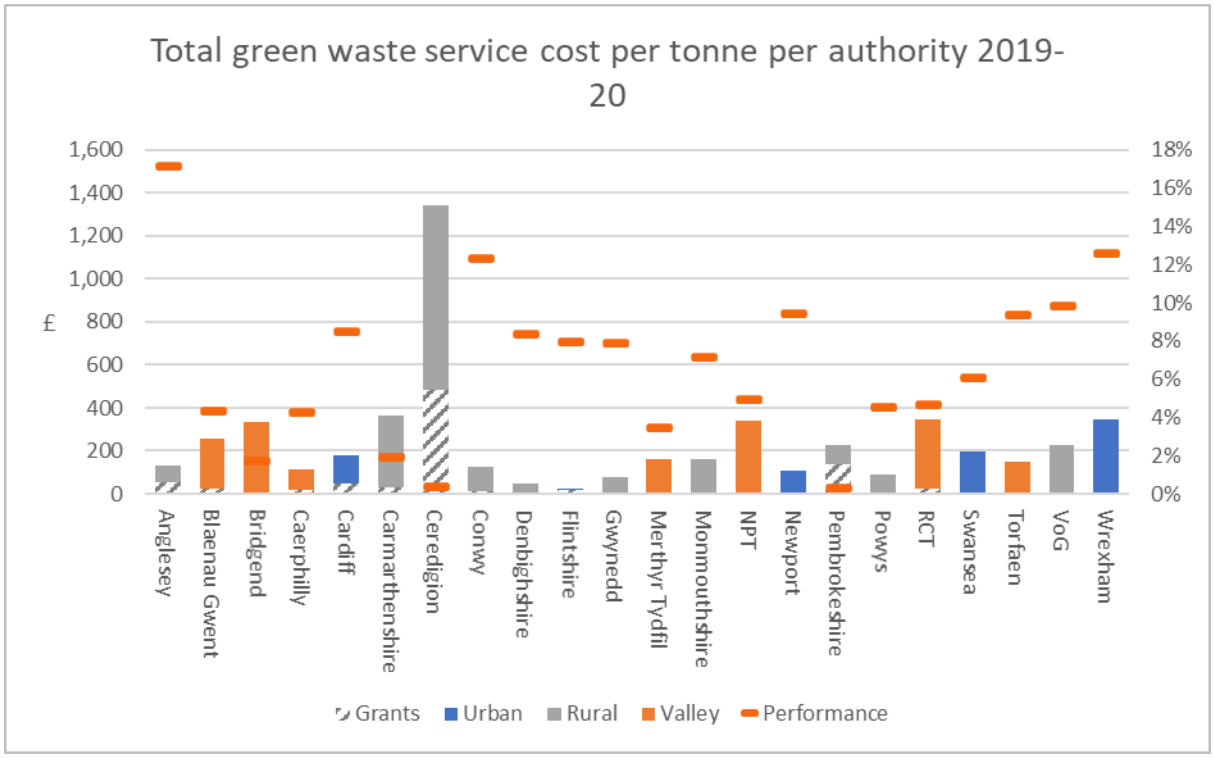


Figure 20 – Green waste service cost per tonne

42. 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 Conwy and Anglesey would suggest that they are relatively efficient services. There is a clear link between authorities collecting the most incurring highest costs, although this may vary slightly due to some authorities charging for the 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.

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

44. 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 results in some authorities exhibiting higher service costs.

45. If all costs associated with various organic collection services are aggregated, it is possible to compare total expenditure in 2019/20 with that of 2018/19:

	17/18	**18/19**	**% Change**
Organic	£49,057,353	£52,488,906	+6.9%

46. Food waste services across Wales are now fairly stable and tonnage continues to increase. Performance in terms of total organic waste mass collected from the kerbside increased by 14,341 tonnes when compared to 2018/19. This follows a performance decrease between 2017/18 – 2018/19.

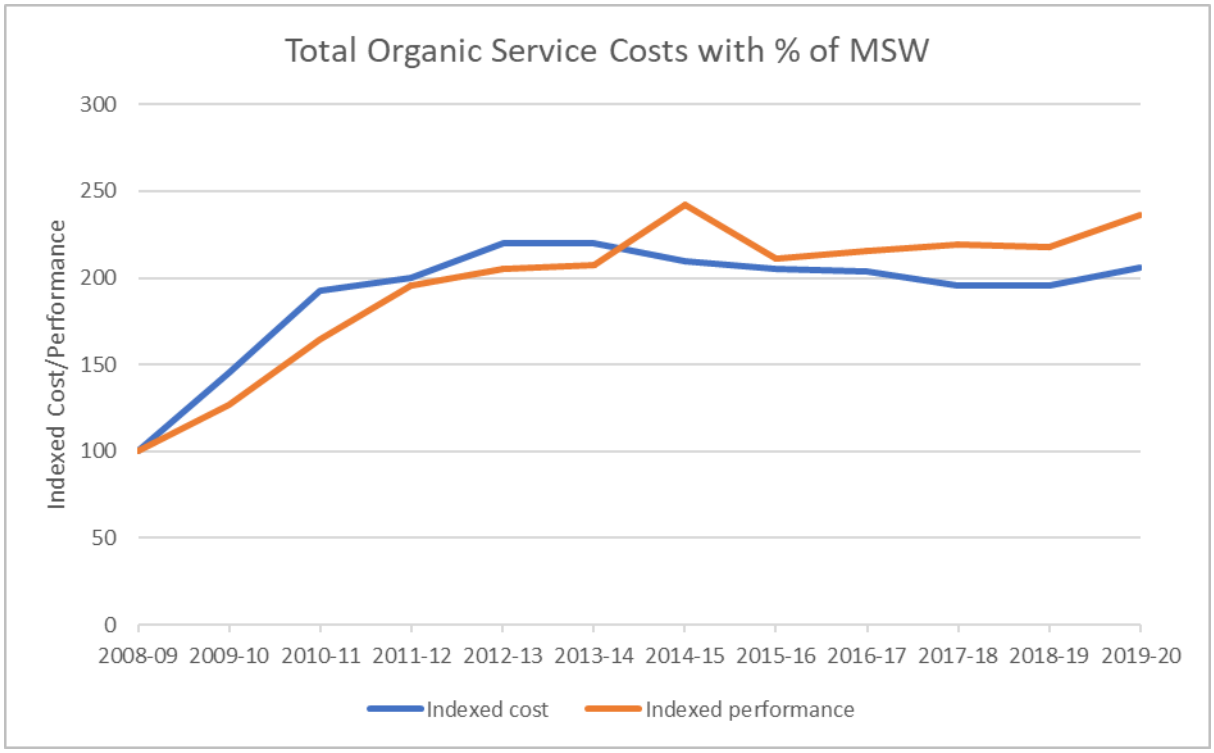


Figure 21 – Organic waste costs since 2008/09

47. The longer term trend can be seen in Figure 21. The ten 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 as shown by the orange line in figure 21. The total cost of organic waste services increased by 7% in 2019/20 but expenditure in real terms (adjusted for inflation of 1.74%) is slightly lower, increasing by 5%. This is the second consecutive increase in organic service costs since 2012/13. During the same period mass organic waste collected at the kerbside also increased, increasing by 14,000 tonnes, (6.56%). The increase in organics collected can be partly attributed to more authorities introducing garden waste collections and as frequency and capacity of residual waste collections continue to reduce, this is likely to have an impact on organic mass collected.

Collection costs

48. 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

49. The food waste collection cost is shown in Figure 22 (cost per household served) and Figure 23 (cost per tonne collected).

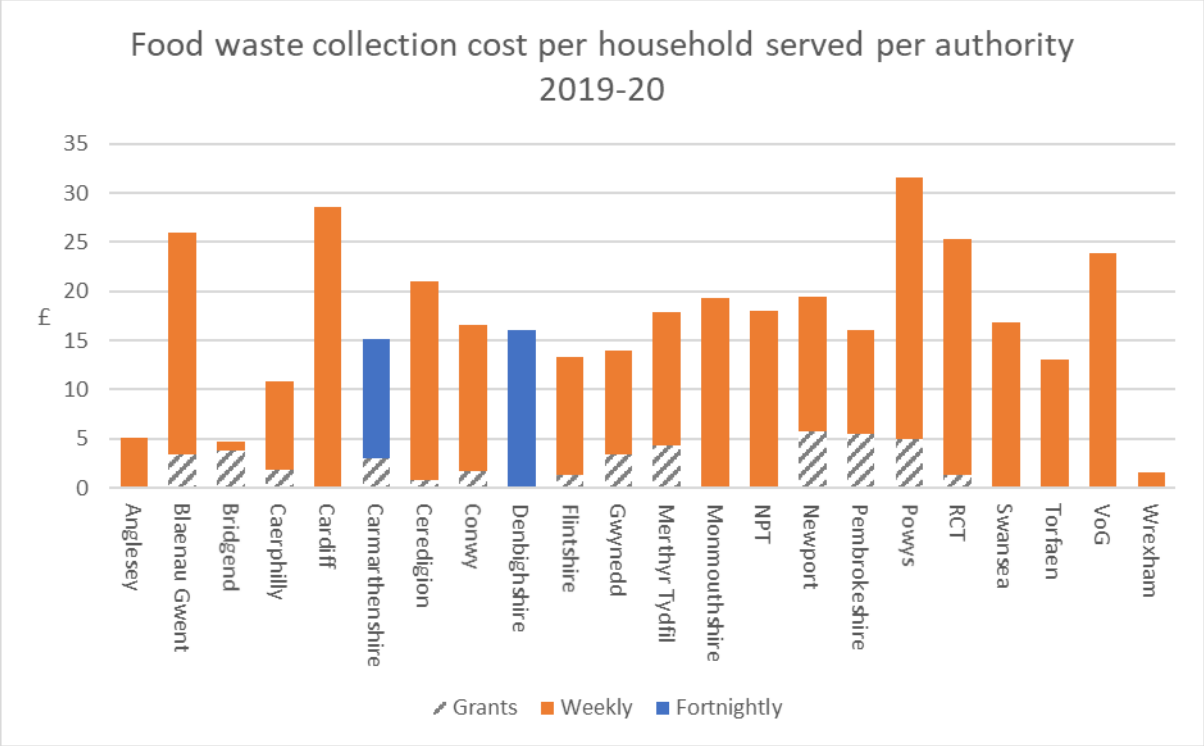


Figure 22 – Food waste collection cost per household served.

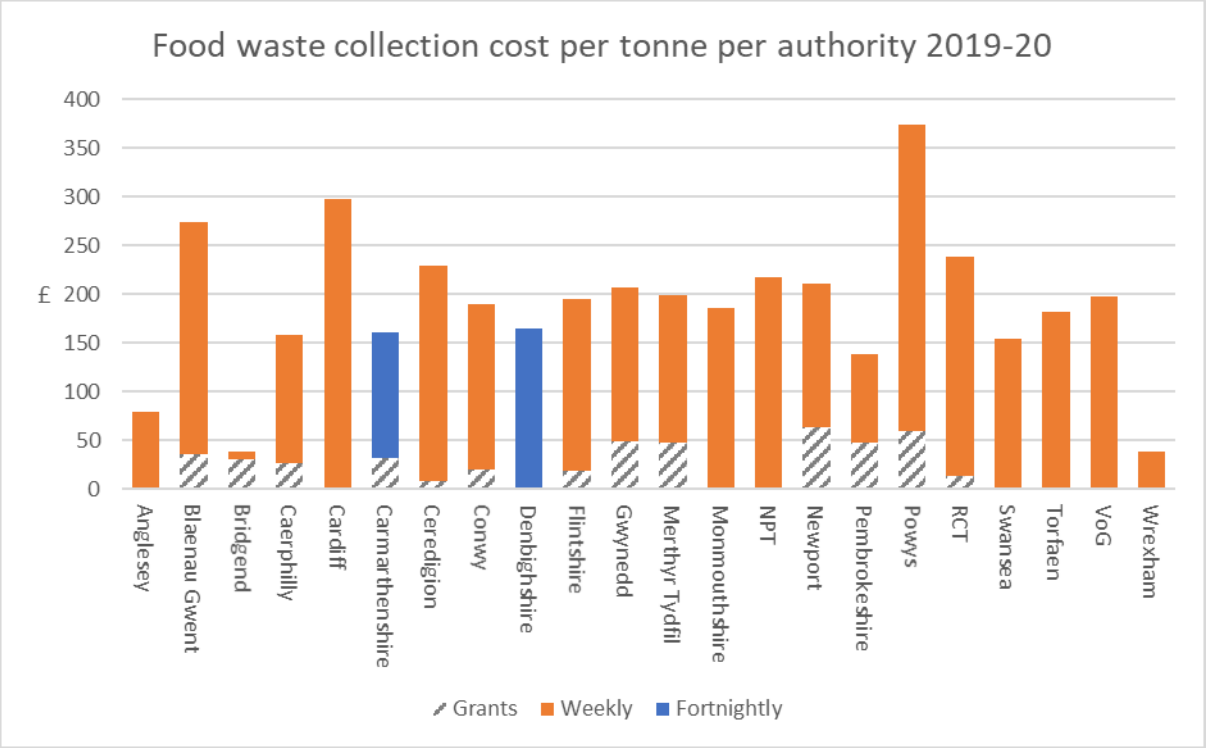


Figure 23 – Food waste collection cost per tonne

Separate green waste collection

50. The green waste collection cost is shown in Figure 24 (cost per household served) and Figure 25 (cost per tonne collected). Bridgend and Flintshire show negative expenditure where income from charging for the service offsets the actual cost of the service.

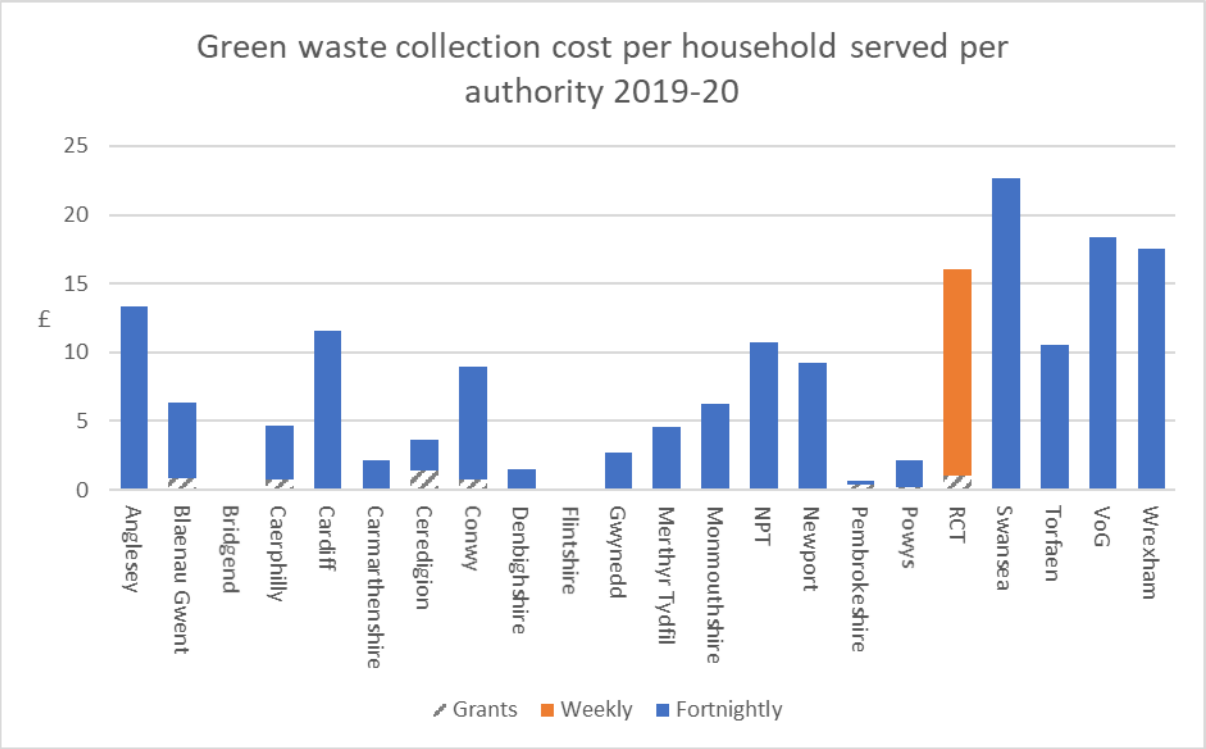


Figure 24 – Green waste collection cost per household served.

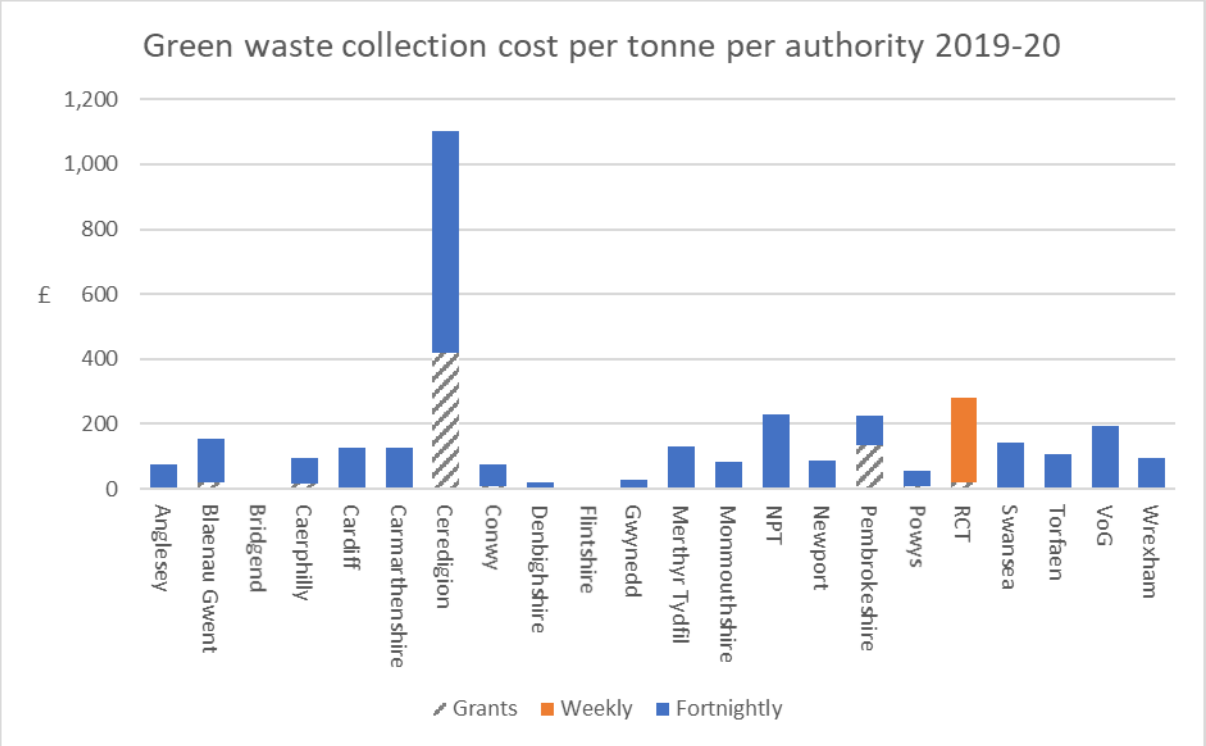


Figure 25 – Green waste collection cost per tonne

51. It can be seen that for all organic waste services, collection costs are by far the greatest contributor to overall service cost, contributing to 70% of the total service cost.

Treatment Costs

52. 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

53. The food waste treatment cost is shown in Figure 26 (cost per household served) and Figure 27 (cost per tonne collected).

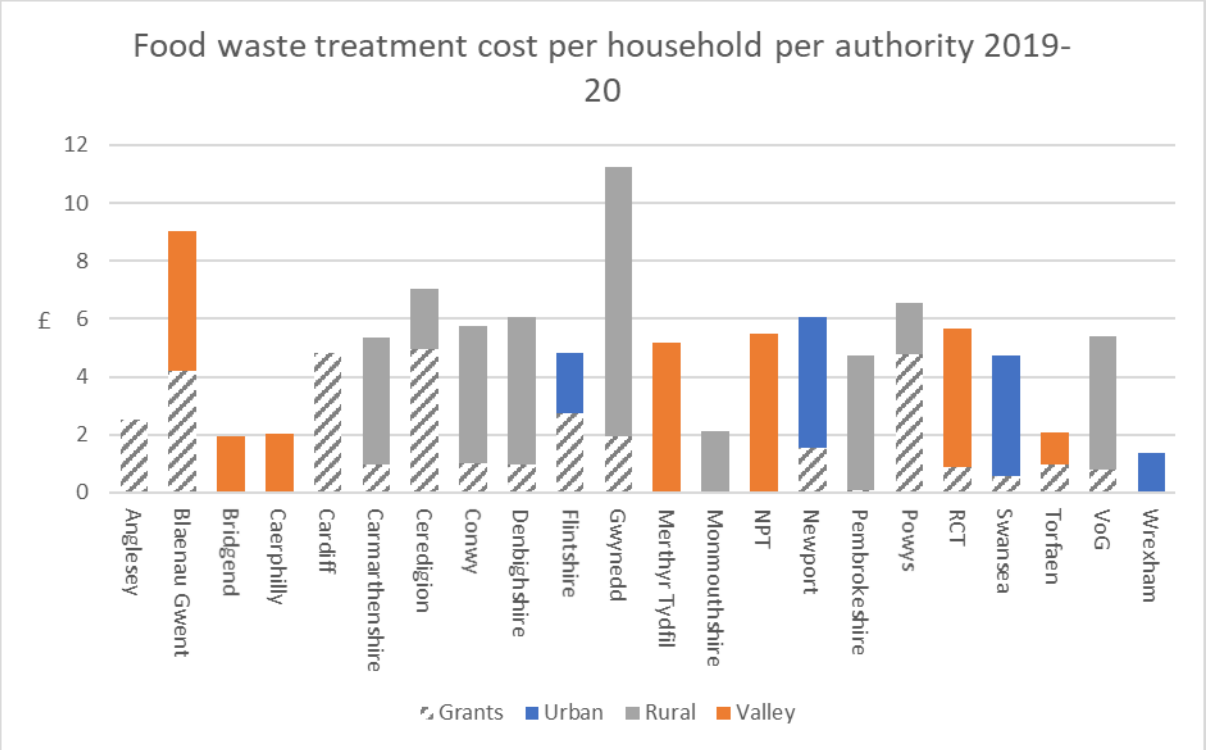


Figure 26 – Food waste treatment cost per household served.

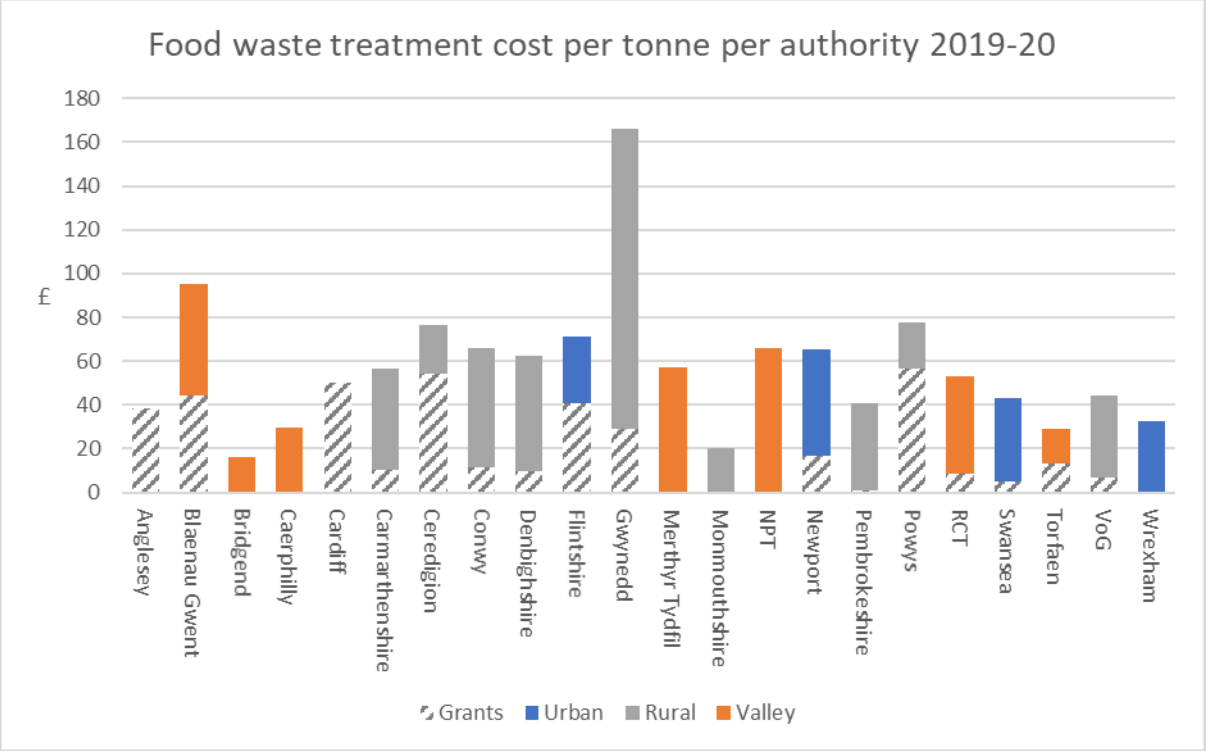


Figure 27 – Food waste treatment cost per tonne

Separate green waste

54. The green waste treatment cost is shown in Figure 28 (cost per household served) and Figure 29 (cost per tonne collected).

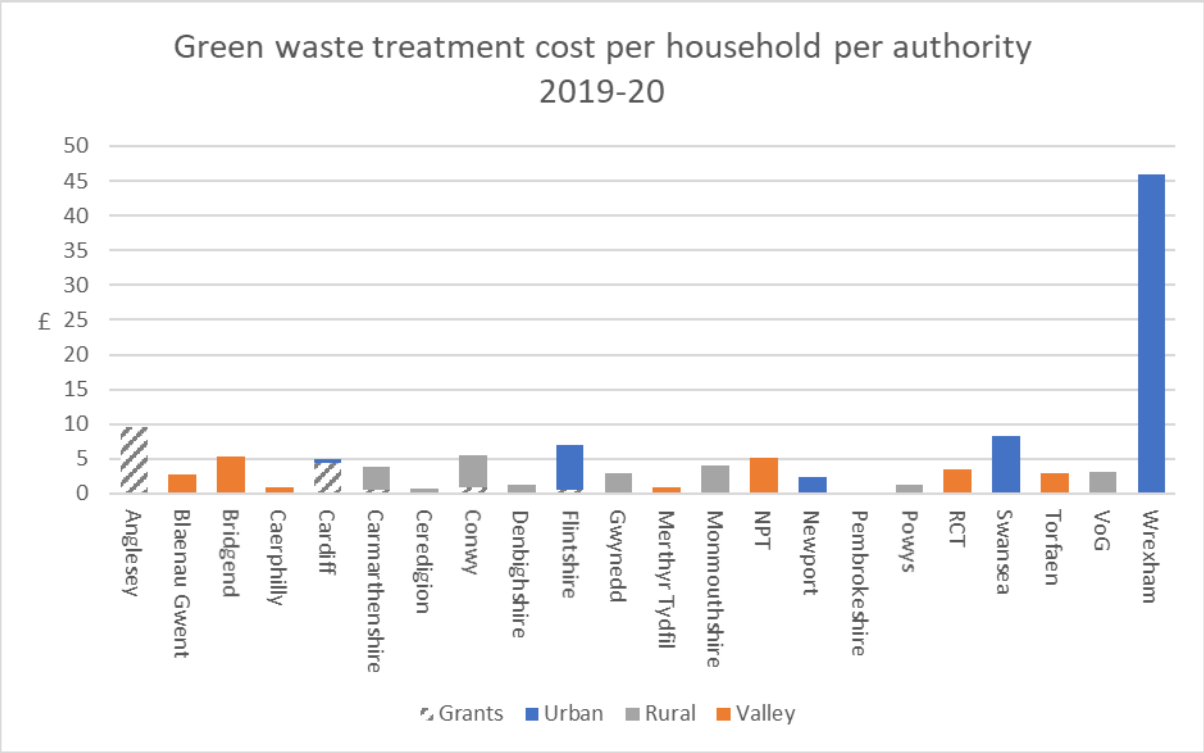


Figure 28 – Green waste treatment cost per household served.

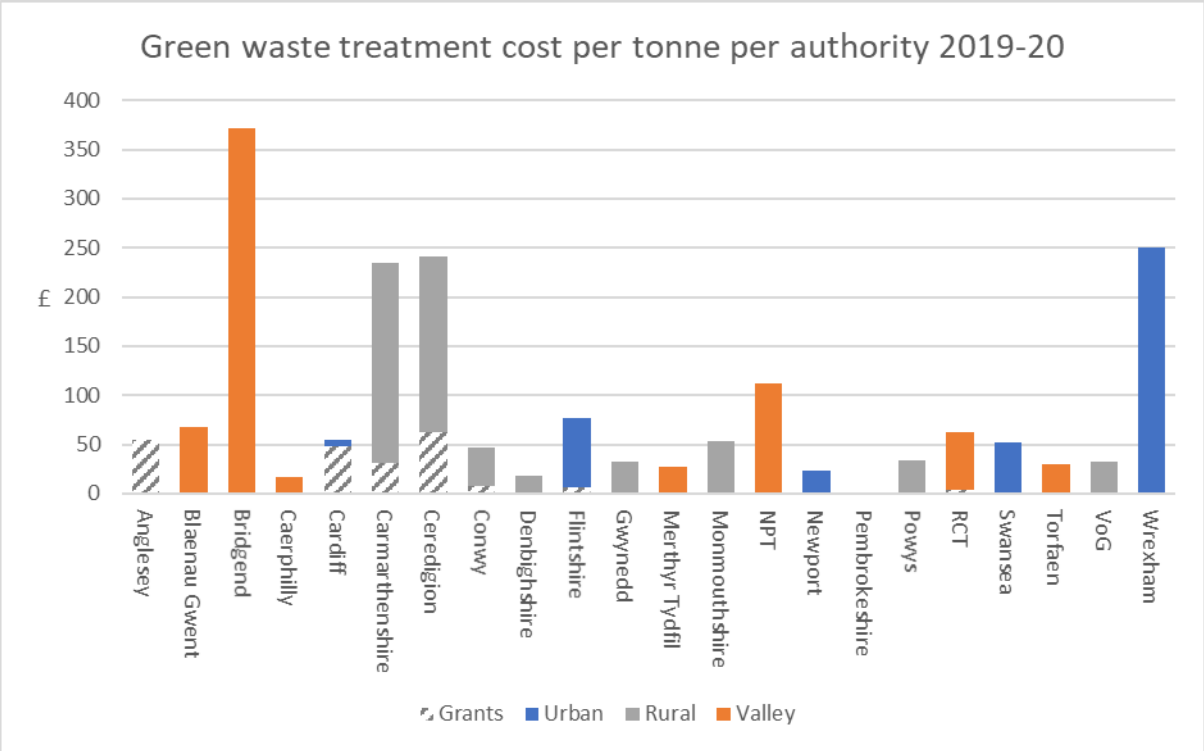


Figure 29 – Green waste treatment cost per tonne

55. Wide variation exists across the group for green waste treatment costs, mainly due to the variation in tonnage collected between LAs. The group average is £90 per tonne, this is a slight decrease of £0.50 from 2018/19.

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 30 and 31 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 and green waste. Not included are residual waste services, HWRC, bring, bulky waste, trade waste and clinical waste collections.

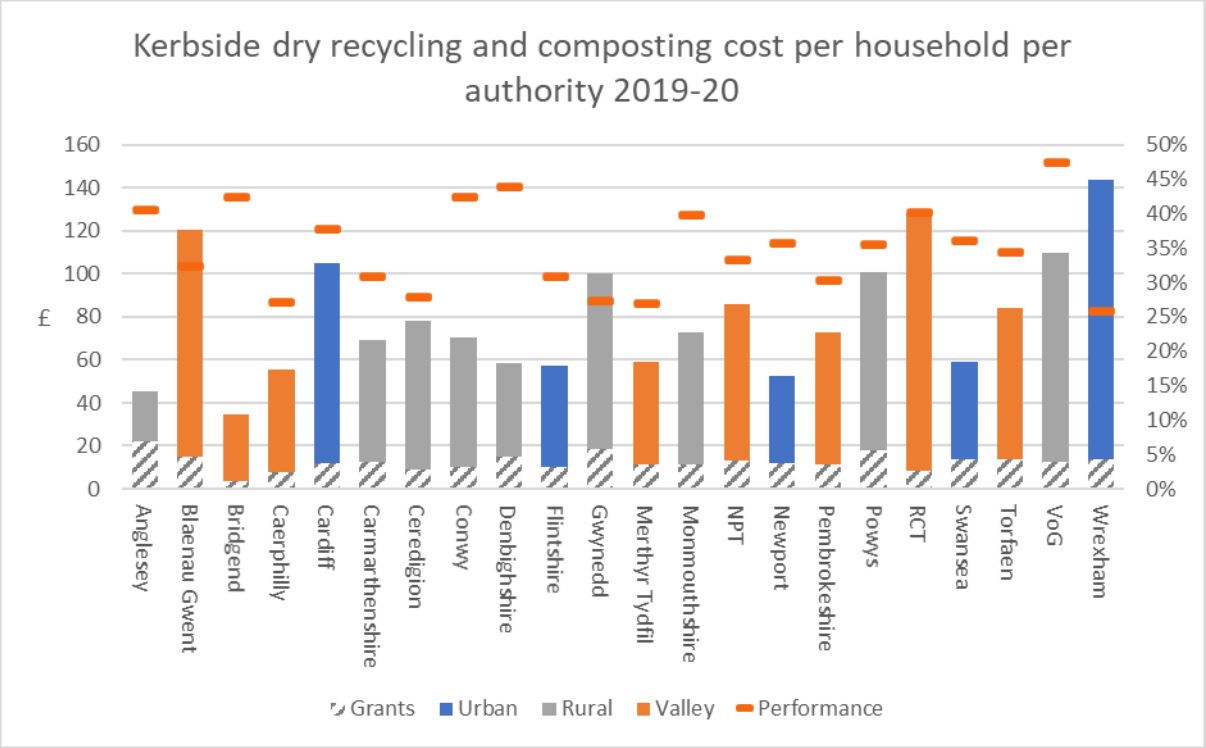


Figure 30 – Kerbside recycling and composting services – per household

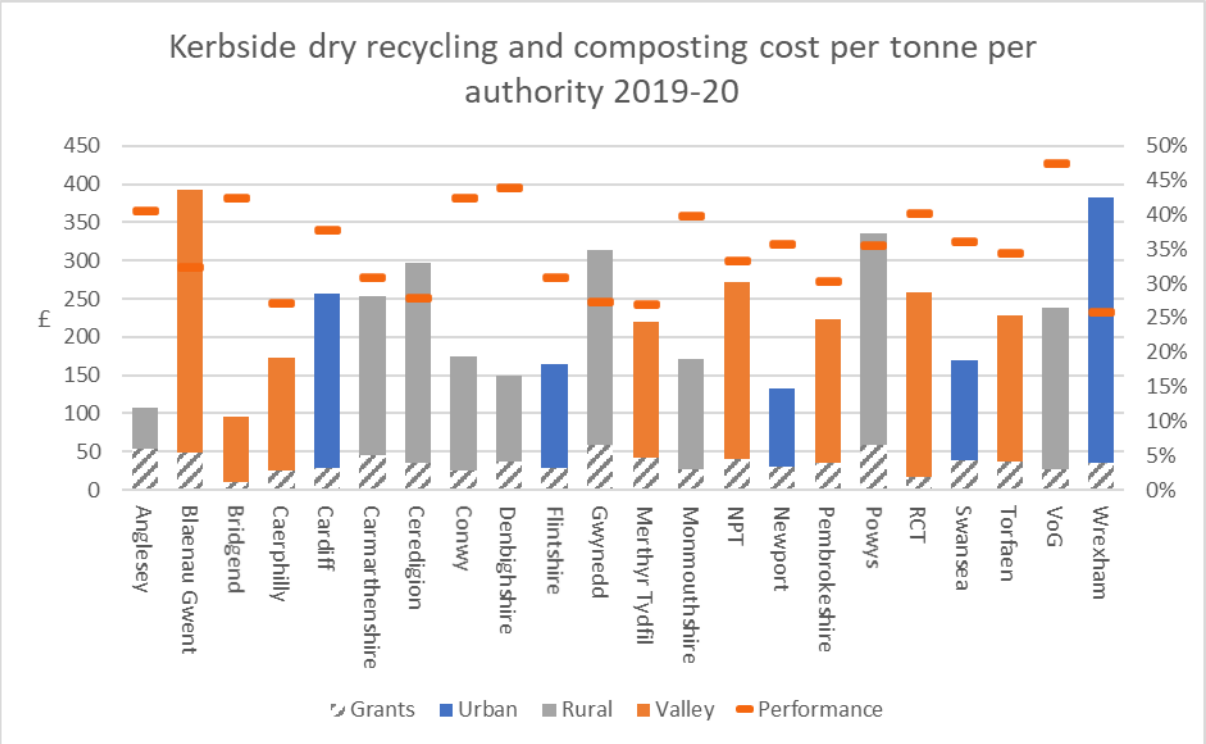


Figure 31 – Kerbside recycling and composting services – per tonne

59. Some variations in costs can be seen across the group, though over half authorities are exhibiting combined service costs of less than £73 per household with a group median of £72.60, an increase of £6.80 per hh from 2018/19. Most local authorities range between £55.30 per hh - £86.10 per hh. Performance also varies across the group with between 26% and 47% of total MSW diverted via

kerbside collection of material. Expenditure of these combined services have increased each year since 2017/18. This could be due to a number of reasons, including the implementation of improved services across authorities, residual waste restrictions which has resulted in a shift in mass collected, and behaviour change as recycling starts to become the 'norm'. As authorities strive to meet Welsh Government recycling targets we can see an increase in expenditure which is reflected in overall greater performance in the vast majority of authorities.

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).

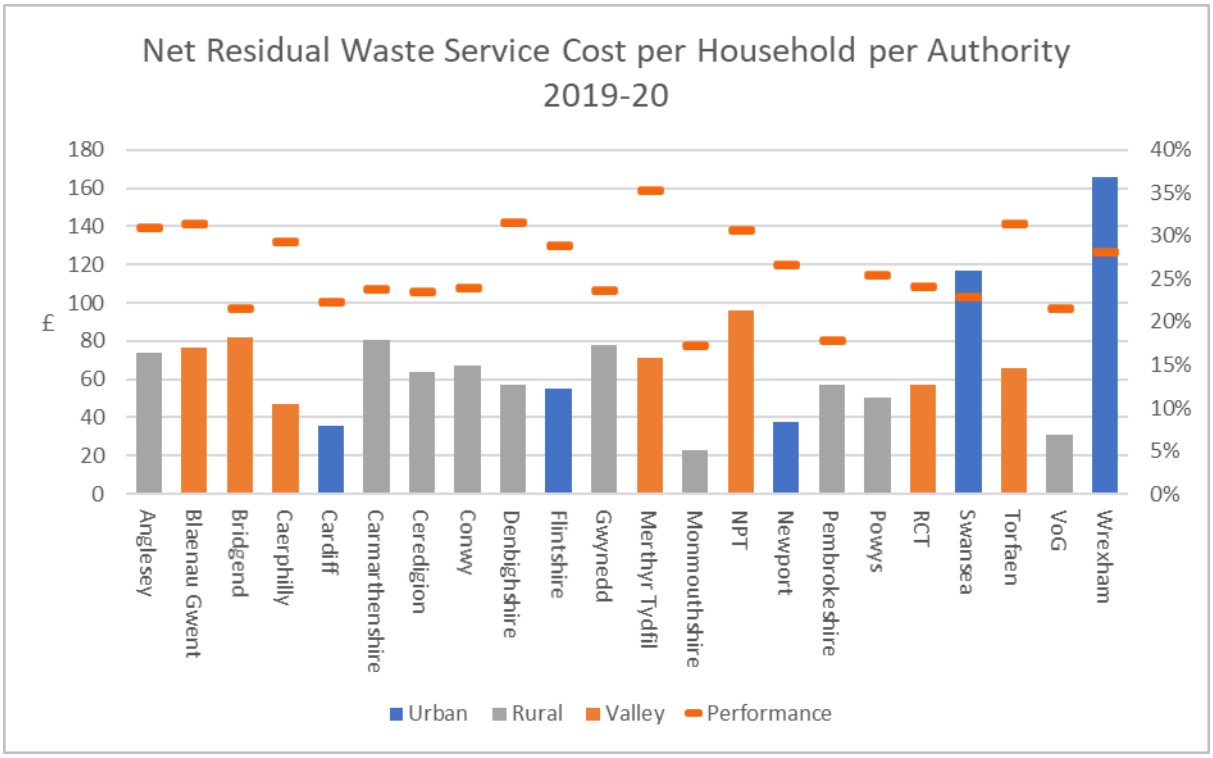


Figure 32 – Residual waste service cost per household

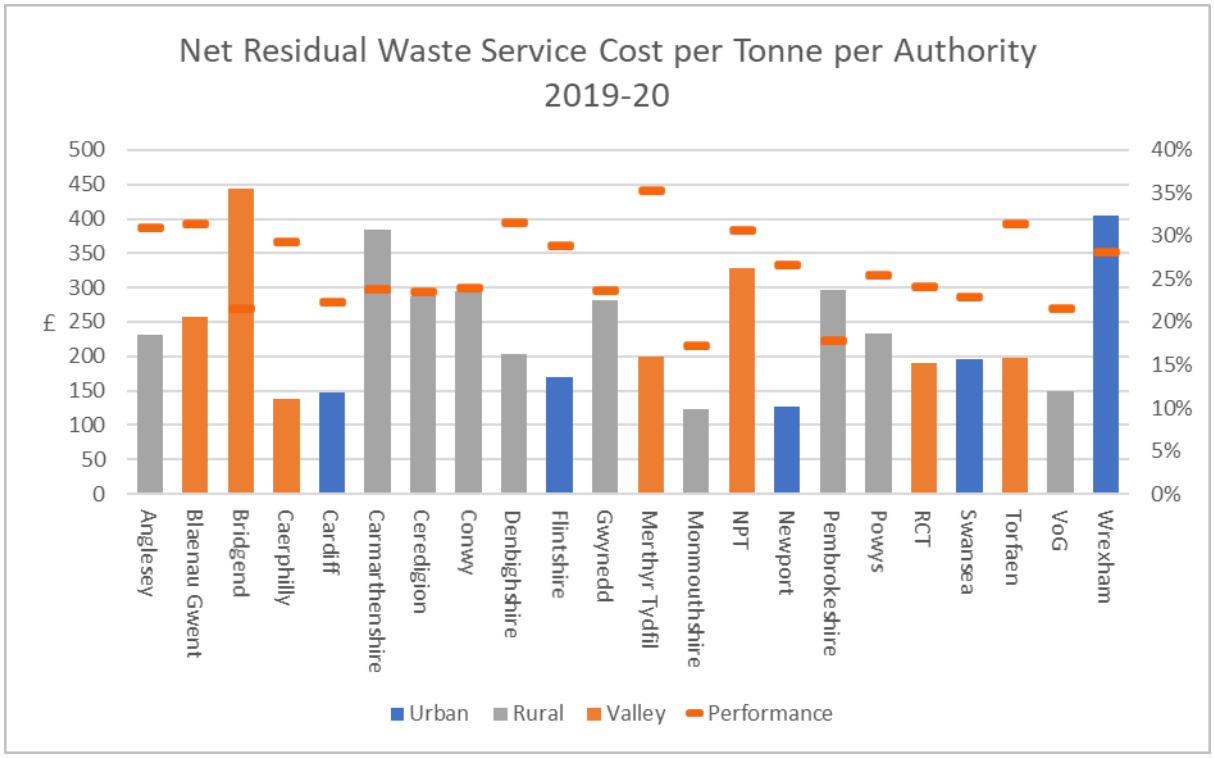


Figure 33 – Residual waste service cost per tonne

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 2019/20 overall residual waste service expenditure with that of 2018/19:

	18/19	**19/20**	**% Change**
Residual waste	£84,624,422	£88,329,826	+4.4%

63. 2019/20 saw an increase in overall residual waste service costs, with net expenditure increasing by £3.7m when compared to the previous year. This is likely to be due to an increase in the number of authorities sending residual waste to energy from Waste facilities. However, in 2019/20 residual mass decreased by 22,800 tonnes which can be attributed to residual waste restrictions, including reduction of collection frequency, capacity, and implementation of side waste policies across many authorities. In 2019/20 all 22 Welsh authorities collected residual waste on at least a fortnightly basis, with Anglesey, Blaenau Gwent, Gwynedd, and Powys collecting 3 weekly and Conwy operating a 4 weekly service.

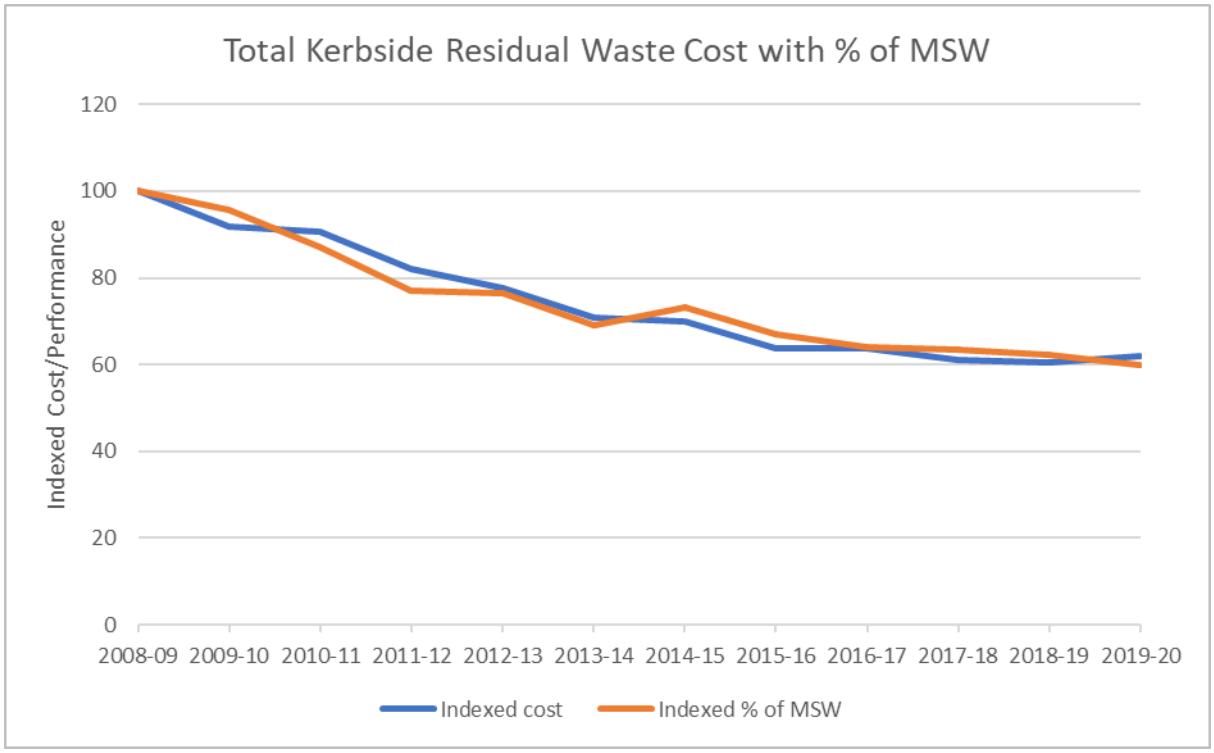


Figure 34 – Kerbside residual waste cost since 2008/09

64. The trend over the last nine years is shown in Figure 34. It can be seen that residual waste costs, adjusted for inflation have dropped significantly since 2008/09. However, the rate of fall has slowed since 2015/16 and 2019/20 saw the first increase in real terms since the baseline year 2008/09. This increase is mainly attributed to treatment costs and is likely to be due to initial setting up costs of Parc Adfer EfW facility in North Wales.

Collection costs

65. The following graphs show residual waste collection costs.

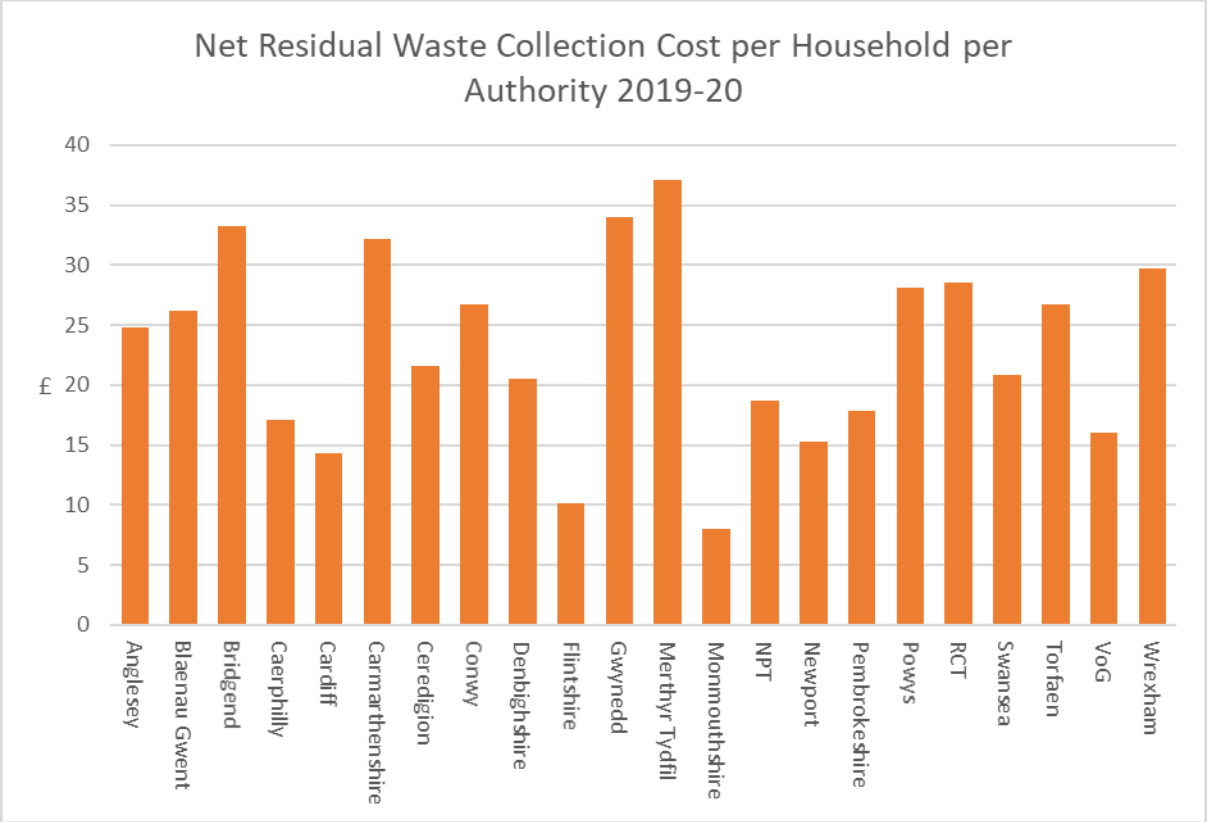


Figure 35 – Residual waste collection cost per household

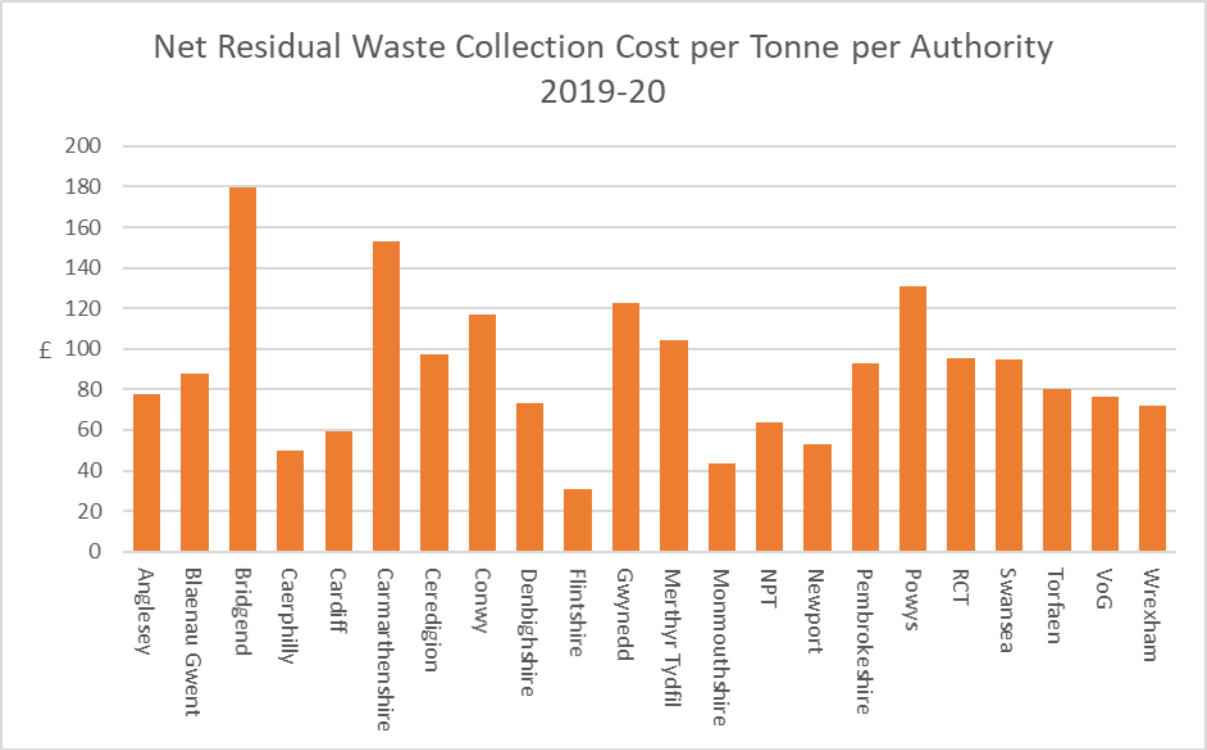


Figure 36 – Residual waste collection cost per tonne

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 37 & 38.

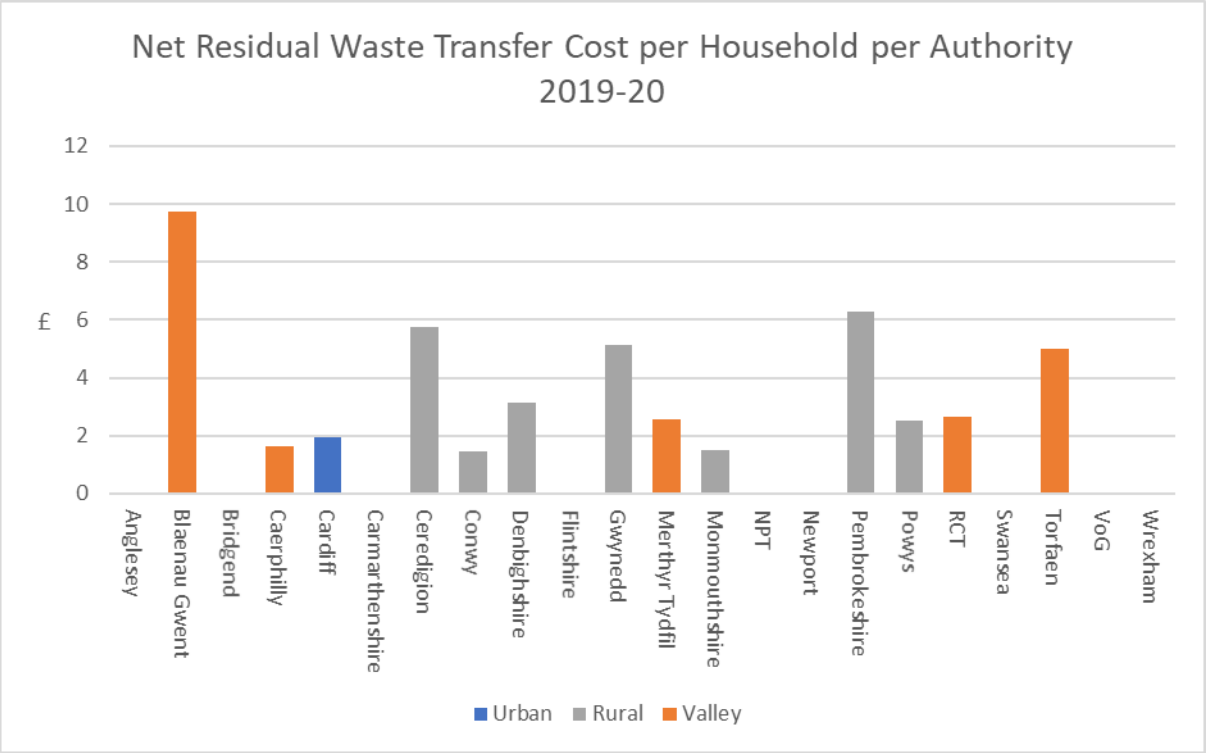


Figure 37 – Residual waste transfer costs per household

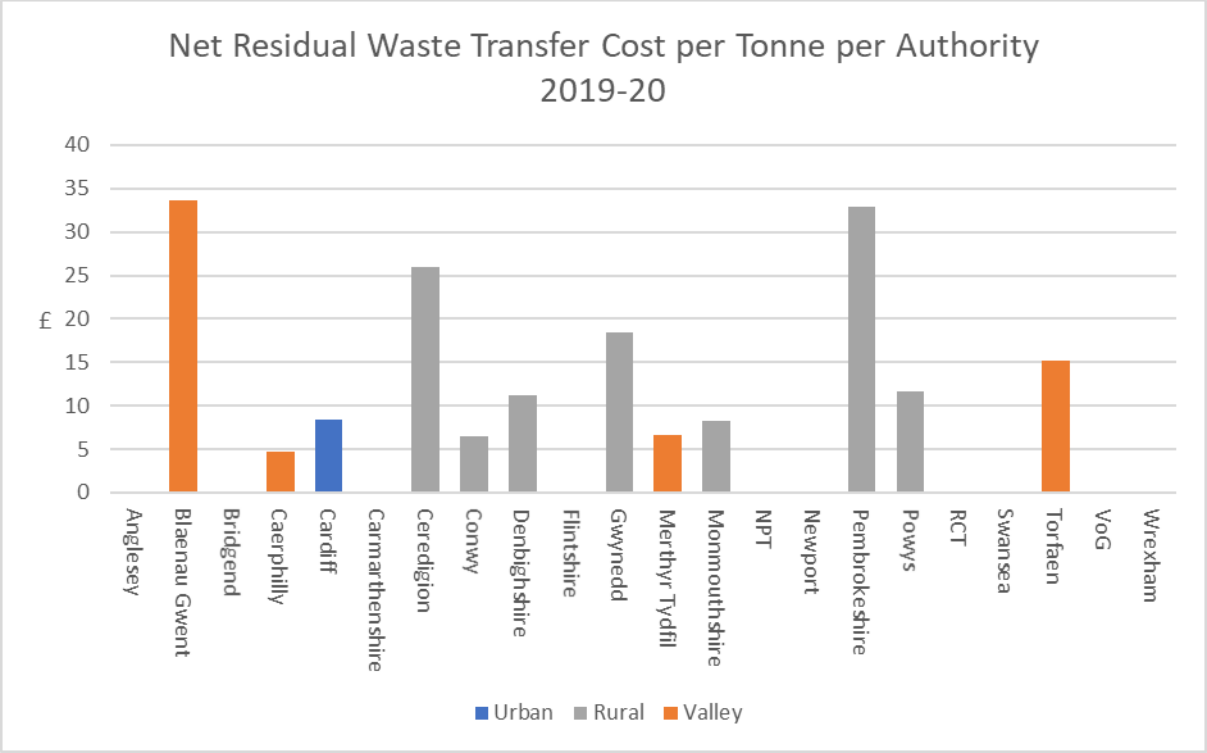


Figure 38 – Residual waste transfer cost per tonne

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 39 & 40. During 2019/20 Parc Adfer, Energy from Waste facility became operational. The Welsh Government and partnership authorities of the North Wales Residual Waste Treatment Project (Flintshire, Anglesey, Gwynedd, Conwy, and Denbighshire) initiated the procurement to achieve long-term targets for recycling and diversion of waste from landfill. These five authorities started sending their residual waste to Parc Adfer during 2019/20 but it is worth noting that the facility did not become fully operational until December 2019.

68. The cost of treatment or processing waste is shown in Figure 39 & 40. Due to ongoing procurement of treatment facilities in Wales, notably the addition of Parc Adfer in 2019/20, this was the first year that all 22 authorities incurred costs for the treatment of residual waste at a combined net cost of £48.2m, 2 more authorities than in 2018/19. Treatment costs increased by £6.7m, from £41.5m in 2018/19 to £48.2m in 2019/20. In some cases, not all residual wastes are treated and therefore some authorities incur disposal costs. As residual waste being sent for treatment continues to increase year on year so does expenditure. Related to this is the reduction of overall disposal costs.

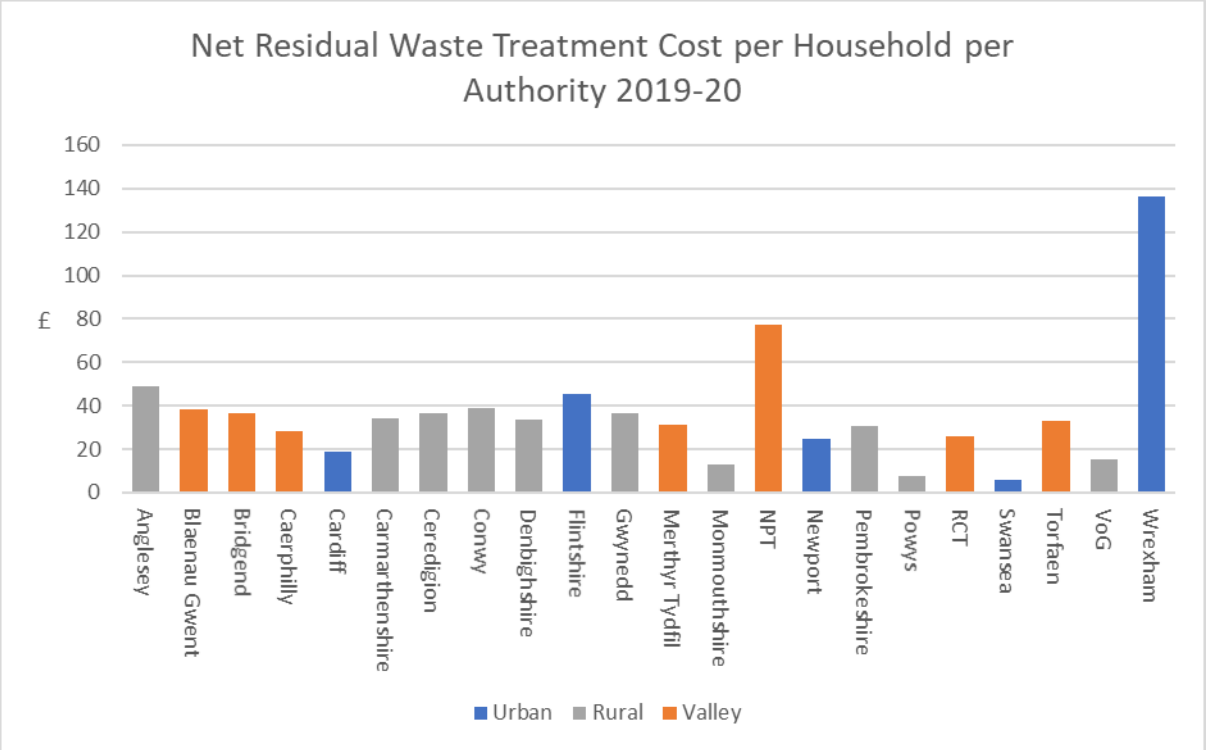


Figure 39 – Residual waste treatment cost per household

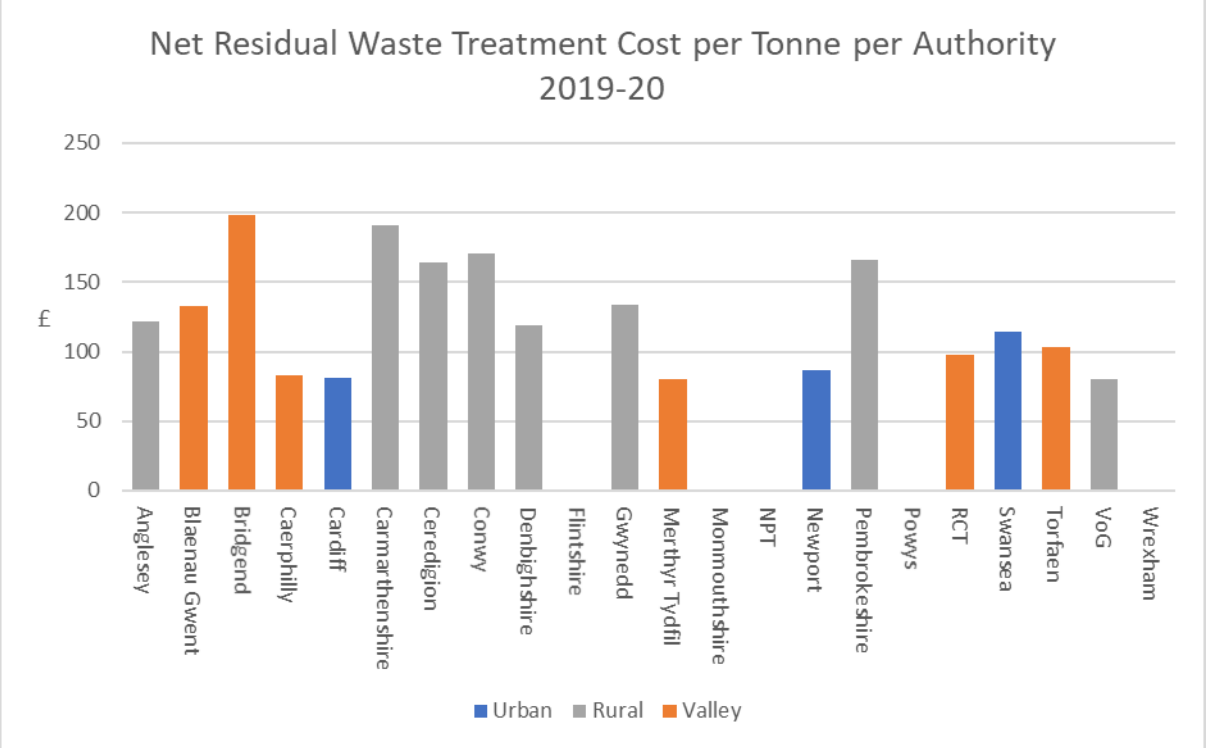


Figure 40– Residual waste treatment cost per tonne

Disposal

69. Figure 41 & 42 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.

70. Combined disposal net costs decreased by £4.4m from £9.6m in 2018/19 to £5.2m in 2019/20. During the same period, the number of authorities incurring costs for the disposal of residual waste decreased from 10 to 8.

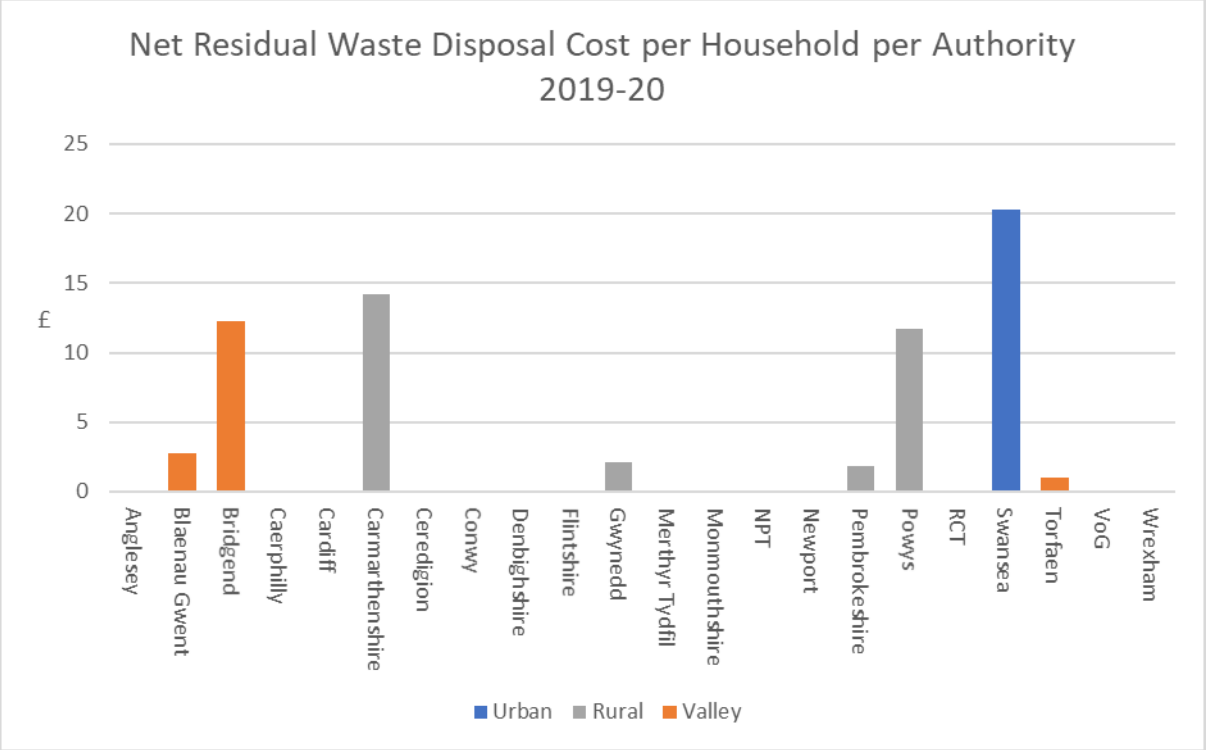


Figure 41 Disposal cost per tonne of Residual waste

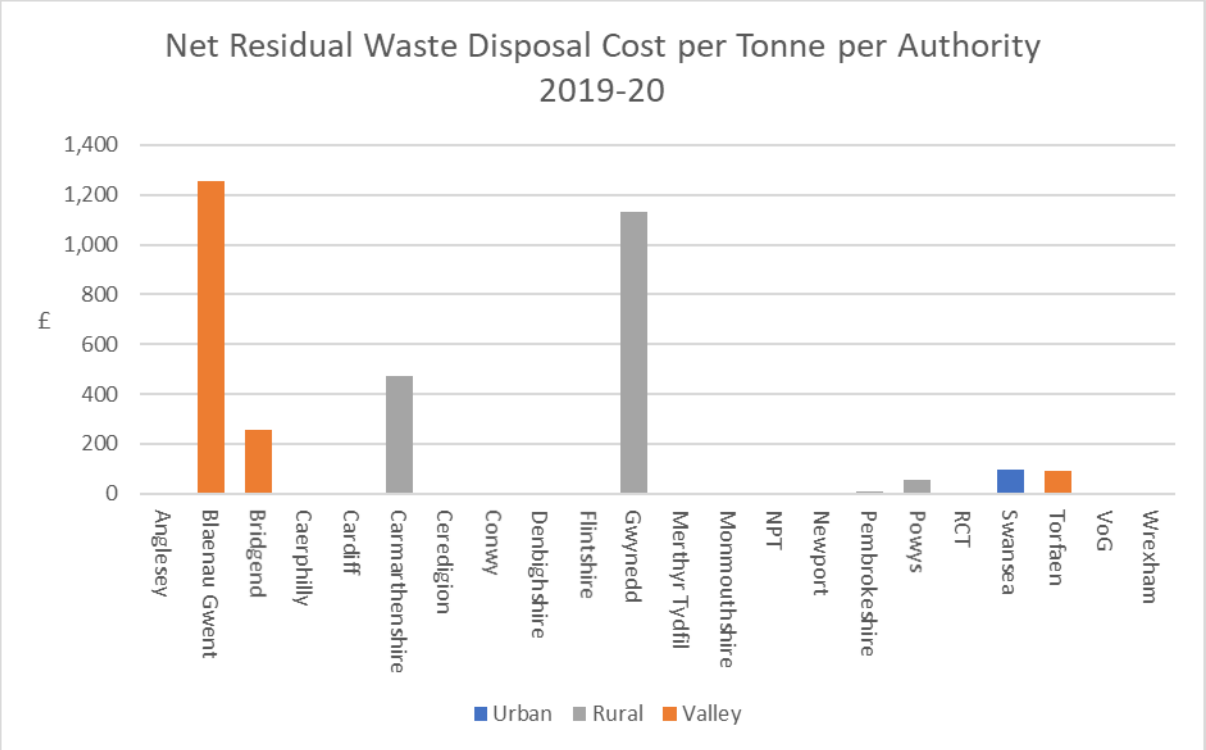


Figure 42 Disposal cost per tonne of Residual waste

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.

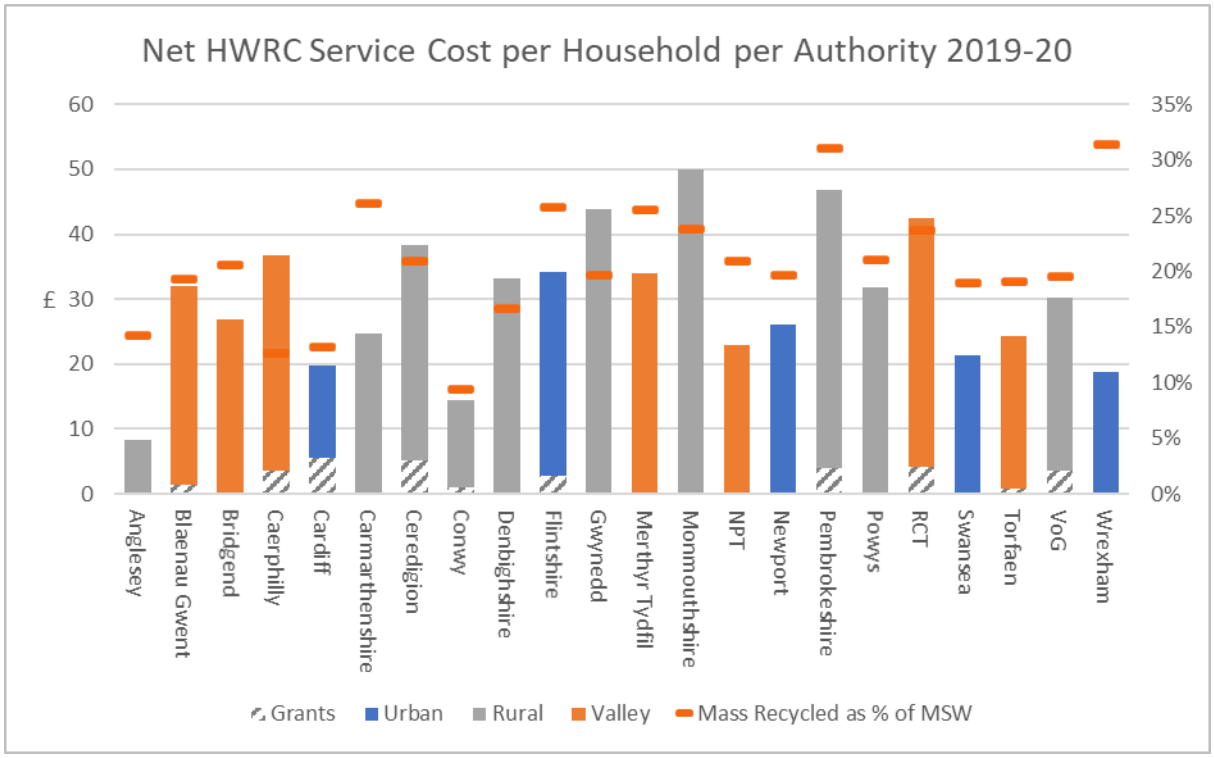


Figure 43 – HWRC site service cost per household

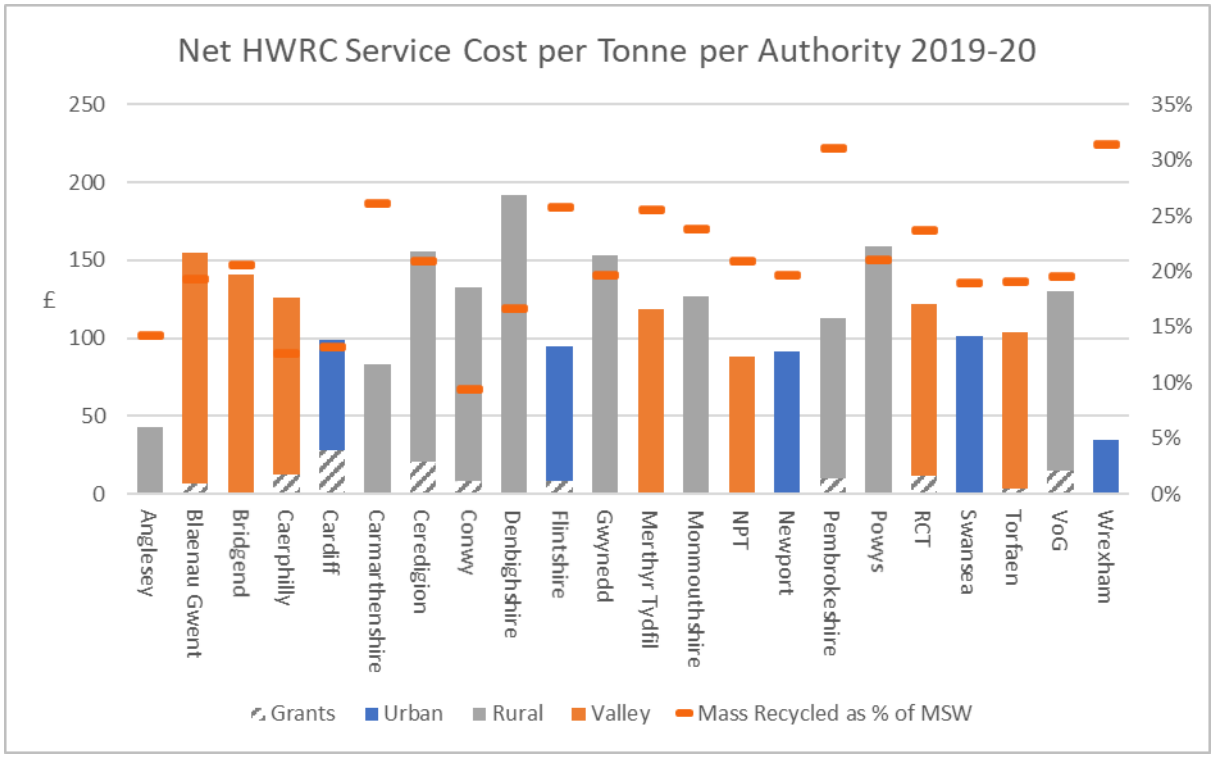


Figure 44 – HWRC service cost per tonne

71. Performance data indicates that contribution made by HWRCs to overall recycling rates can be considerable. In the case of Pembrokeshire and Wrexham 30% or more 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 lowest of authorities, yet with 31% of total MSW recycled through HWRC site network, they are amongst the highest performing authorities. 2019/20 shows a decrease of variation in the contribution to recycling performance with authorities ranging from 9% to 31%.

72. From the core data it is possible to compare 2019/20 overall HWRC service expenditure with that of 2018/19:

	18/19	19/20	% Change
HWRC	£42,993,932	£42,248,897	-1.7%

73. It can be seen that expenditure on HWRCs decreased in 2019/20. Costs adjusted for inflation show a larger decrease in expenditure in real terms. There was a 6.12% reduction in throughput of recycling and residual waste at HWRC's. During this time the mass from HWRC's as a proportion of overall household waste streams has decreased by 1%, decreasing to 30%. This is the first change since 2016/17, however, HWRC's remain to be the largest mass proportion of all household waste streams.

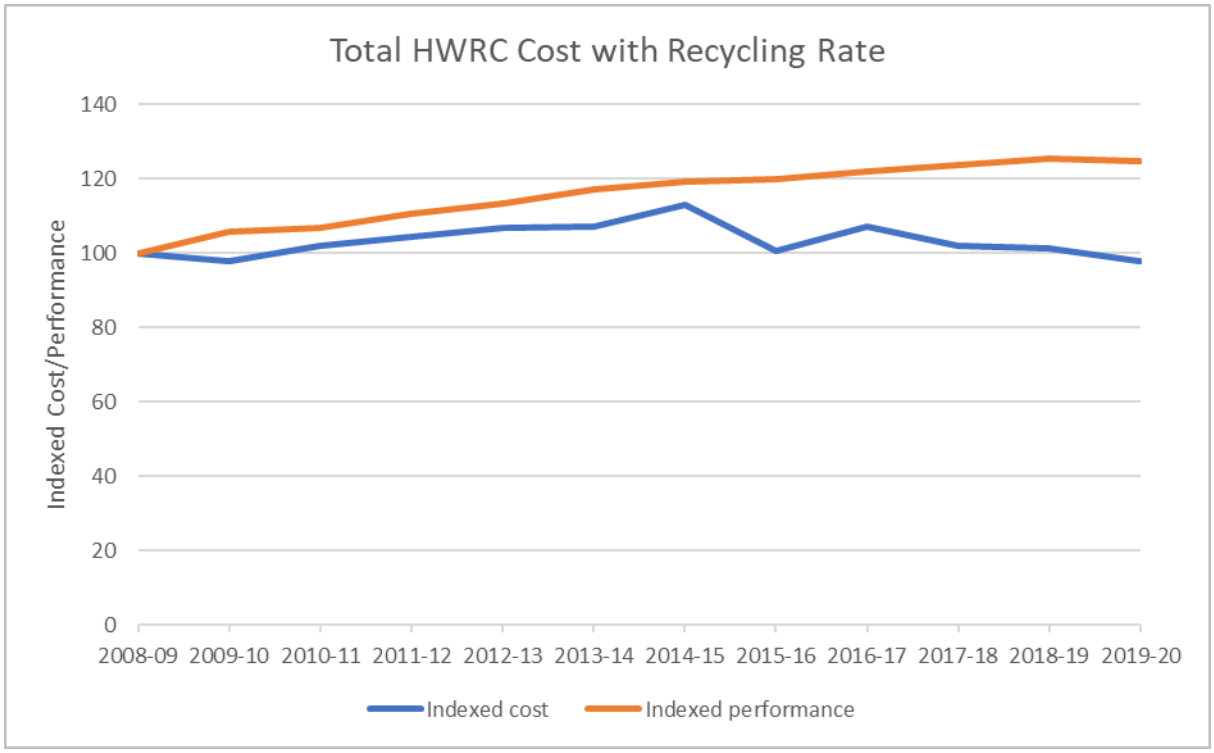


Figure 45 – HWRC site expenditure since 2008/09

74. Over the longer term, it can be seen that expenditure has continued to fall steadily since 2016/17 and in 2019/20 expenditure 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,

however performance dropped slightly in 2019/20, the first drop since 2008/09 (baseline data). This relates to the drop in throughput which could be linked to the ongoing implementation of comprehensive kerbside services across Wales, trade waste restrictions and residency checks. It is worth noting that HWRC sites would have temporarily closed for the last 2 weeks of March 2020 due to COVID-19 lockdown restrictions. Next year's annual finance report will seek to include any effects from the pandemic and whether the balance between HWRC tonnage and kerbside residual tonnage will have shifted.

Bring Sites

75. The figures shown reflect the service cost divided by number of households (Figure 46) and by mass collected (Figure 47).

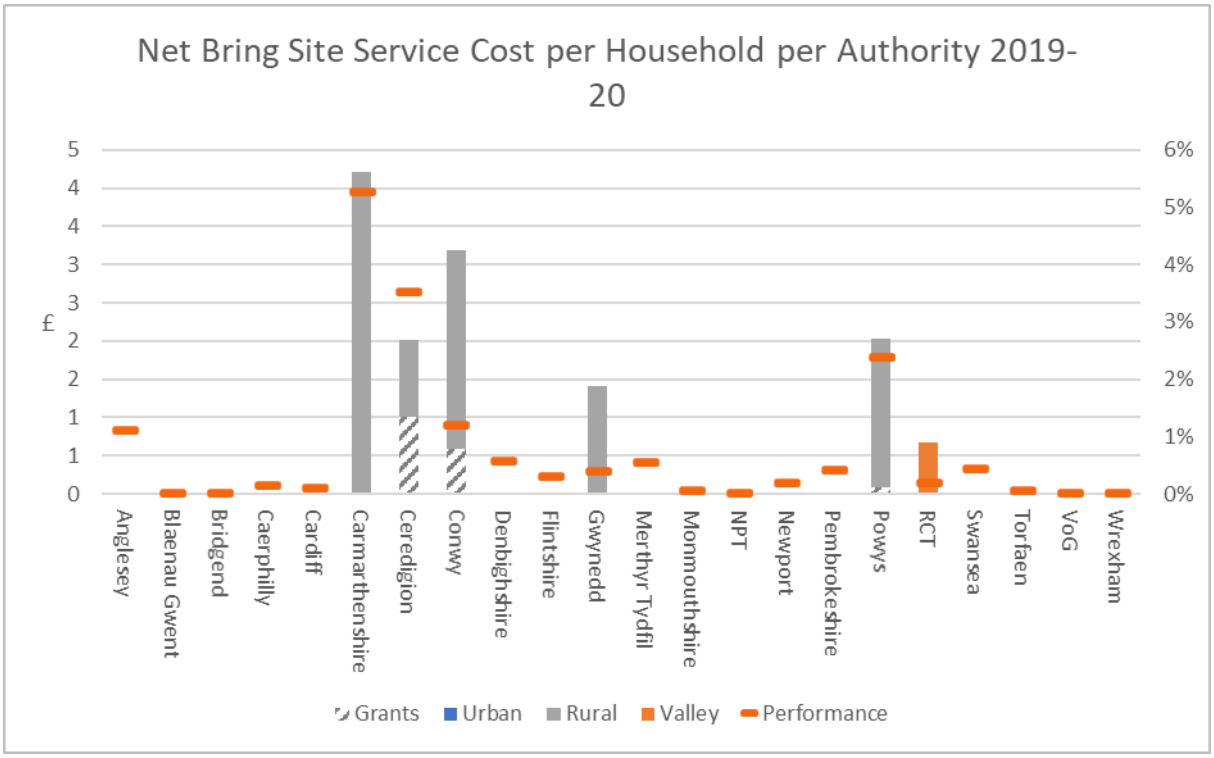


Figure 46 – Bring site costs per household.

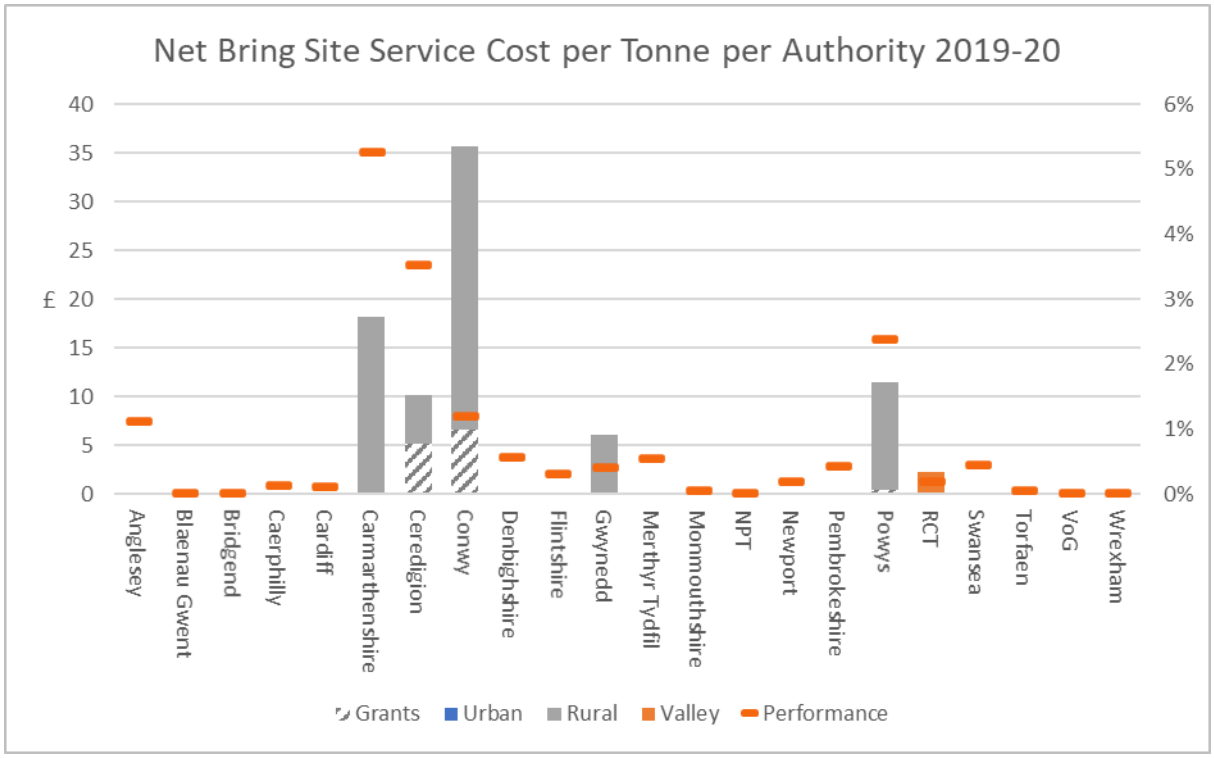


Figure 47 – Bring site costs per tonne.

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

77. From the core data it is possible to compare 2018/19 overall Bring site service expenditure with that of 2018/19:

	18/19	**19/20**	**% Change**
Bring	£1,353,003	£869,046	-35.8%

78. It can be seen that bring site expenditure decreased by 35.8%. During the same period, mass collected via the bring site network reduced by 5,700 tonnes (36.4%) due to a drop in the number of bring sites. This continues a longer term trend.

79. It is likely that mass of material collected via bring site network is reducing due to comprehensive kerbside collection systems and it is likely the number of sites will decrease due to high levels of contamination in recycling and commercial waste being deposited. However, bring sites do currently continue to make a significant contribution to recycling rates for some authorities. Ceredigion and Carmarthenshire collected 4% and 6% of MSW respectively from Bring sites.

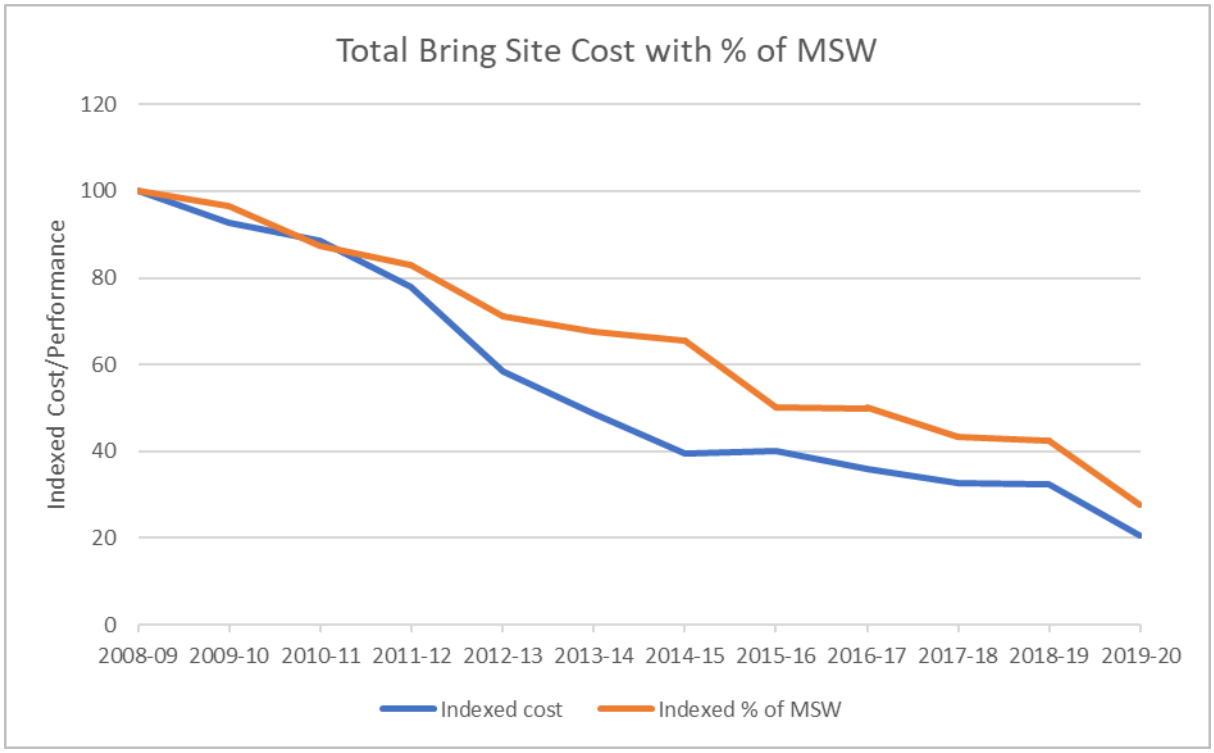


Figure 48 – Bring site expenditure since 2008/09

80. Once again, the trend over the longer term can be examined. Both expenditure and mass recycled via the bring site network has fallen steadily since 2008/09. 2019/20 saw a significant drop in both performance and expenditure which is likely to be due to the reduction of the number of bring sites in authorities.

Trade Waste Service

Figure 49 shows the total trade waste service cost (net of income).

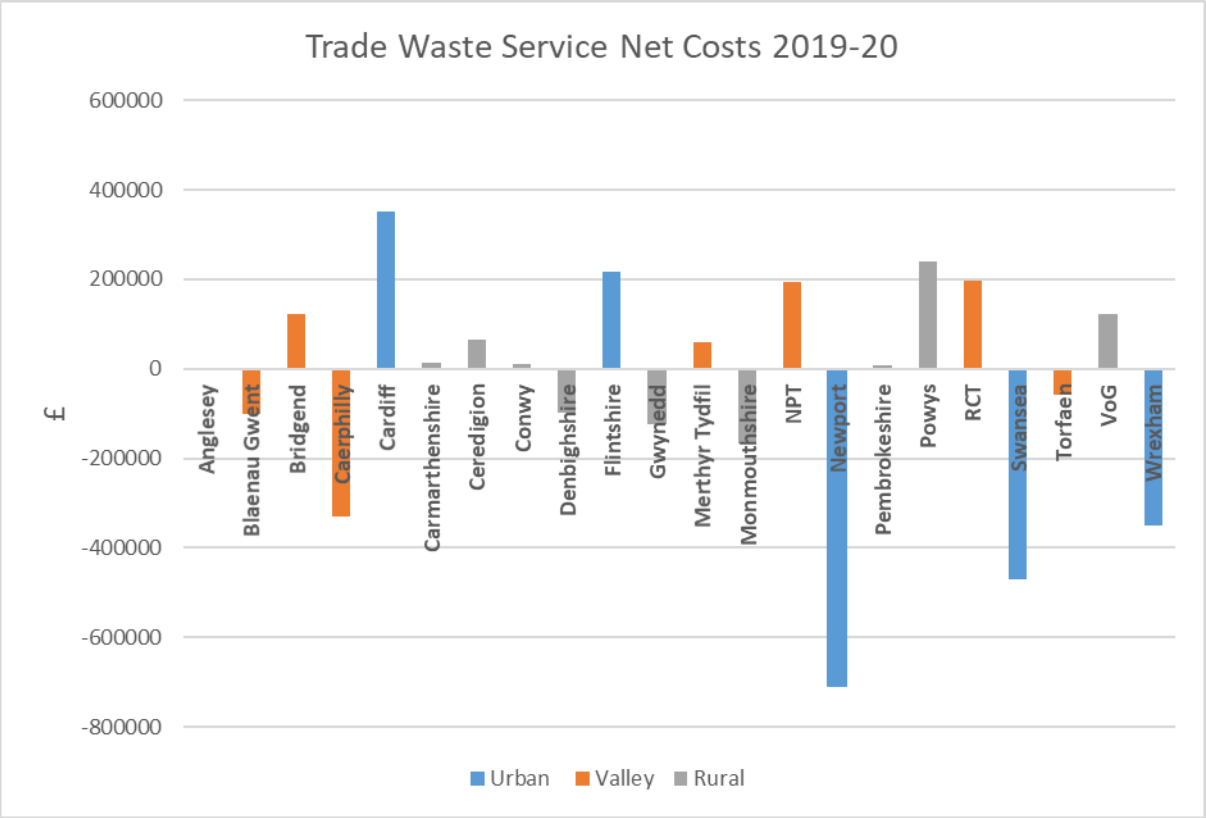


Figure 49 – Trade waste service cost[7]

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. In nine authorities income received from charging covered, or in some cases exceeded the costs of providing the service. Carmarthenshire saw a significant reduction in trade waste expenditure between 2018/19 and 2019/20 due to entering a new Teckal agreement for management of all trade/commercial waste collections.

Nappy and other AHP Collections

82. Currently fourteen authorities provide a collection service for nappies and other AHP that is separate from residual waste and other hygiene/clinical collections; six of these authorities (Blaenau Gwent, Bridgend, Carmarthenshire, Pembrokeshire, Rhondda Cynon Taf and Swansea) send the waste to be treated at Natural UK.

[7] More detailed information on Trade Waste services can be obtained from the Trade Waste Benchmarking Group which is facilitated by Waste Improvement Programme.

83. Costs per tonne associated with such services are shown in Figure 50. The cost per tonne remains high and varies significantly from £261per tonne - £629per tonne. Variation in costs could be due to a number of factors including staff and vehicles dedicated to the service, haulage costs, tonnages collected, in house versus contractor service costs etc.

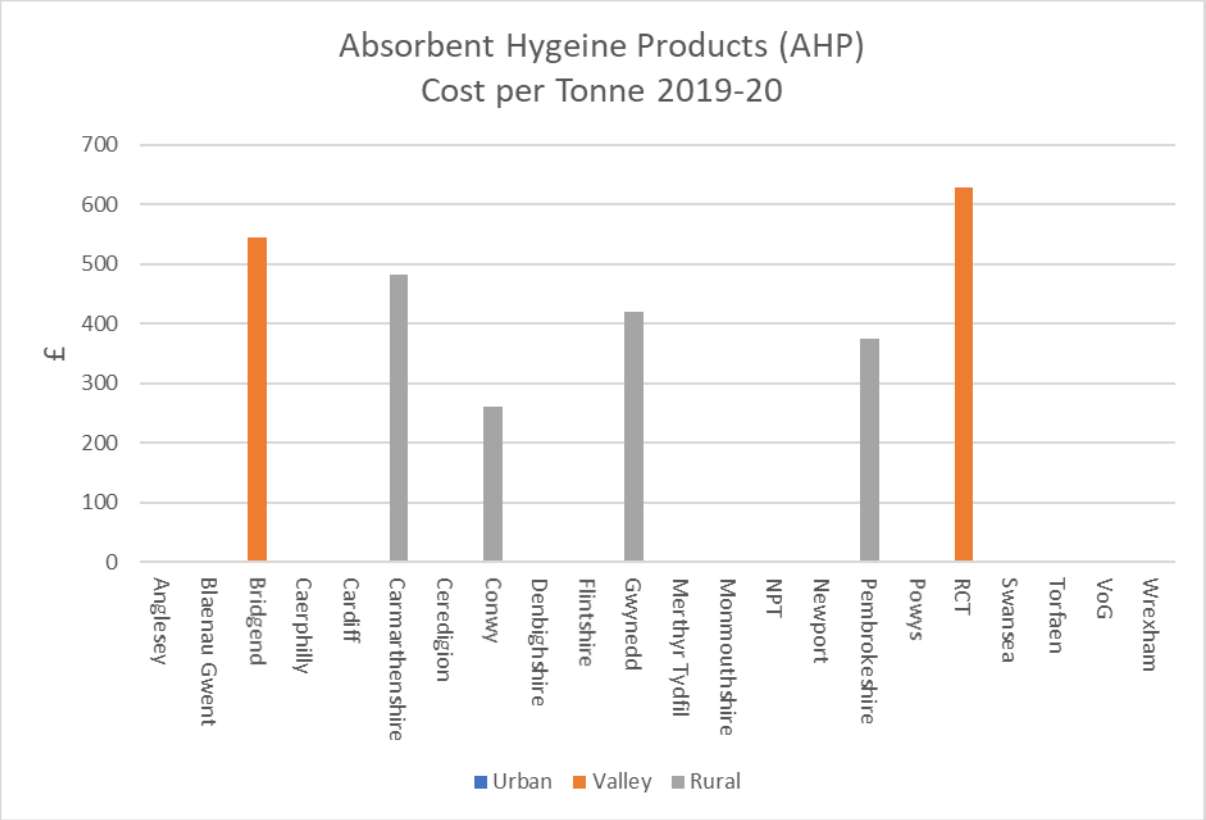


Figure 50 – Nappy/Absorbent Hygiene Products (AHP) Cost per tonne

Clinical Waste

84. Six authorities (Conwy, Flintshire, Gwynedd, Merthyr Tydfil, Swansea, and Wrexham provided clinical waste collection and these costs are included in Figure 51. These costs include clinical waste collections on behalf of Local Health boards as well as other separate hygiene collections.

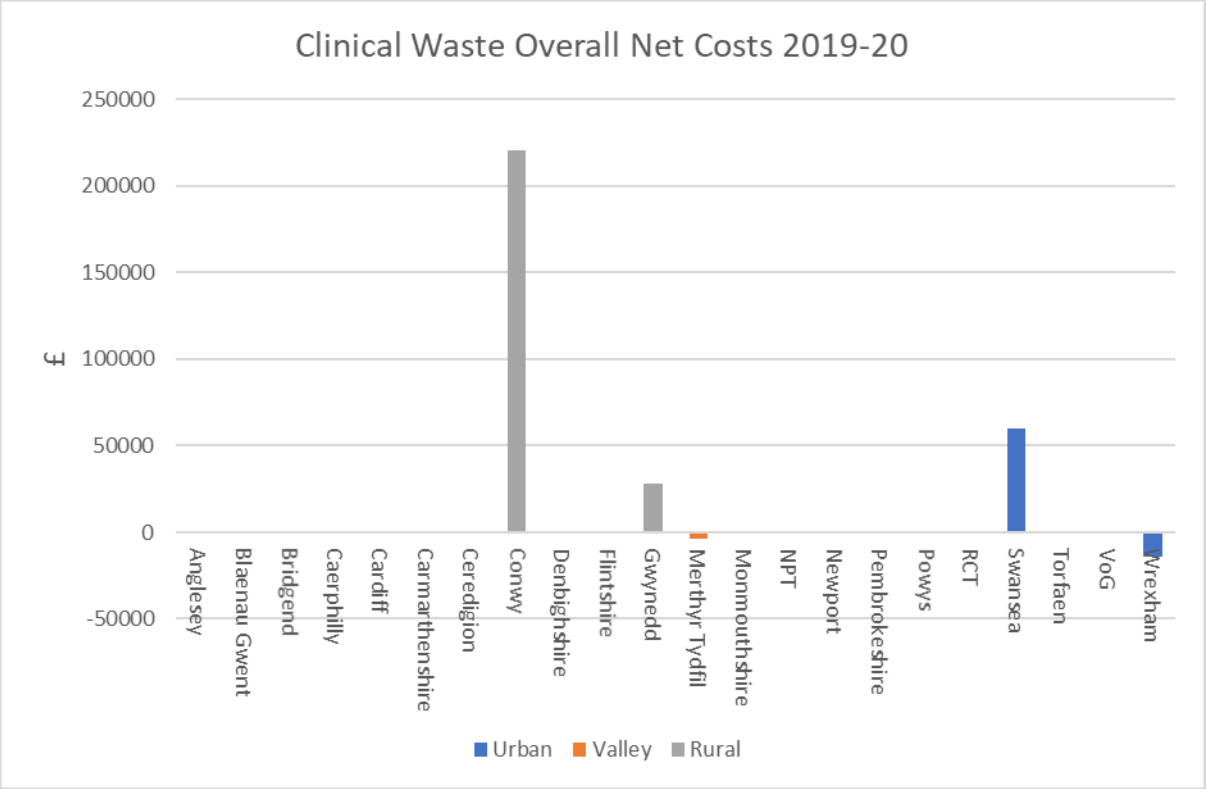


Figure 51- Clinical waste Costs

The Next Stage

1. The Annual Waste Finance Report is a quantitative report to track expenditure over time. Authorities also receive an individual financial summary report detailing their own authority's Waste Expenditure and their position relative to the other Welsh authorities.

2. These are intended to form the basis for further analysis in the benchmarking work. This year three benchmarking papers will be available to authorities with more detailed analysis of collection costs, primarily focusing on food waste services, dry recycling services and household waste recycling centres (HWRC) during 2019/20.

3. WLGA will continue to work with WRAP and Welsh local authorities on the Performance and Efficiency programme to support local authorities in identifying and prioritising the key strategies, policies, and interventions necessary to achieve high recycling and Circular Economy ambitions in the most cost-effective manner.