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Y Gweinidog Cyfoeth Naturiol
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Llywodraeth Cymru
Welsh Government

Eich cyf/Your ref
Ein cyf/Our ref

Alun Ffred Jones AM
Chair
Environment and Sustainability Committee
National Assembly for Wales

16th October 2014

Dear Alun

Inquiry into recycling in Wales – further information

Thank you for your letter of 2 October. I set out my answers to your questions, in the same order, below.

1. Householder preference

There are separate issues regarding householder preferences that need to be considered. The first is the principle of consulting residents about services and the second is the narrower legal issue as reflected in the draft guidance on separate collections.

It is good practice for local authorities to consult and listen to all of their residents and that householder preferences are considered when planning and delivering public services. It is indeed a requirement in respect of the improvement objectives set out in the Local Government (Wales) Measure 2009 (not the 2011 Measure). The public can often contribute new ideas that enable services to improve in effectiveness and efficiency.

Nevertheless, local authorities must ensure that their waste management services operate within the law. The Waste (England and Wales) Regulations 2011 give effect to our European Union obligations under Directive 2008/98/EC. That Directive requires member states to collect waste separately if it is technically, environmentally and economically practicable. The draft guidance to the 2011 Regulations states that householder preference will not be a defence to a failure to comply with that requirement of the Regulations. My officials are currently considering the responses to the consultation on the draft guidance.

Where services need to change to be compliant, local authorities will need to explain why and how to their householders in order to carry them with them in making changes. It is reasonable to expect a local authority to address low participation rates or ineffective engagement with their waste management services in order to do this.

Local authorities already do this across Wales as many services are changing, for example, in how residual waste is collected, and it is important for local authorities to be in regular and close dialogue with their residents. It is evident from current experience across Wales that householders are happy with kerb-side sort services where these are deployed and actively engage in using such services where they are efficiently run and properly explained.

The waste Collaborative Change Programme (CCP) is actively supporting local authorities to analyse the service options available to them, including the Welsh Government Collections Blueprint, in comparison to their existing services, in the specific context and local circumstances of their area and population, to ensure optimum cost and value for money and that councils meet their recycling targets in the future.

I can reassure the Committee that the Government is mindful of the legal duties imposed on local authorities under both the Waste (England and Wales) Regulations 2011 and under the Local Government (Wales) Measure 2009. It is not uncommon for more than one piece of regulatory law to apply to a given situation and we do not foresee any difficulty with a local authority complying with both. Local authorities can demonstrate compliance with the 2009 Measure by taking householder views and preferences into account in deciding how they comply with Regulation 13 of the 2011 Regulations.

2. Local authority collaboration

Local authorities and the Welsh Government are looking at ways in which we can collaborate to optimise the income from the sale of recyclables. There are also potential supply chain improvements we can make to ensure that materials collected in Wales are recycled and reprocessed here and available to Welsh manufacturers. This coupled with the proposals in the Environment Bill will make a major contribution to helping to deliver the Welsh Government's 'green growth' aspirations and create green jobs in Wales. While we consider the options the Waste and Resources Action Programme (WRAP) has recently started to help local authorities market their materials as part of its delivery of the Collaborative Change Programme (CCP). WRAP will report on the impacts of this work over the coming year.

3. Sustainable waste management grant (SWMG)

The Sustainable Waste Management Grant (SWMG) was introduced in 2001/02 to help local authorities meet the waste prevention and recycling targets set out in the then Welsh Government waste strategy 'Wise About Waste' published in 2002 (superseded in 2010 by 'Towards Zero Waste'). The new targets represented a radical change from the old way of waste collection and disposal and the sector's understanding of the technologies available and the new services which would be required was much more limited than it is today. Consequently there were relatively few conditions about service configuration attaching to the grant and the design of services was left to be determined at the local level.

Some conditions have been added in recent years to exclude certain types of technologies and practices which have been shown to not achieve good environmental or economic outcomes or to avoid unnecessary expense, for example by not allowing grant to be used to fund so-called 'dirty-MRFs' (mixed waste mechanical recycling facilities which tried to sort co-mingled waste including food, dry recycling and residual waste together) from 2006-07. The Welsh Government also indicated in 2007-08 that it would no longer support investment in MBT (mechanical and biological treatment).

The experience of and research into the different ways of collecting and sorting waste and recyclates over the last decade or so has given us a much clearer understanding of the options and best practice. This includes the financial and environmental costs and benefits

of different options. The trend has been towards more sustainable waste management services requiring earlier separation of wastes and separation of different materials for recycling earlier in the supply chain. There is also now a much greater emphasis on resource efficiency and the circular or closed loop economy as opposed to simply thinking about how we pick up and dispose of our waste, which gives additional weight to doing things differently. This development of ideas and technologies is reflected in the Collections Blueprint published by the Welsh Government in 2011.

There was a major increase in the level of SWMG in the period 2008–2012 in particular to support the introduction of separate collection of food waste from households. Now over 96% of Welsh households are covered by this and it is one of the factors which have helped to raise recycling levels in Wales so dramatically and to ensure Wales meets its EU targets for diversion of bio-waste from landfill. In turn it also helps Wales to avoid heavy infraction fines from the European Commission for failure to meet diversion targets.

Having published the Collections Blueprint, the Welsh Government's preferred way to date to promote its use has been to support local authorities in modelling its application in their areas alongside existing services and any other options they wish to consider, taking account of local factors. This collaborative approach is now starting to pay dividends with the first authorities coming through the options appraisal and business planning stages and moving to implement new services. The benefits can be seen in better environmental outcomes and reduced cost of services as services move towards separate collection.

The conditions of the SWMG were modified in 2012-13 to promote the approach of the Welsh Government's Blueprint:

"Priority must be given to source separated recycling and composting (and anaerobic digestion) collection schemes in order to deliver high quality materials to re-processors. This maximises the carbon emission reduction benefits of recycling and composting (and anaerobic digestion). It is the Welsh Government's preference that kerbside sort methods of kerbside recycling are used in accordance with the "Collections Blueprint" published on 10 March 2011."

In 2013-14 the conditions were strengthened to discourage local authorities that carried out separate collections from switching to a co-mingled approach:

"The Purpose of this Funding does not include requiring changes from 'co-mingled' recycling services to kerbside sort recycling services. Where a local authority currently provides a kerbside sort recycling service it must not use SWMG to change that to a co-mingled recycling service."

In addition, local authorities were advised in February 2011 during the then Environment Minister's meeting with local authority cabinet members that SWMG funding levels would be reduced incrementally over the coming years. This was a reasonable step in view of the level of savings indicated as achievable in the Collections Blueprint.

As I said when I spoke to the Committee, there is certainly scope for greater consistency in local authority waste management services. As well as helping to reduce potential confusion around what can and cannot be recycled, and how, it would bring benefits in procurement and help reduce costs.

Arrangements are currently being made for a review of the SWMG. I shall update the Committee with progress on this review as it proceeds. The review will be conducted in collaboration with stakeholders from local government.

4. Cost of recycling

The costs of recycling and wider wastes management are collated by the Welsh Local Government Association (WLGA) to facilitate financial benchmarking. The benchmarking reports for 2009-10 to 2012-13 are attached.

Yours sincerely

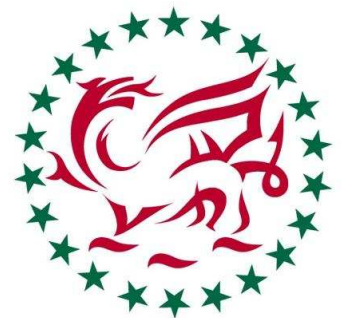
A handwritten signature in black ink, appearing to be 'C. Sargeant', with a period at the end.

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Minister for Natural Resources



Waste Finance Data Report 2009-10

January 2011



WLGA • CLILC

Executive Summary

1. Building upon the work previously carried out on 2008/09 financial data, 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 2009/10.
2. Data supplied has undergone a process of checking by WLGA, and where anomalous data was identified, corrections were made by local authorities¹. 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 and in the associated annex. Where possible, comparisons have been drawn with 2008/09 data.
3. 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 a role for the wider Waste Improvement Programme run by the WLGA in partnership with the WAG Transformational Change Programme.
4. It should also be noted that trends over time for some service aspects are difficult to identify as services are constantly evolving and changing e.g. LAs switching to alternate week collection half way through the year means that their data on residual collections will not be truly representative and the full impact of the change will not be demonstrated until the following financial year's reporting.

Key Findings

5. Gross expenditure on waste services in 2009-10 totalled £274,063,034. This represents an increase of £19,325,231, a rise of 7.59%.
6. Net expenditure on waste services was £240,069,117 which represents an increase of £13,356,736, a rise of 5.89%.
7. Overall net expenditure on household waste services² (Dry Recycling, Organic, Residual, CA and Bring) during 2009/10 was £223,585,296. This represents an increase of £11,075,923 over 2008/09 figure, a rise of 5.21%.
8. There has been a significant increase – 53% in expenditure on organic services both supporting by the “ring-fencing” in SWMG of food waste

¹ This does not mean that all inaccuracies have been removed – there is still further work by LAs and WLGA on improving data collection and reporting

² 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

collections and additional investment and prioritisation by local authorities. This investment has seen an increase of 28,147 tonnes collected and made a major contribution to recycling targets and landfill diversion.

9. There has been a decrease in expenditure in residual waste at a time of rising landfill tax costs. This demonstrates the benefits of increased recycling and composting. In addition investment in residual waste activities now only form 49% of total budget – this represents a 5% reduction on the 2008-09 figures and demonstrates that a shift to focus on providing recycling services has occurred.
10. There has also been a reduction in bring site expenditure but this is potentially offset with increased expenditure in kerbside and household waste recycling centre provision.
11. Overall recycling and composting rates have increased from 35.85% in 2008/09 to 39.27% in 2009/10.
12. The table below demonstrates the differences in expenditure on the household service elements:

	08/09	09/10	% change
Dry recycling	£39,862,853	£42,814,326	+7.4%
Residual waste	£114,553,997	£110,458,224	-3.58%
Organic waste	£20,459,474	£31,336,775	+53.17%
CA/HWRC	£34,281,721	£35,751,300	+4.29%
Bring	£3,351,328	£3,224,670	-3.78%

2008/09 Benchmarking

13. WLGA undertook a process of detailed benchmarking of 2008/09 waste finance data during 2010, covering two topics: Residual Waste Collection and Civic Amenity/Household Waste Recycling Centres.
14. Main Findings were:
 - Wide variation in waste collection costs across Wales
 - Waste collection costs strongly influenced by Labour and Transport costs
 - Significant savings could be realised from optimisation of residual waste collection routes.
 - Wide variation in CA site costs and performance

- Improving diversion at CA sites could have significant impact on overall recycling rates

Recommendations made have been included in Wales Audit Office report. Detailed benchmarking of 2009/10 finance data will be undertaken by WLGA during 2011.

INTRODUCTION

15. The information in this report is the continuation of a project undertaken by the WLGA which started in February 2008. Until 2007/08 local authorities reported their waste management financial data in line with individual practices. Whilst these practices followed CIPFA's Best Value Accounting Code of Practice (BVACOP), 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) has had limited impact in identifying transferable efficiencies.

16. The WLGA engaged this process for three main reasons:

- To provide annual finance reports on waste management undertaken by local authorities. A significant proportion of recycling activities are funded through Sustainable Waste Management Grant (SWMG) and WAG rightly wants to identify whether this is being used to its greatest efficiency.
- Cost modelling for the review of the national waste strategy. This will be needed to provide a baseline for financial planning for the delivery of Towards Zero Waste.
- To allow for greater comparisons between authorities; allowing the sharing of best practice, bringing service improvement and efficiencies.

17. 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 WAG 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.

18. Building upon the work carried out on 2008/09 data, several refinements to the data gathering process have been implemented. Guidance notes for each individual question to be entered in Waste Data Flow (WDF) were updated and were linked directly to the WDF system to allow instant access to the information during the data entry process. Modifications to WDF allowed data to be collected for each individual element of organic waste services (food only, green only and combined food and green collections). Additional refinements to WDF have enabled more accurate recording of mass data allowing data to be displayed on a cost per tonne basis as well as on a cost per household basis as seen in the 2008/09 report. In addition, household numbers and collection frequency data has been updated to reflect the changing complexion of collection services offered by local authorities in Wales.

Economy and Efficiency – making use of national data locally – Benchmarking

19. The data presented in this report feeds in to the national programme of benchmarking. The County Surveyors Society (CSS) Waste Sub-group, consisting of heads of service, will select key areas for analysis which meet the strategic needs of local authorities. The WLGA's Waste Improvement Programme will coordinate the qualitative analysis of the selected areas and develop working documents with the Wales Audit Office (WAO) for each.

20. Using the 2008/09 data as a foundation, two areas of expenditure were chosen by CSS to be analysed in greater detail. A representative sample of eight local authorities was chosen to undergo further data analysis on Refuse collection and Civic Amenity costs. Following a discussion of the preliminary results from the benchmarking of residual waste collection costs, it was decided, in conjunction with CSS, that additional data relating to refuse collection expenditure would be sought from all 22 local authorities in order to further inform the benchmarking process.

21. Results of analysis were circulated to local authorities and CSS in working papers authored by the WLGA. The findings and recommendations made have been incorporated in a WAO report as per agreed benchmarking process. Progress made by local authorities against recommendations made will be monitored by WAO who will provide an annual progress report to ministerial programme board.

22. Reports detailing main findings and recommendations made are available from WAO, with detailed findings and related data available in working papers from WLGA.

23. Key findings and recommendations are summarised below:

Residual Waste Collection:

- Wide variation in waste collection costs across Wales
- Waste collection costs strongly influenced by Labour and Transport costs
- Significant savings could be realised from optimisation of residual waste collection routes.

Civic Amenity Sites/Household Waste Recycling Centres:

- Wide variation in CA site costs and performance
- Costs linked to number of sites provided and total material throughput.
- Improving diversion at CA sites could have significant impact on overall recycling rates
- Performance of sites should be reviewed by local authorities and long term plans put in place to improve performance at failing sites.
- Local authorities should evaluate whether rationalisation of sites could be achieved without reduction in overall throughput and performance.

Benchmarking 2009/10 data

24. In conjunction with CSS it has been decided that the WLGA's waste improvement team should look at dry recycling services in more detail as part of the 2011 benchmarking project.

Detailed Findings

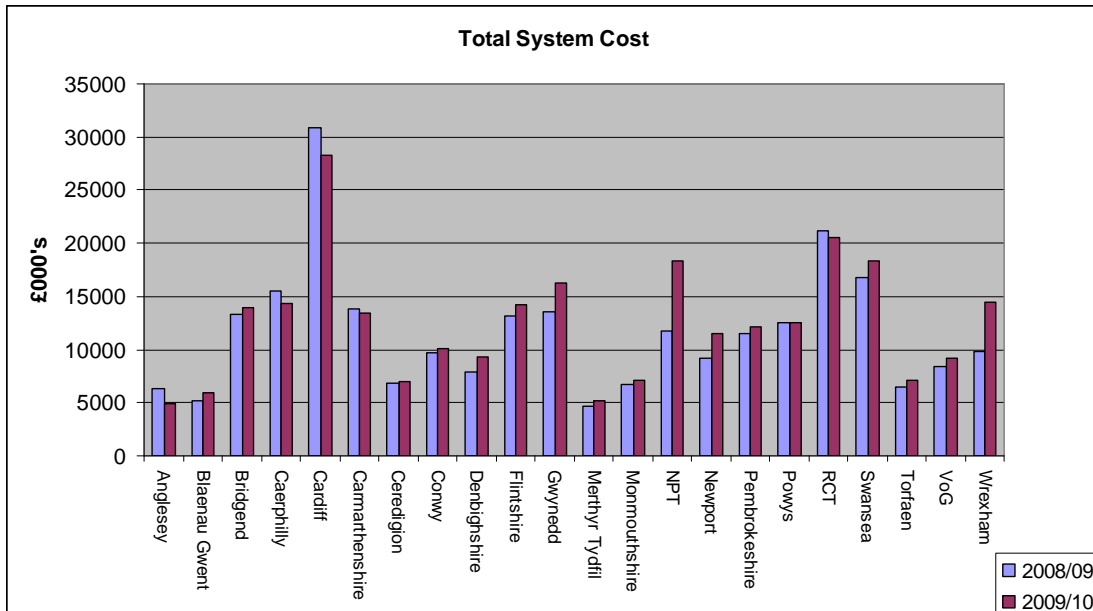
Total Service Data

25. From the data it can be seen that overall expenditure on waste services during 2009/10 was £274,063,034 (£240,069,117 net of income). This represents an increase of £19,325,231, a rise of 7.59%.

26. Sustainable waste management grant allocated to local authorities totalled £59,000,000 during the same period. An increase of £9,000,000 over the 2008/09 allocation.

27. Graph in Fig 1 Below shows total expenditure on Waste services by each local authority in Wales for financial years 2008/09 and 2009/10.

Fig. 1 – Total System Costs



28. 16 LAs have demonstrated an increase in expenditure, 5 LAs showed a reduction and one LA has reported the same amount of expenditure between the two financial years. The data collection exercise does not determine "why" these changes have been made, but it is intended, via the CSS meetings process to undertake a high level analysis as to why these differences have occurred.

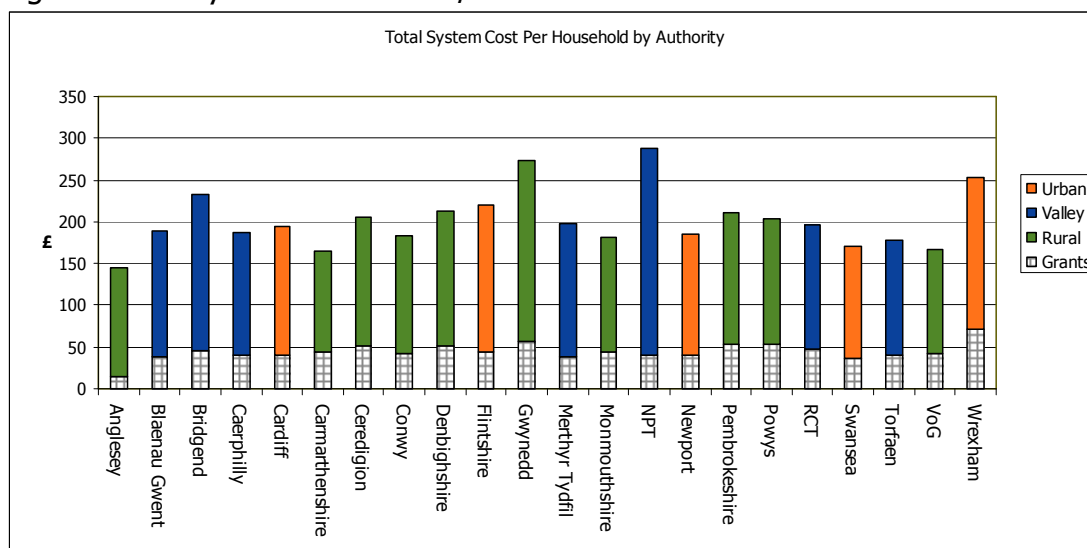
Use of Grants³

29. The graph in Fig 2 Below shows the allocation of Grants made by local authorities against total expenditure for financial year 2009/10.

³ Grants = Sustainable Waste Management Grant plus other grants received e.g. procurement support, SCIF, RCAF, WAW funding

Contribution made by grant is represented as 'hatched' portion of bar. Expenditure is shown on a cost per household basis.

Fig 2 – Total System Costs 2009/10

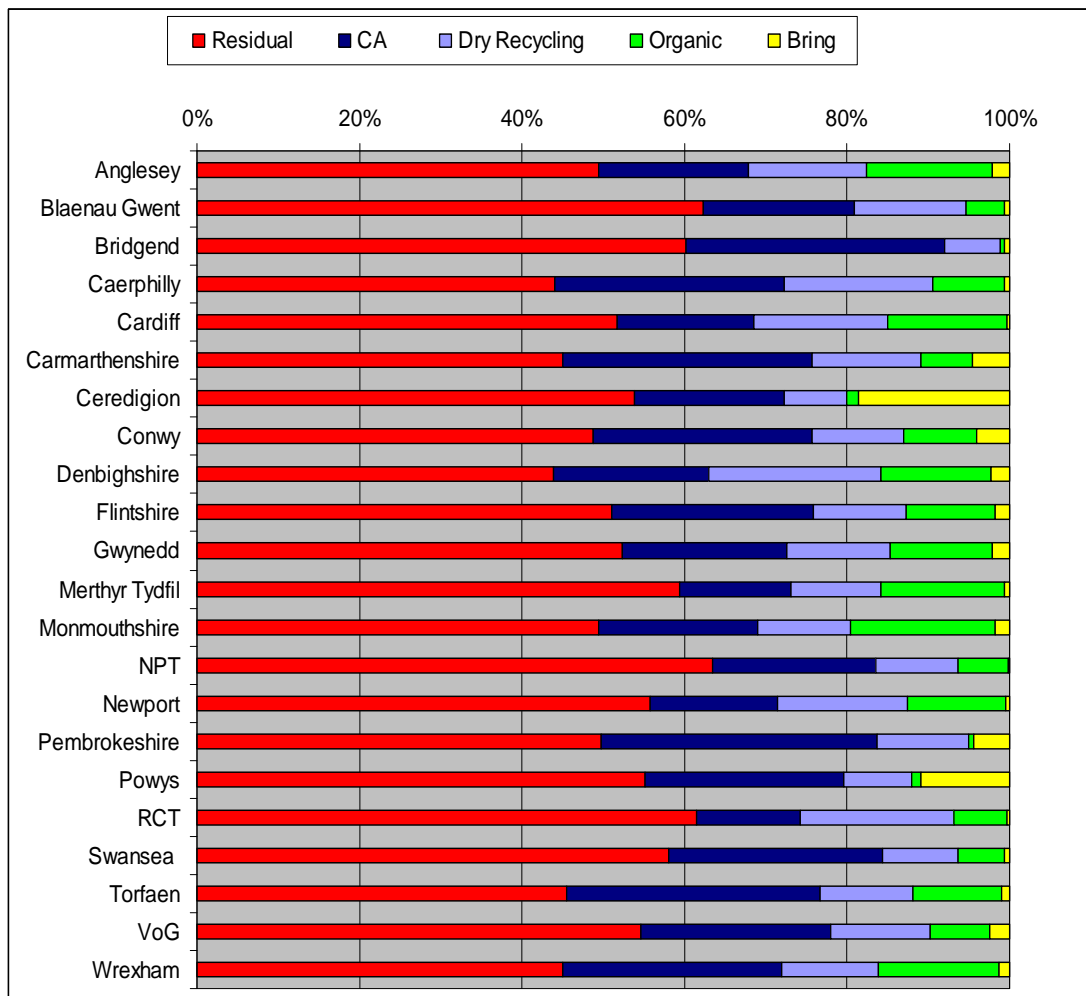


30. This graph demonstrates that per household there is quite an even distribution of the amount that grant supports total expenditure. One LA does stand out with a lower contribution of grant and the WLGA will work with that authority to determine why.

31. The majority, though not all, of these costs result from the provision of services directly to the householder: Dry Recycling, Organic Waste, Residual Waste, CA and Bring sites.

Waste Collected by LAs

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



N.B. above does not include trade, clinical, bulky or other MSW.

Household Waste Service Costs

33. The majority of expenditure by local authorities on waste management results from the provision of waste services to the householder. The following data compares expenditure on household waste services across Welsh local authorities. *The Household Waste Service cost can be defined as the aggregated total of cost associated with Kerbside dry recycling, Kerbside food waste, kerbside green waste, civic amenity sites, 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.

34. 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 analysis will be required to determine whether the type of LA impacts upon cost. 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 offered, expenditure net of income received is shown in the graphs.

35. It is not possible to differentiate between SWMG and other types of grant when allocated against service area in WDF. Therefore grant contribution shown in the following graphs includes other grants in addition to SWMG.

36. Total grants allocated add up to £60,638,583. SWMG in 2009-10 was £59,000,000⁴.

Fig 3 - Total household waste service cost per household

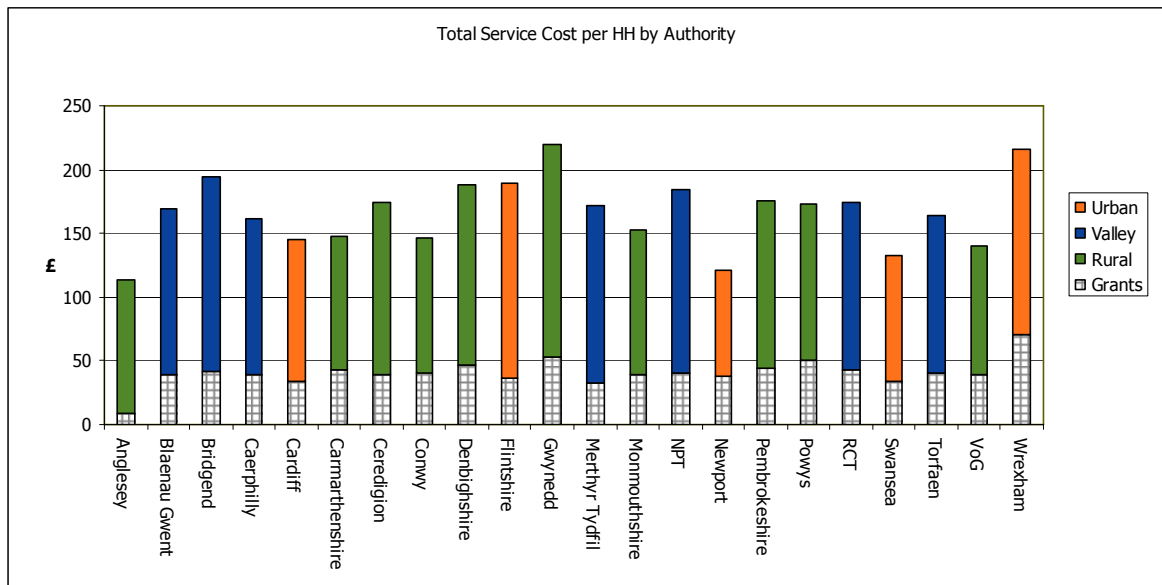
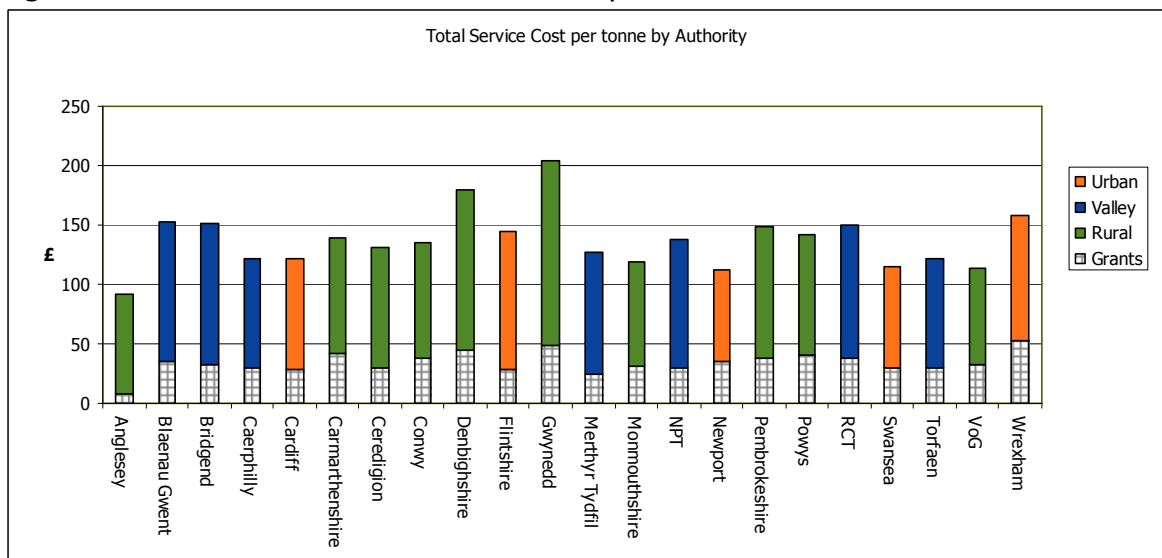


Fig 4 – Total household waste service cost per tonne



⁴ It is recognised that there are issues with how grants are allocated and reported within Waste Dataflow making analysis and actual apportionment of other specific grants to activities difficult. This will be rectified throughout the 2010-11 project

37. Overall expenditure on household waste services during 2009/10 was £223,585,296. This represents an increase of £11,075,923 over 2008/09 figure, a rise of 5.21%.

Recycling

38. 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 axis on right hand side of graph.

Total dry recycling service cost

39. Figs 5 & 6 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 authority type and contribution made by grant is retained.

Fig 5 – Dry recycling service cost per household

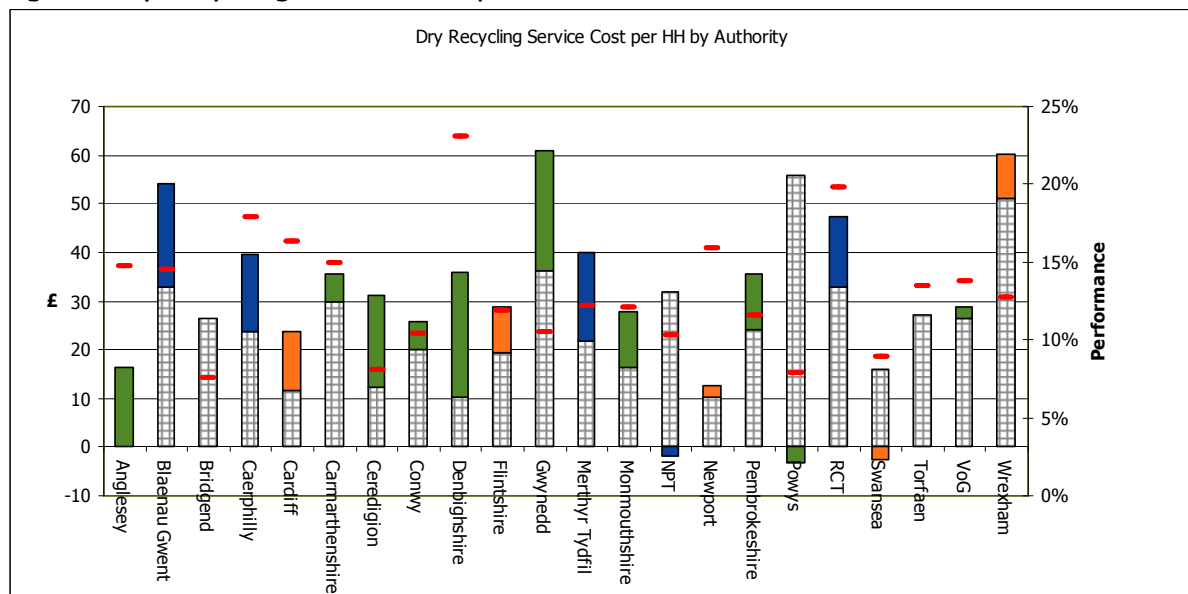
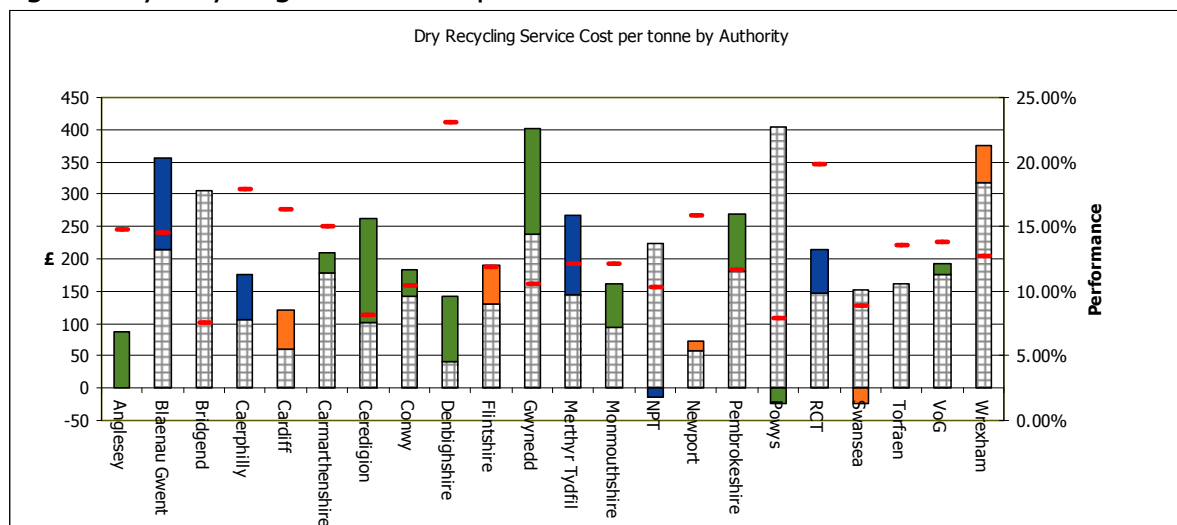


Fig 6 – Dry recycling service cost per tonne



What are the graphs telling us?

40. Both cost and performance vary significantly. Ideally, services should deliver high performance, in terms of mass collected, whilst exhibiting lowest cost possible. For example, Newport’s service collects 10,670t of dry recycle, which equates to 15.89% of total MSW, placing their performance within the highest quartile. The cost of the service is the lowest across the group at £12.77 per household. What we want to see is a high plotted red line and a low as possible expenditure bar – the wider the gap the more effective and efficient the service.

41. Three authorities display both positive and negative values on the above charts. This is due to grant attributed to service being greater than the net cost of the service. Grant is shown as positive value, with the resultant service cost shown as a negative value (Gross service cost less grant and income < 0). For example, Swansea’s gross service cost of £1,899,900, less income of £447,000 equates to a net service cost of £1,452,000. This is less than the £1,727,000 attributed to service from grant.

42. From the core data it is also possible to compare 2009/10 overall dry recycling service expenditure with that of 2008/09, in addition it is also possible to compare the grant contribution to dry recycling services over the same period:

	08/09	09/10	% change
Dry recycling	£39,862,853	£42,814,326	+7.4%
Grant	£29,776,609	£31,207,005	+4.8%

43. It can be seen that approximately three quarters of expenditure on dry recycle collection is supported by grant funding.

Collection

44. From the data it is possible to plot the individual component costs of the service. Graphs in Figs 7 & 8 show the dry recycling collection cost on both a per household and per tonne basis. Collection frequencies vary across the group and as frequency of collection is likely to affect collection cost, colour coding shows whether authorities collect recycle on a weekly or fortnightly basis. However because many LAs introduced alternate week collection sometime during 2009-10 until a full financial year of activity has been reported we will not be able to accurately monitor trends and differences. Costs are net of any income.

Fig 7 – Dry recycle collection cost per household served

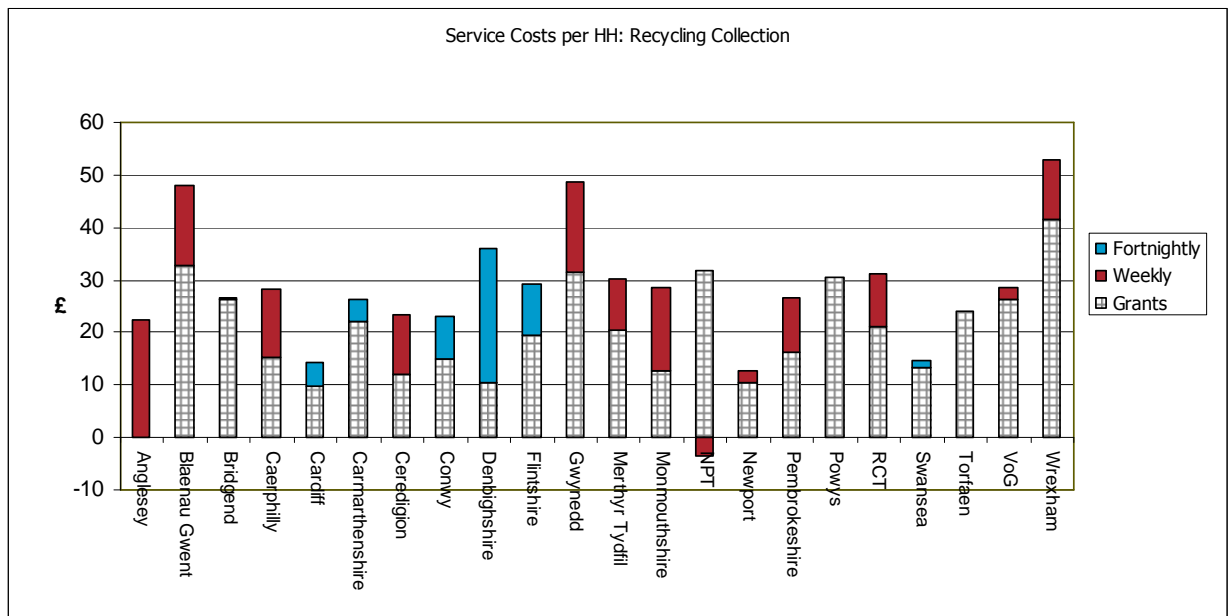
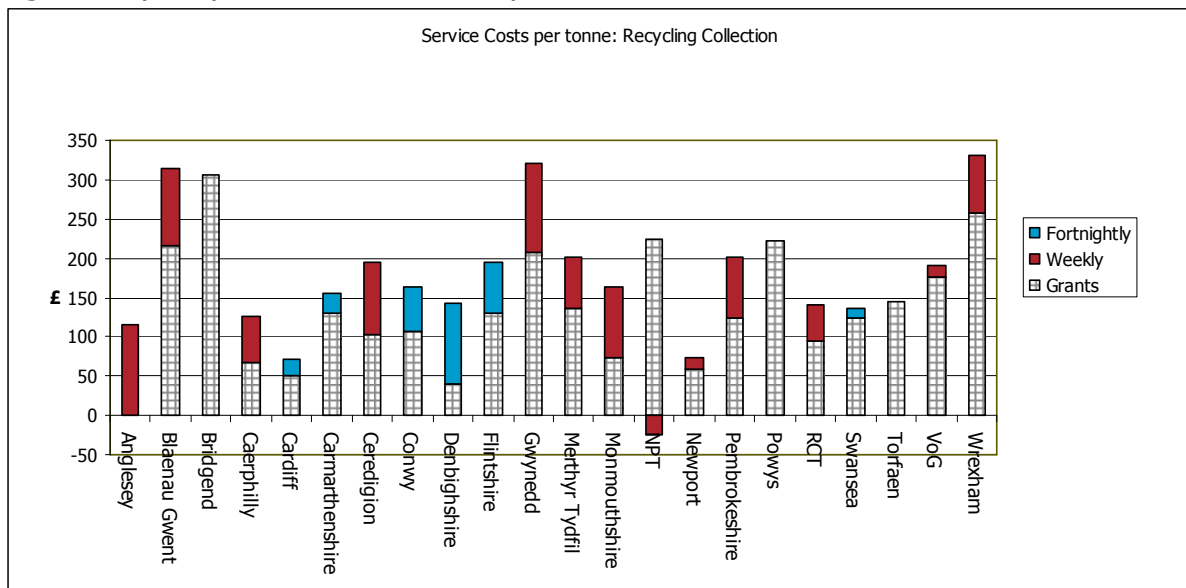


Fig 8 – Dry recyclate collection cost per tonne collected.



45. As in previous graphs, negative values result from grant allocated to service being greater than net cost of service.

Transfer costs

46. According to data provided, few authorities incur costs from transfer of recyclate following its collection. 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 included in the annexe.

Treatment costs

47. Figs 9 & 10 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.

Fig 9 – Dry recycling treatment cost per household served

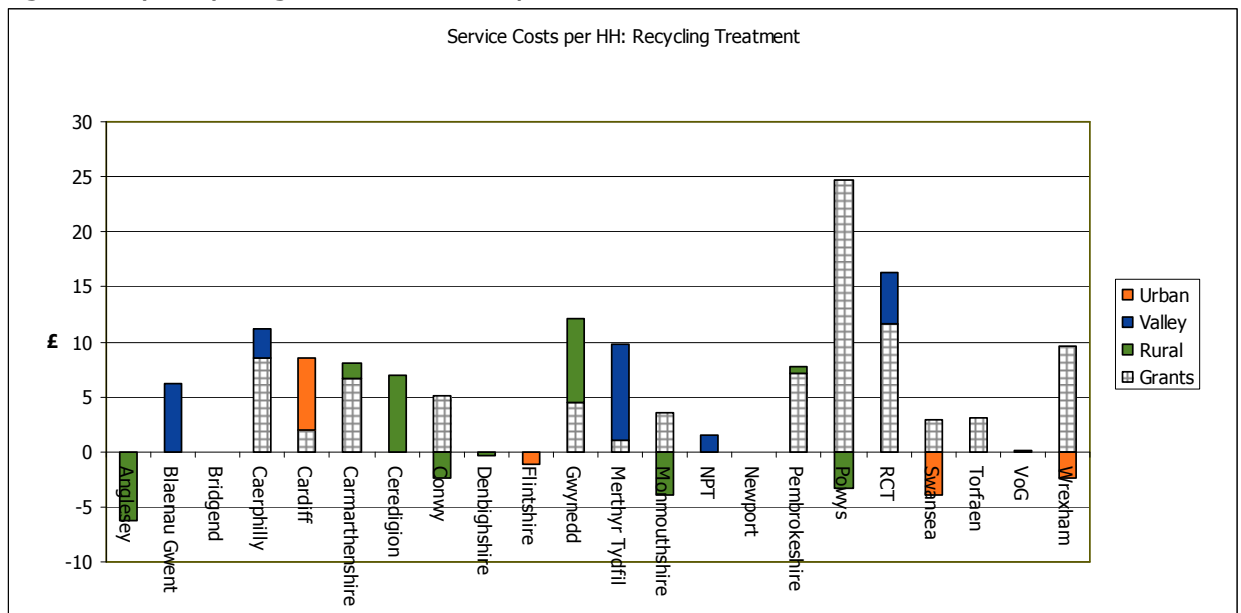
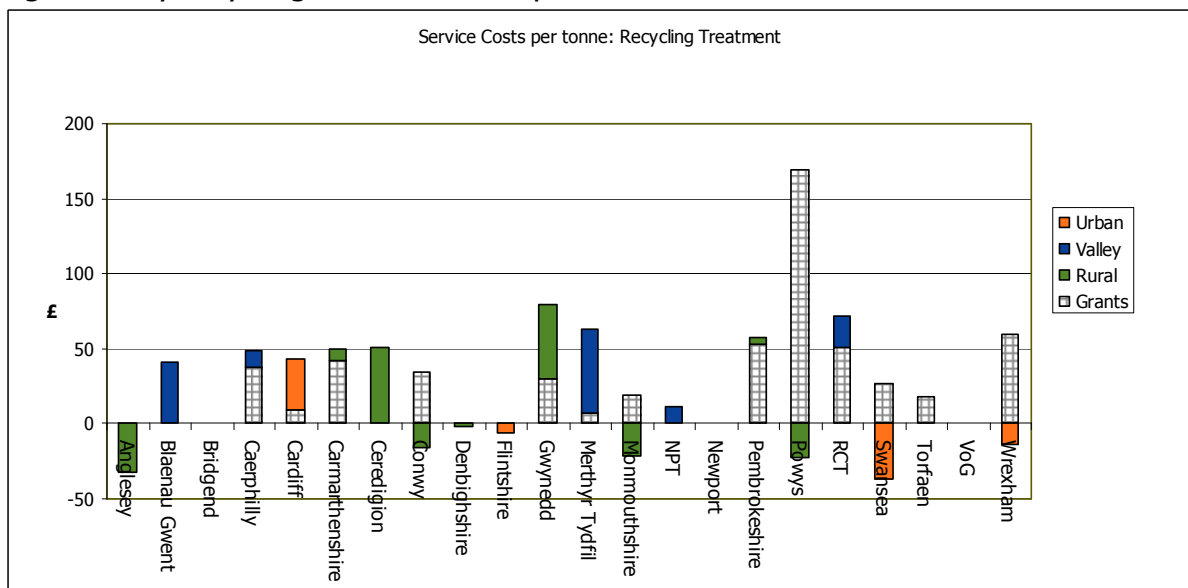


Fig 10 – Dry recycling treatment cost per tonne



48. It can be seen that there is a wide variance 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)

49. A number of authorities exhibit both positive and negative costs on the graphs shown. This occurs when grant allocated against treatment is greater than the net cost of treatment. Positive value shown represents grant allocated, whilst negative figure shown is the net treatment cost when both grant and income from sale of recyclate are subtracted from gross cost.

Income

50. Charts shown in Figs 11 & 12 Shows the amount of income received from the sale of collected materials on a per household served and per tonne basis. Authorities which show no return for income received have their separation conducted by a third party: in this case the handling fee is generally net of any income received from the sale of materials.

Fig 11 – Income from sale of dry recyclate per household served

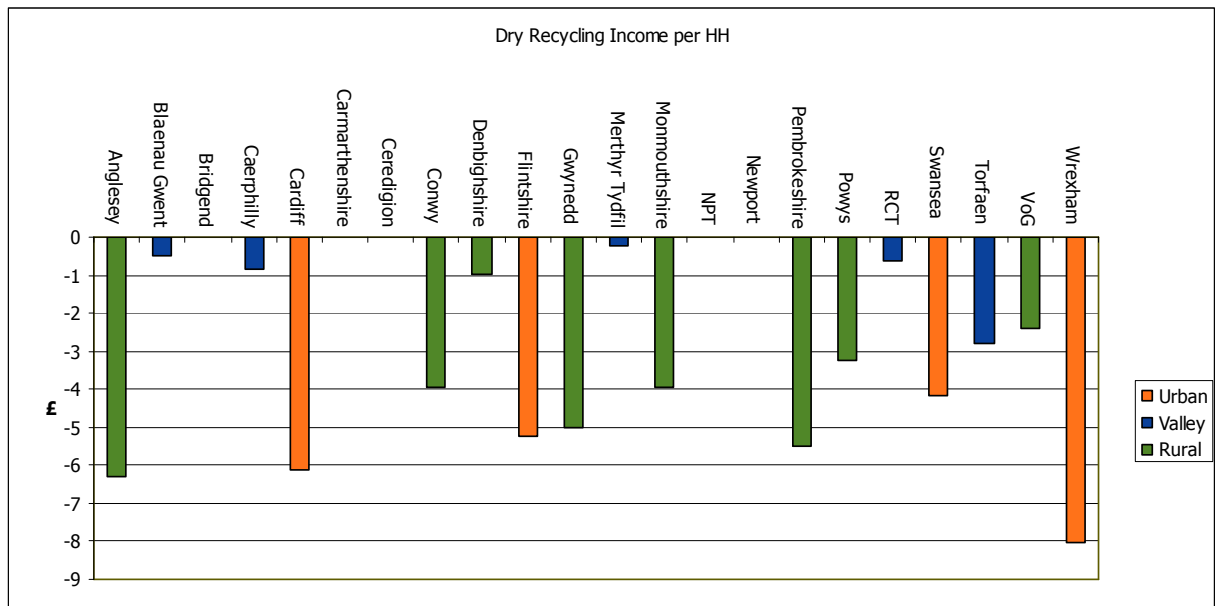
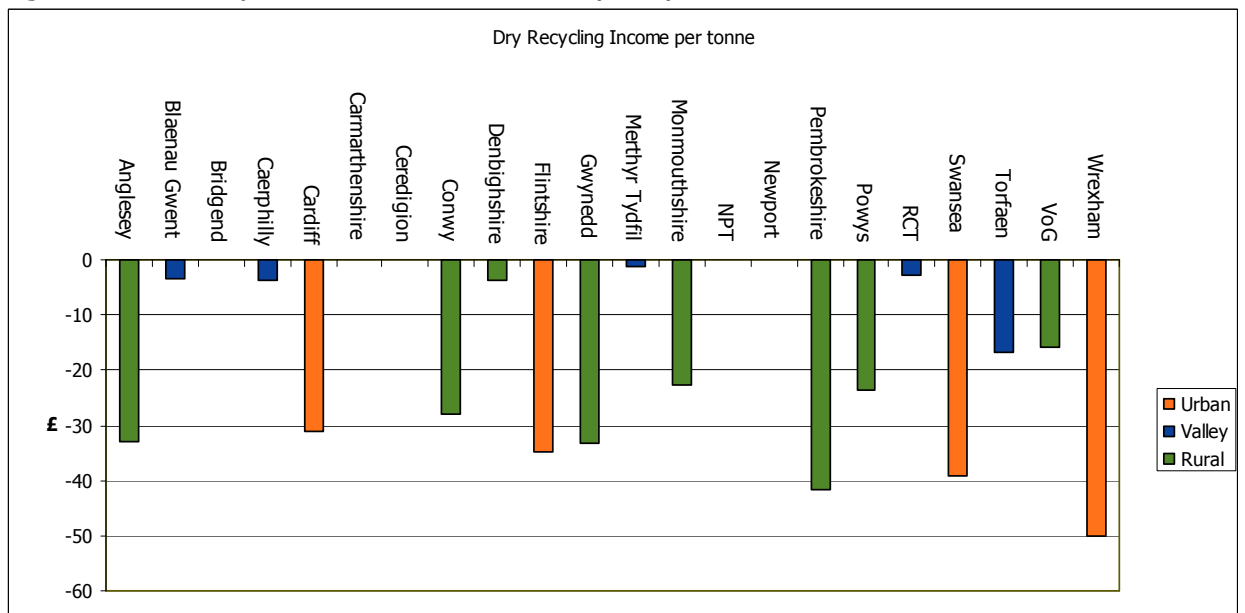


Fig 12 – Income per tonne from sale of dry recyclate



Organic Waste Services:

51. As with recycling, performance is cross referenced against cost in the following graphs. Performance data shows the mass of waste collected by the service as a percentage of total MSW.

52. In a change from how the data was recorded for 2008/09, where the cost of organic collections was grouped under a single heading, 2009/10 data is split under three headings covering food-only collections, green-only collections, and co-mingled green and food collections.

Food waste only

53. The total cost of providing food waste collection are shown in Figs 13 (cost per household served) and Fig 14 (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.

Fig 13 – Food waste service cost per household served.

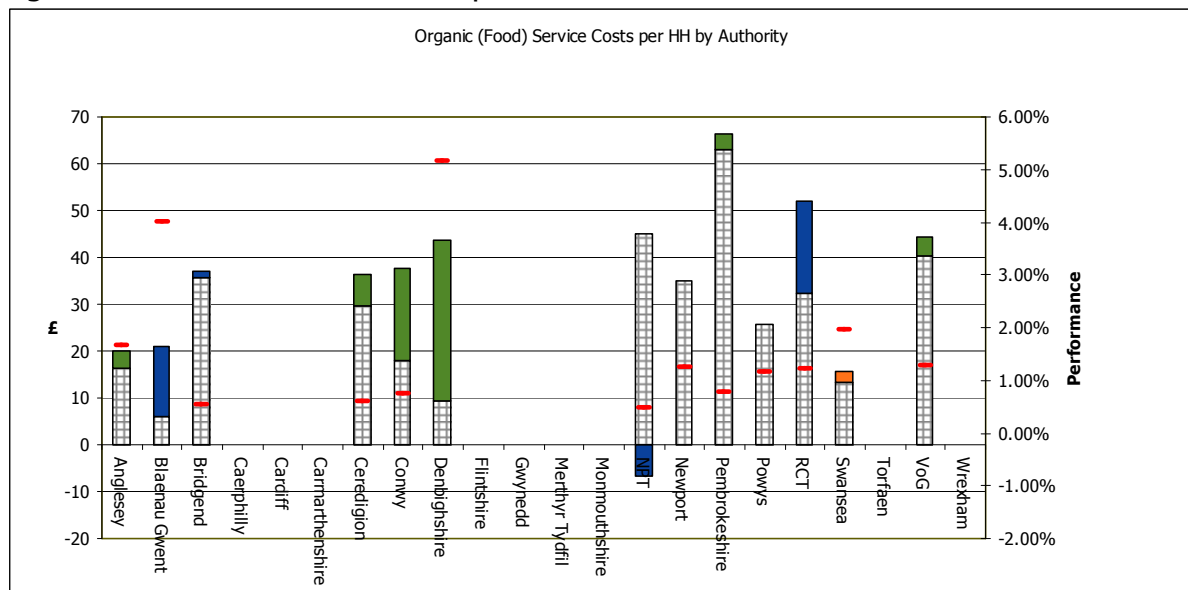
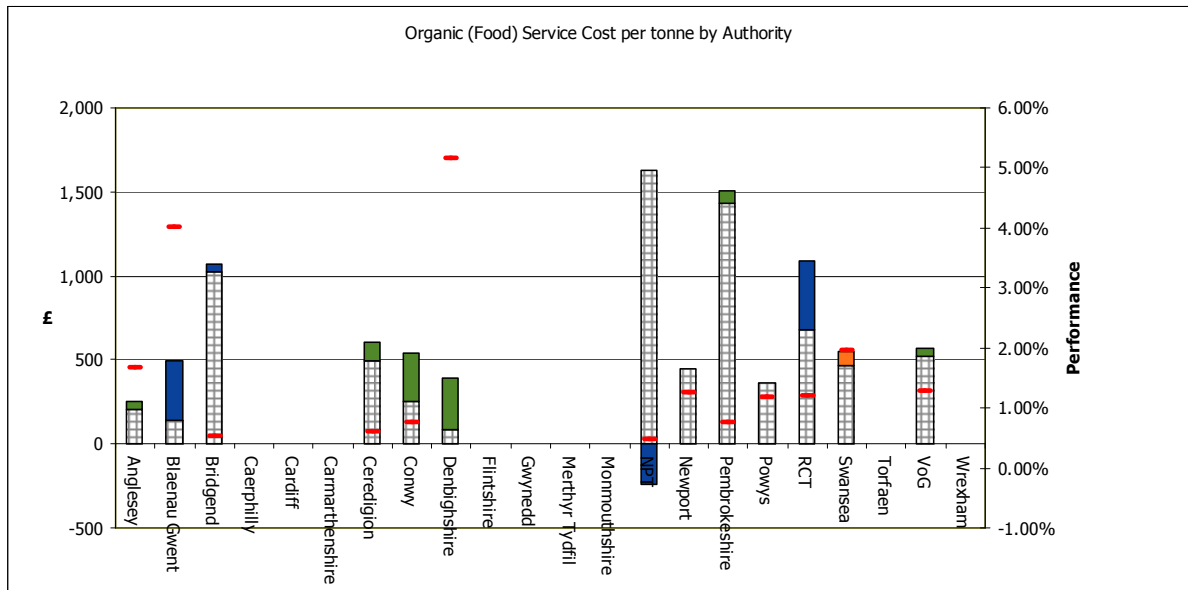


Fig 14 – Food waste service cost per tonne



54. Both costs and performance vary significantly across the group. A wide variation can be seen in yield as % of total MSW, from around 0.5% for Neath Port Talbot to over 5% for Denbighshire. Service operated by Denbighshire operates at a low cost relative to the group, whilst also collecting the largest amount of food waste as a proportion of total MSW.

Green waste only

55. The total cost of providing green waste collection are shown in Figs 15 (cost per household served) and Fig 16 (cost per tonne collected). The performance, in terms of mass of green waste collected as proportion of total MSW is shown on the right-hand axis and can be seen as the red line on the chart.

Fig 15 – Green waste service cost per household served.

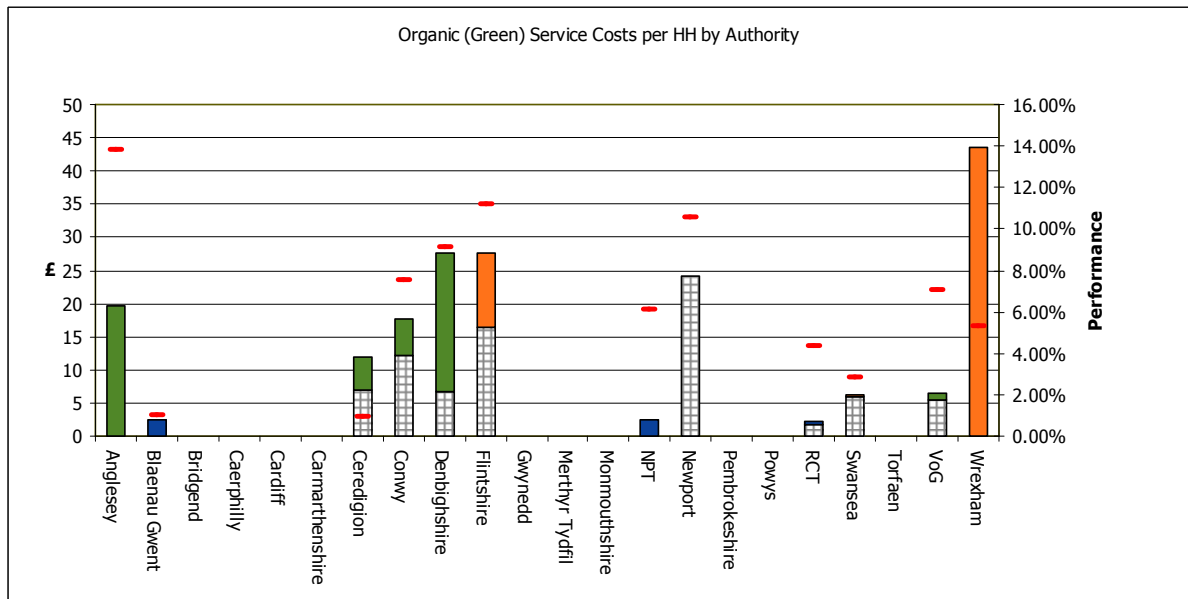
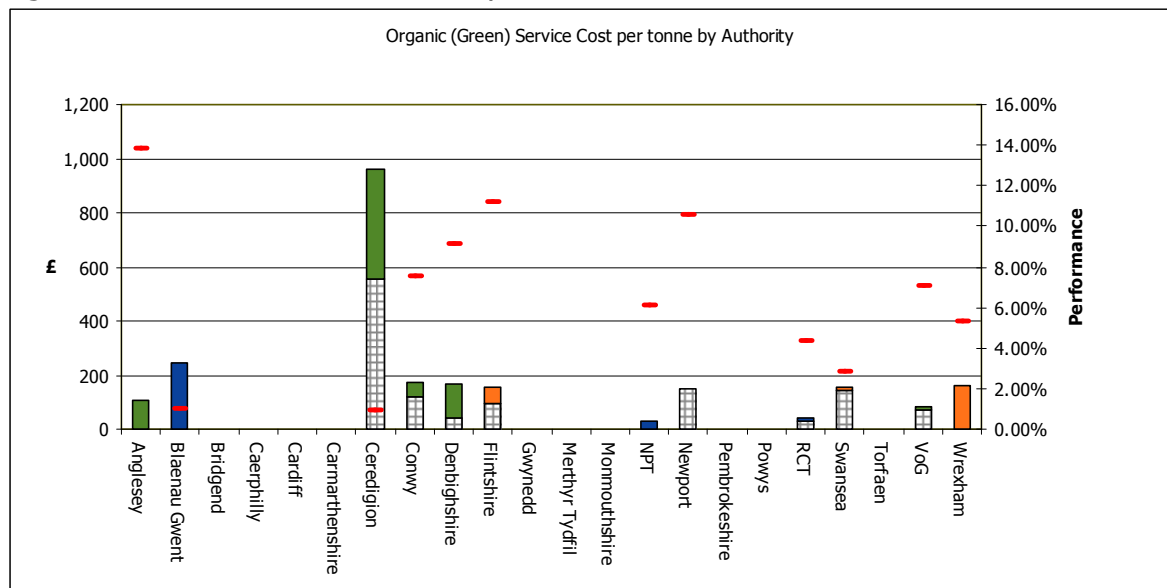


Fig 16 – Green waste service cost per tonne

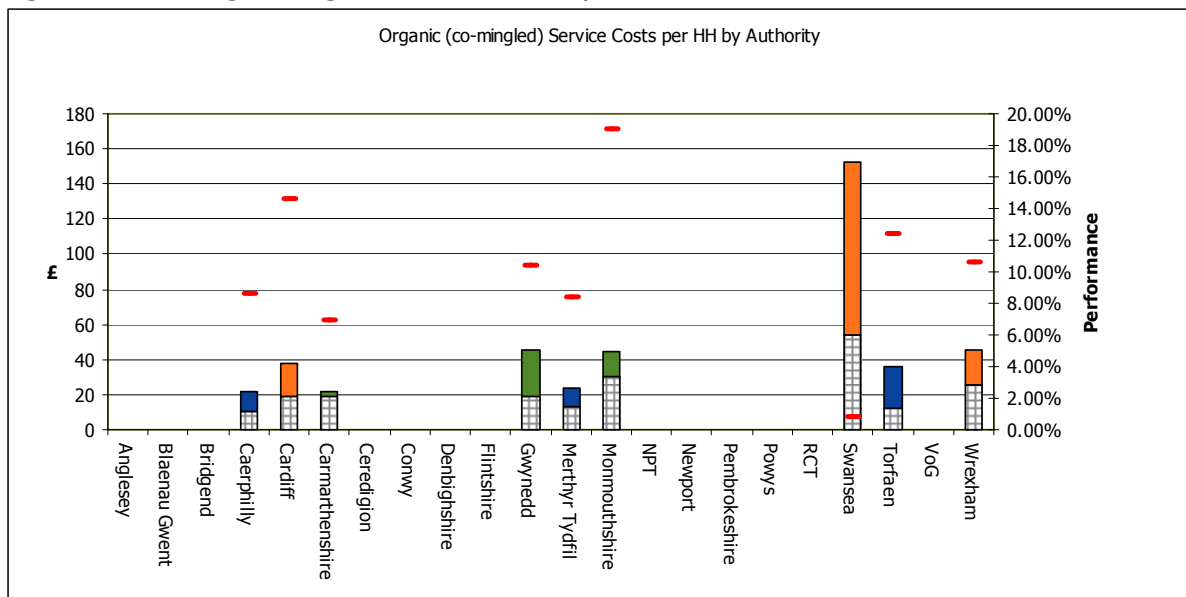


56. Again, a significant variance in both costs and performance can be seen across group. An interesting example of which can be seen in Flintshire’s data. Performance data indicates that service is delivering high yield of material as a proportion of MSW (9,249 tonnes 11.26% of total MSW). Costs, whilst appearing relatively high on a cost per household basis (£27.49) are around the median level when expressed as a cost per tonne (£155.41) as a result of the higher yields seen.

Co-mingled food and green waste

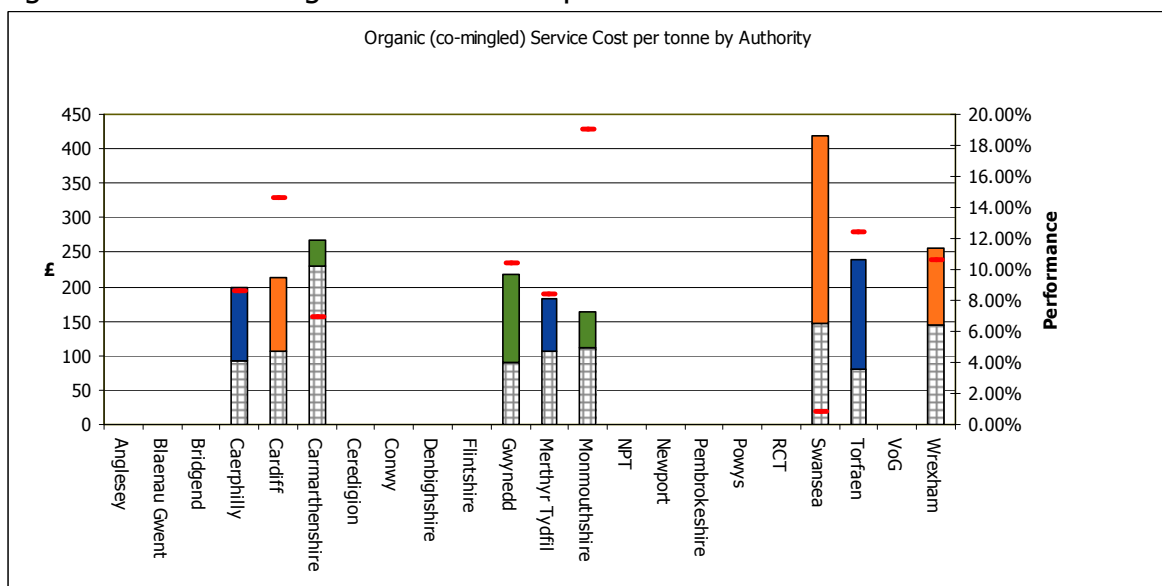
57. Some authorities co-collect the food and green waste fractions. The total cost of providing this combined food and green waste service are shown in Figs 17 (cost per household served) and Fig 18 (cost per tonne collected). The performance of the service, as mass collected as % of total MSW, is shown on the right-hand axis and can be seen as the red line on the chart.

Fig 17 – Co-mingled organic service cost per household served.



N.b. Merthyr Tydfil CBC collect food and green waste segregated in different compartments on the same vehicle. Treatment of both fractions carried out separately with separate costs recorded. However as collection costs cannot be disaggregated, whole service is shown in graphs under combined collection.

Fig 18 – Combined organic service cost per tonne



58. For all organics collections it can be seen that there is a wide variation in costs across the group. This is likely to result from the fact that many services are being delivered as trials or as part of a phased expansion programme where costs may be artificially higher than if they delivered more extensively. This variation is most pronounced when comparing costs on a per tonne basis. Low yields from new services, coupled with elevated start up costs result in some authorities exhibiting very high service costs. It is expected that as these services mature, yields will improve and unit costs will decrease.

59.If all costs associated with various organic collection services are aggregated, it is possible to compare total expenditure in 2009/10 with that of 2008/09:

	08/09	09/10	% change
Organic	£20,459,474	£31,336,775	+53.17%
Grant	£10,397,259	£18,419,297	+77.16%

60.2009/10 has seen a significant increase in expenditure on organic waste services over the previous financial year.

Collection costs

61.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.

Food waste only

62.The food waste collection cost is shown in Figs 19 (cost per household served) and Fig 20 (cost per tonne collected). Colour coding denotes frequency of collection.

Fig 19 – Food waste collection cost per household served.

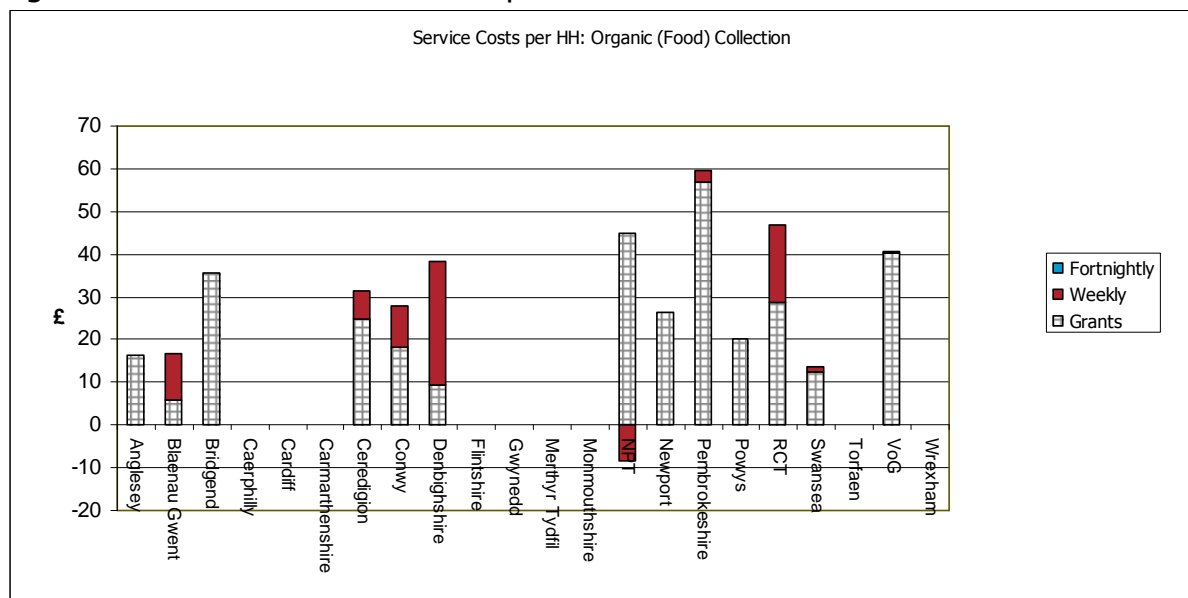
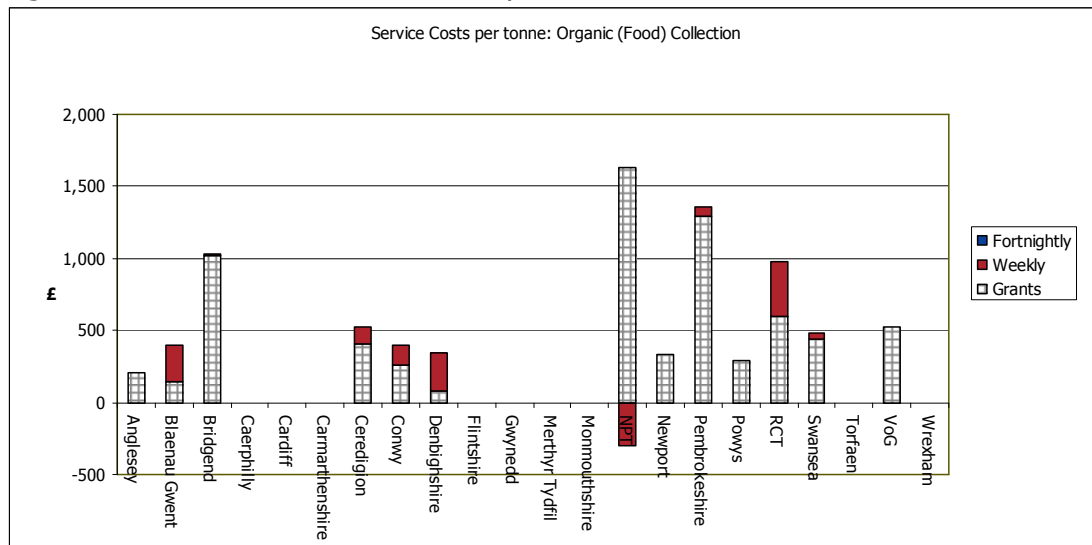


Fig 20 – Food waste collection cost per tonne



Green waste only

63. The green waste collection cost is shown in Fig 21 (cost per household served) and Fig 22 (cost per tonne collected). Colour coding denotes frequency of collection.

Fig 21 – Green waste collection cost per household served.

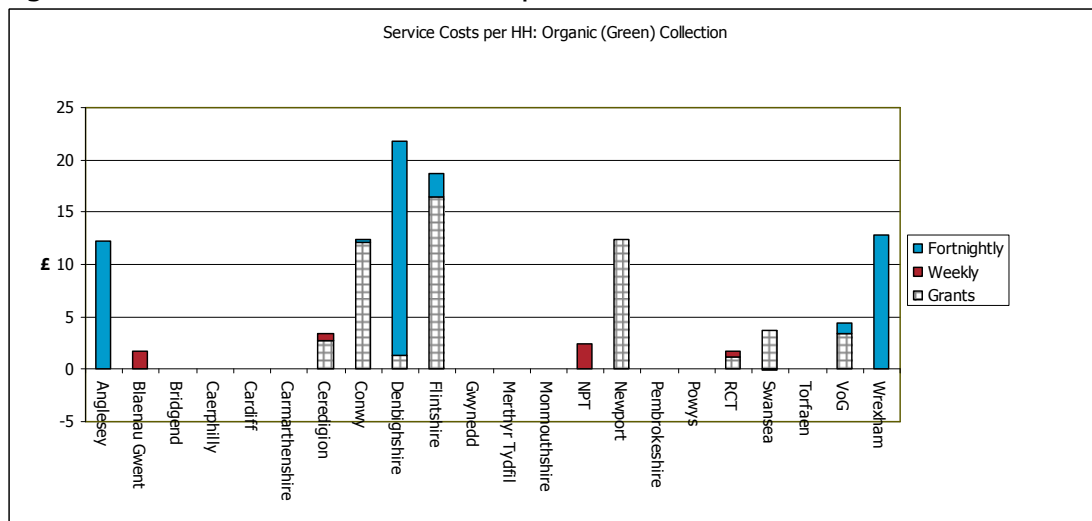
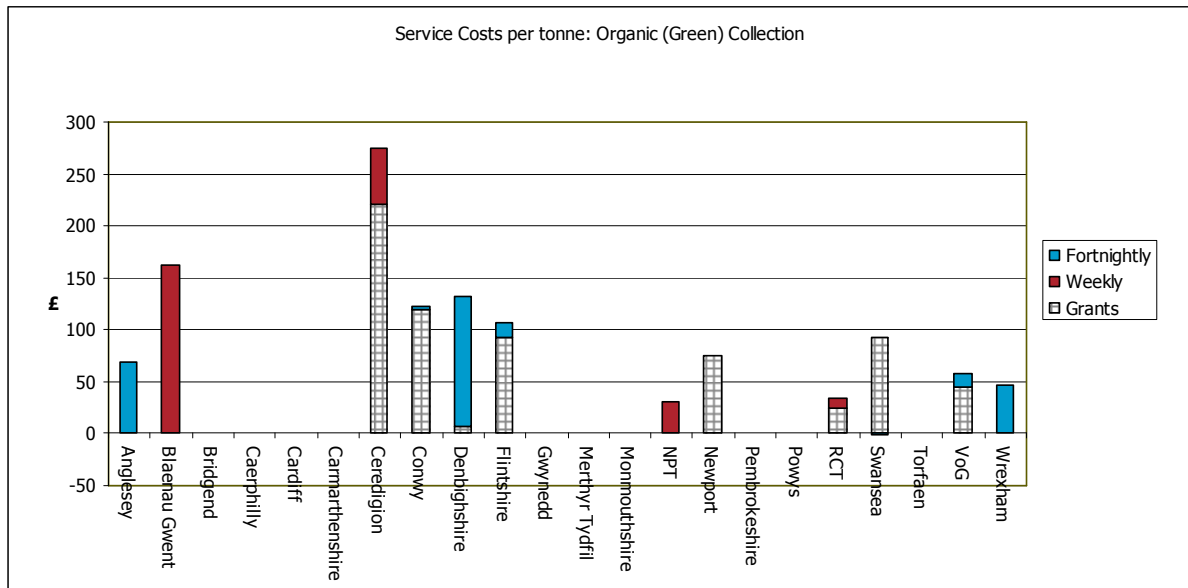


Fig 22 – Green waste collection cost per tonne



Combined food and green waste

64. Costs for authorities collecting food and green waste fractions together are shown in Fig 23 (cost per household served) and Fig 24 (cost per tonne collected). Colour coding denotes frequency of collection.

Fig 23 – Combined food and green waste collection cost per household served.

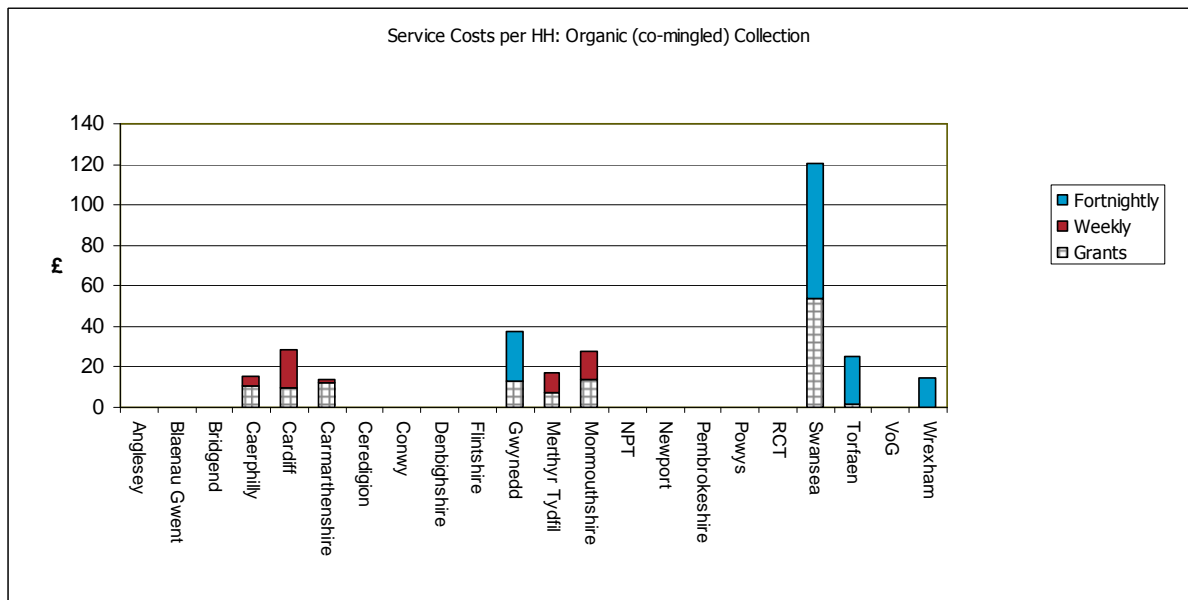
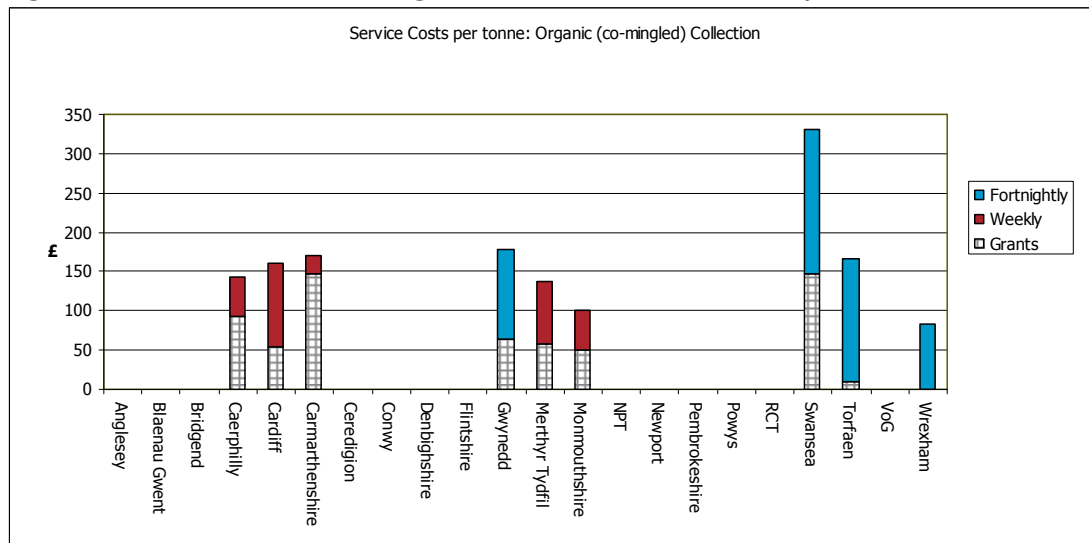


Figure for Swansea represents historic fortnightly combined collection which was replaced by weekly separate food waste collection service during 2009/10 and as a result will not be representative of costs in future years.

Fig 24 – Combined food and green waste collection cost per tonne



Treatment Costs

65. Organic material collected at the kerbside will require some form of treatment. Costs incurred will be dependant 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.

Food waste only

66. The food waste treatment cost is shown in Fig 25 (cost per household served) and Fig 26 (cost per tonne collected).

Fig 25 – Food waste treatment cost per household served.

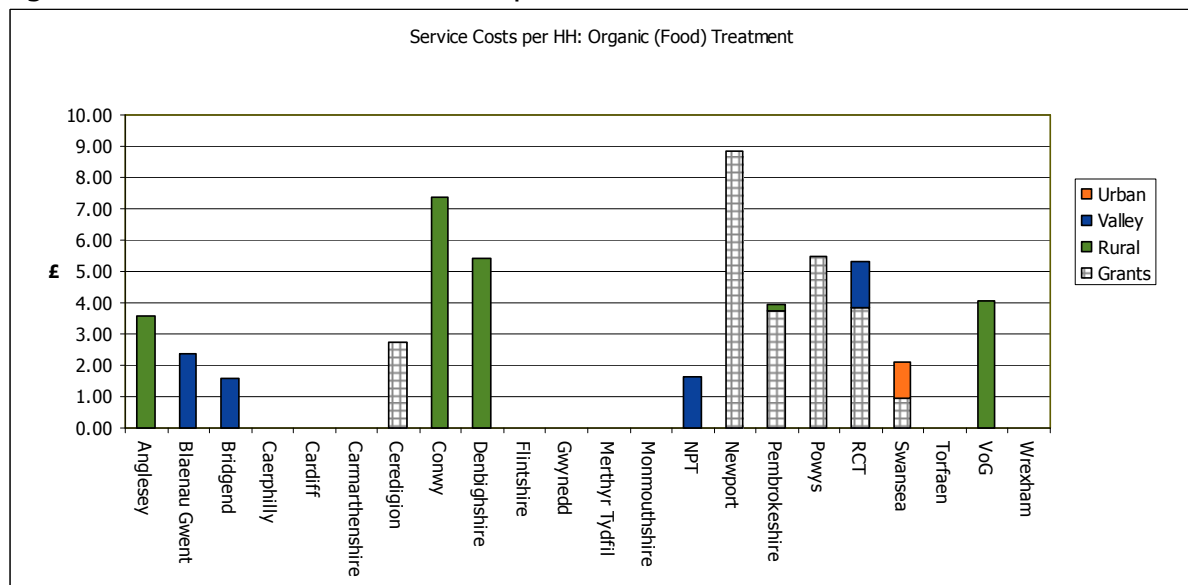
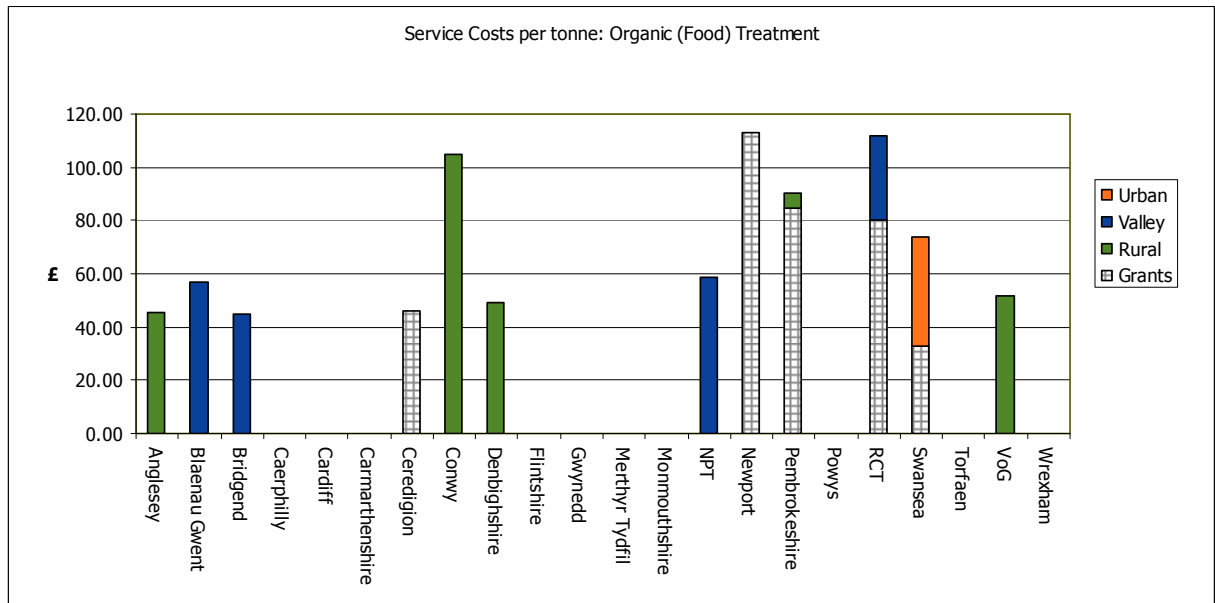


Fig 26 – Food waste treatment cost per tonne



Green waste only

67. The green waste treatment cost is shown in Fig 27 (cost per household served) and Fig 28 (cost per tonne collected).

Fig 27 – Green waste treatment cost per household served.

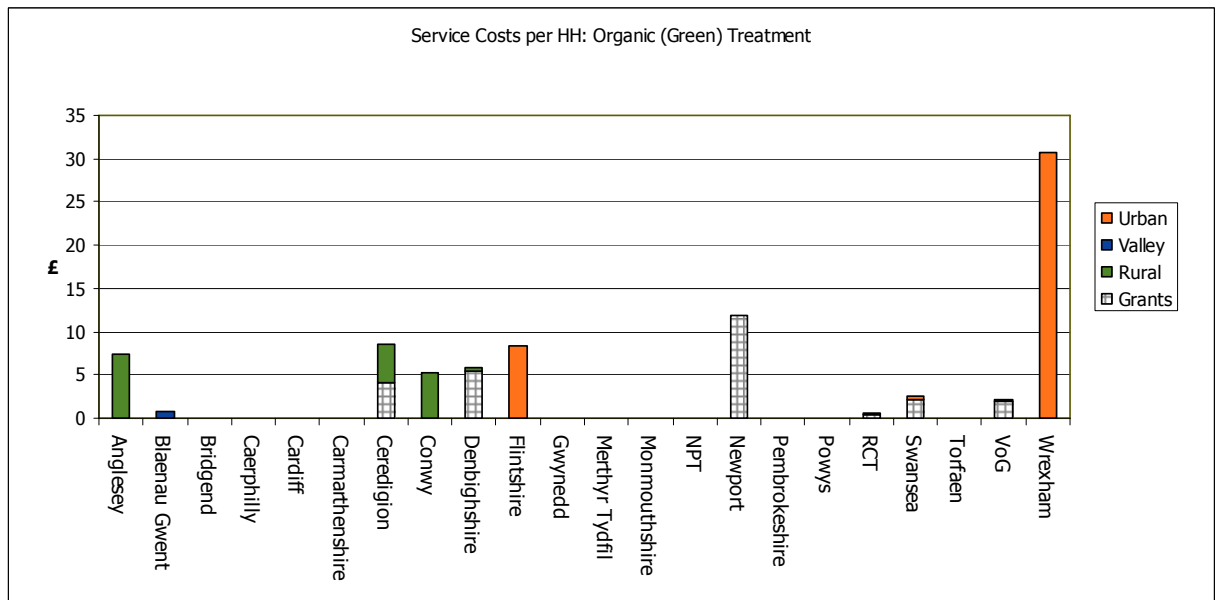
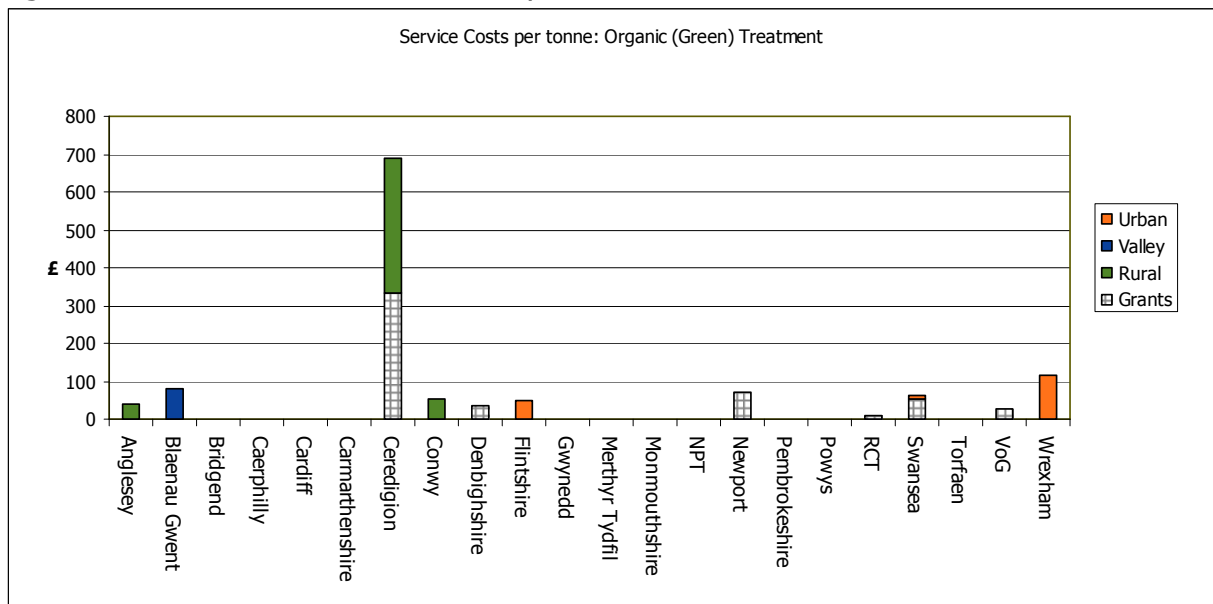


Fig 28 – Green waste treatment cost per tonne



Combined food and green waste

68. Treatment Costs for authorities collecting food and green waste fractions together are shown in Fig 29 (cost per household served) and Fig 30 (cost per tonne collected).

Fig 29 – Combined food and green waste treatment cost per household served.

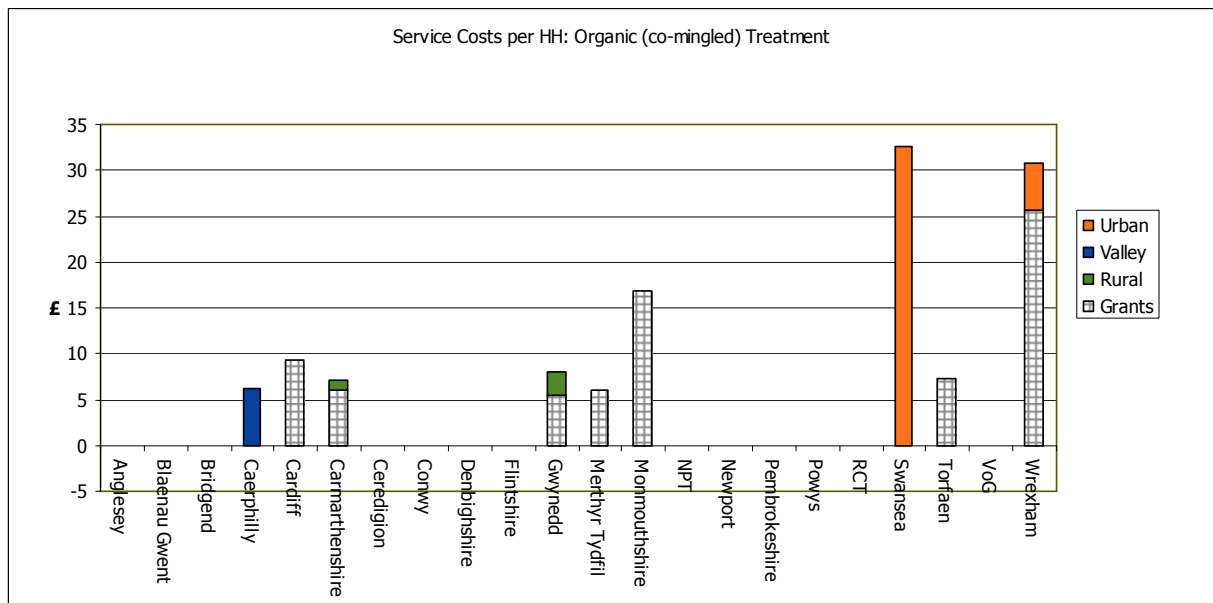
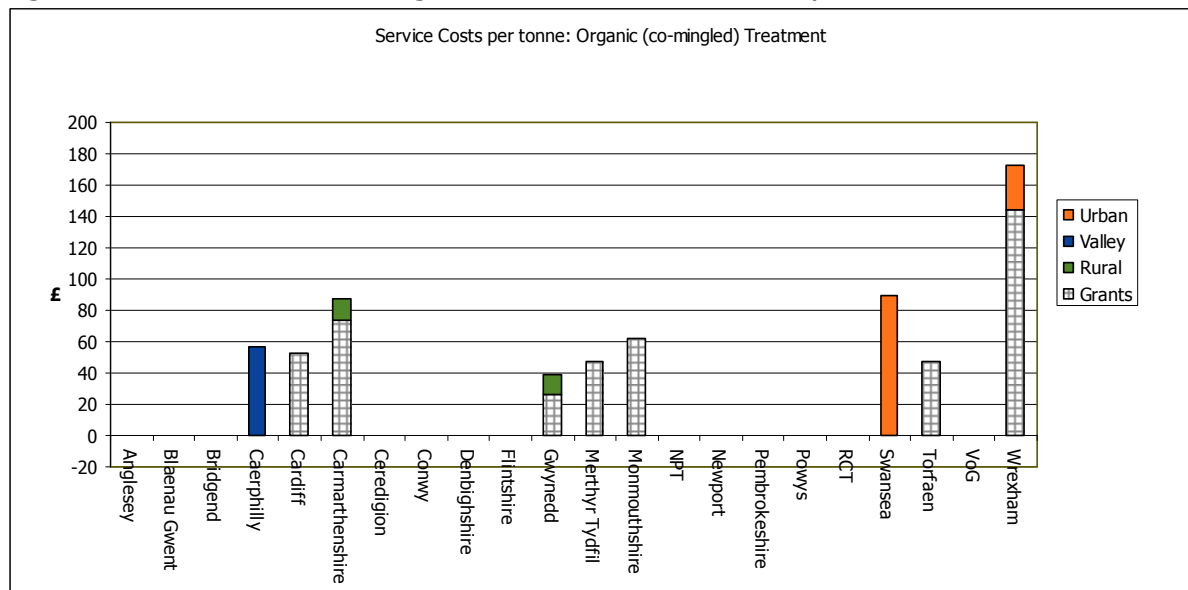


Fig 30 – Combined food and green waste treatment cost per tonne



Transfer, disposal and Income

69. 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 shown in annexe rather than in main body of report. Similarly, costs incurred from disposal of non compostable material (contamination) and incomes generated by organic waste services are low, data is therefore shown in annexe rather than in main report.

Refuse Collections:

70. Graphs show the aggregate cost of providing collection, transfer, treatment and disposal of residual waste. The following graphs show service costs net of any income (where applicable).

Fig 31 – Residual waste service cost per household

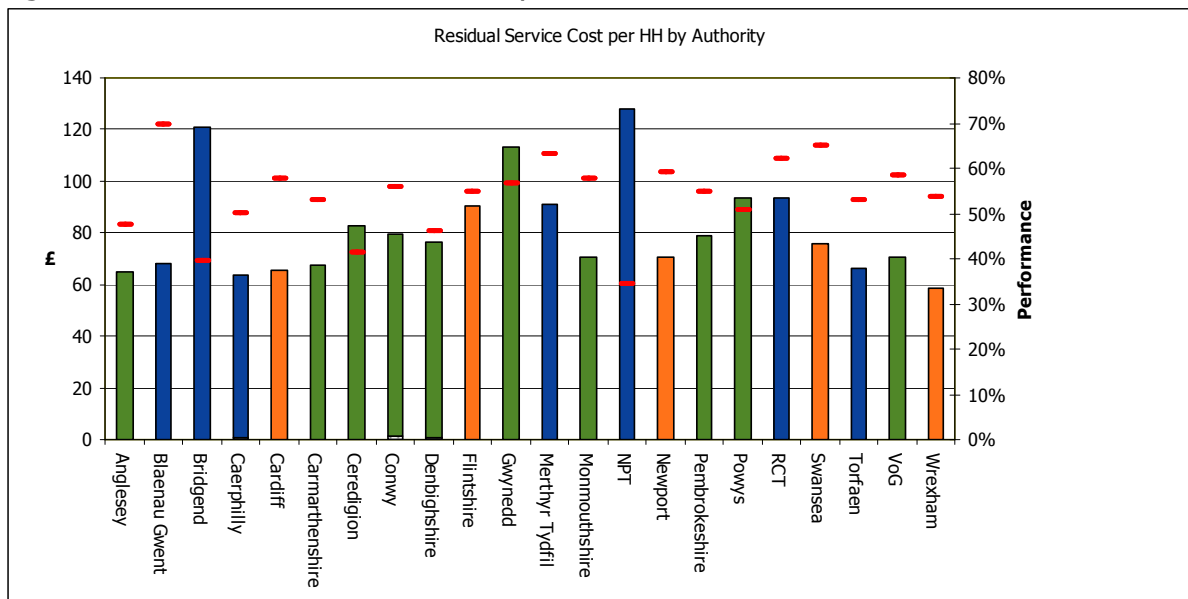
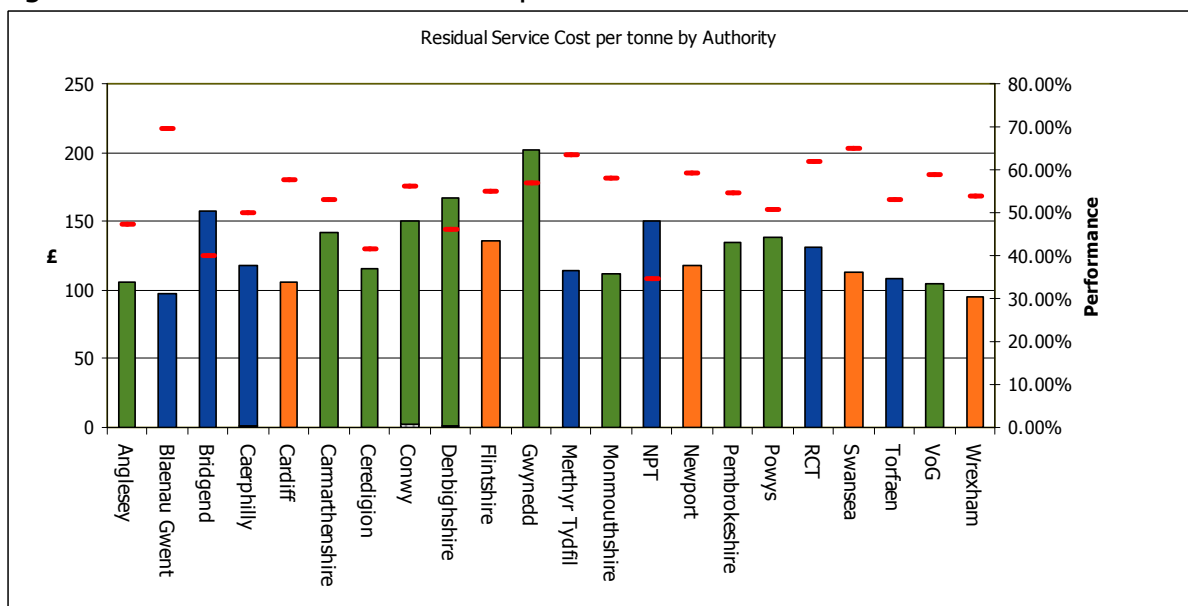


Fig 32 – Residual waste service cost per tonne



71. Performance data shows the proportion of overall MSW landfilled or otherwise disposed. Therefore in this case, lower figures indicate a better performing service overall. i.e. a greater proportion of the total waste arisings is recycled. For example, Ceredigion operate a low cost residual waste collection service relative to the group. In addition, the performance data indicates that the proportion of total MSW being landfilled is one of the lowest across the group.

72. From the core data it is also possible to compare 2009/10 overall residual waste service expenditure with that of 2008/09:

	08/09	09/10	% change
Residual waste	£114, 553,997	£110,458,224	-3.58%

73. It can be seen therefore that expenditure on residual waste services has decreased in 2009/10. This in spite of an £8 per tonne increase in landfill tax. This is possibly an indication of a shift of resources away from residual waste services towards recycling services.

Collection costs

74. The following graphs show residual waste collection costs. Frequency of collection varies across the group, with some authorities providing weekly collections while others provide collections on an alternate weekly basis. A smaller number of authorities have a mixture of properties served weekly and alternate weekly.

Fig 33 – Residual waste collection cost per household

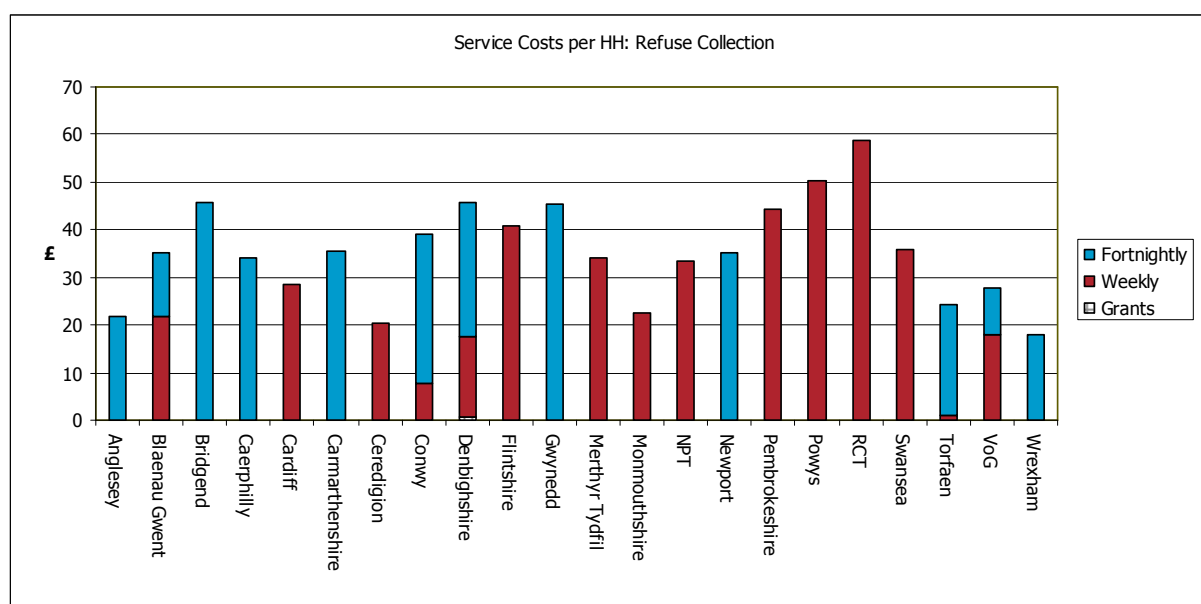
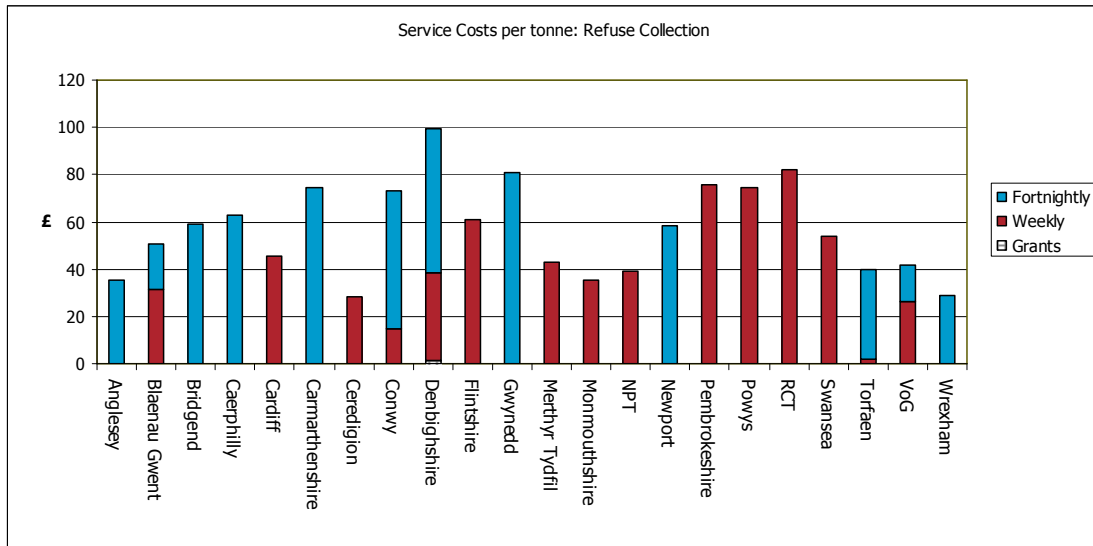


Fig 34 – Residual waste collection cost per tonne



Transfer costs

75.A significant number of authorities are required to transfer residual waste collected prior to onward treatment or disposal. Costs incurred are shown in Fig 35 and Fig 36.

Fig 35 – Residual waste transfer costs per household

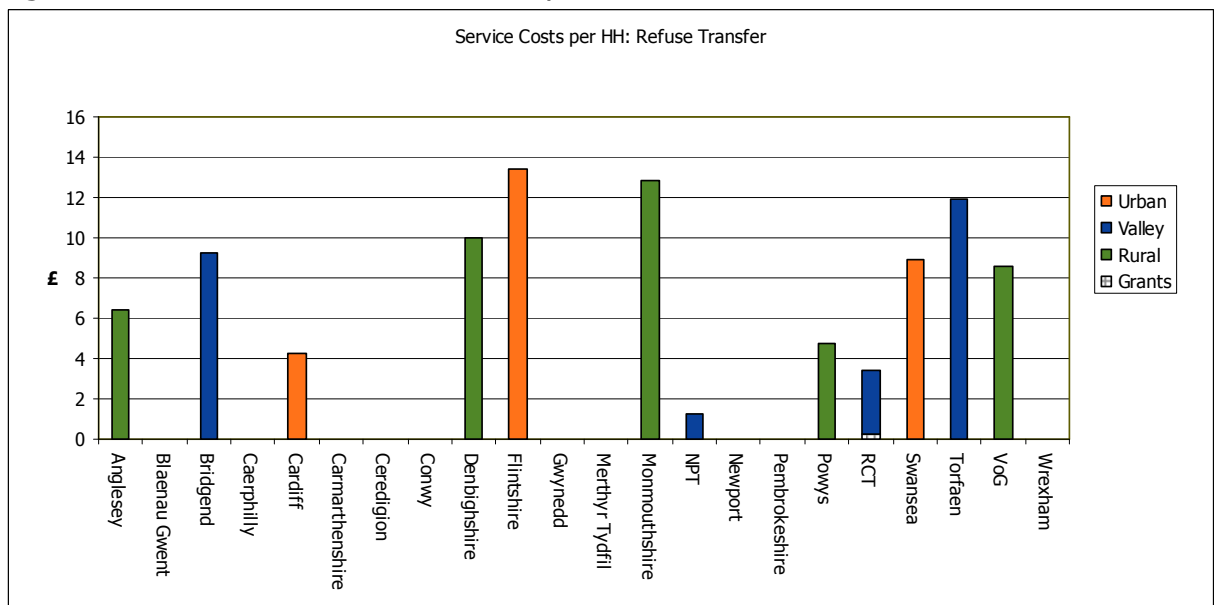
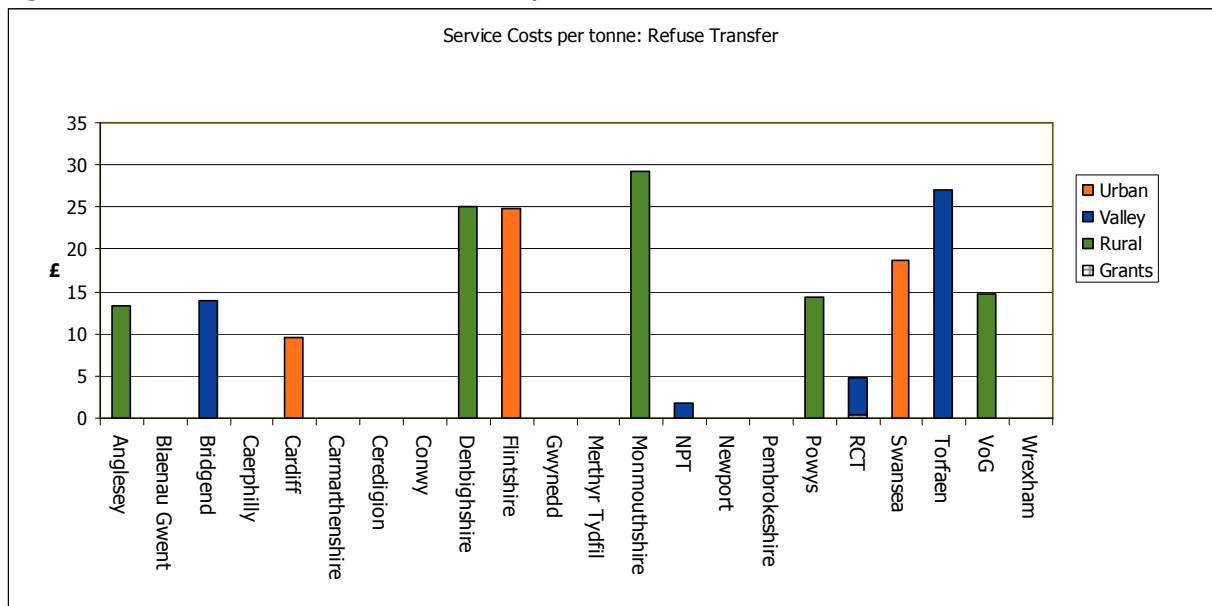


Fig 36 – Residual waste transfer cost per tonne



Treatment / processing costs

76.A relatively small number of authorities treat residual waste prior to its disposal. Those authorities which exhibit treatment costs are shown in graphs below. The cost of treatment or processing waste prior to disposal is shown. At present only a small number of authorities treat residual waste prior to disposal and in some cases not all residual wastes are treated. The constraints of landfill allowances and the procurement of treatment technology will mean that all authorities will eventually incur treatment costs.

Fig37 – Residual waste treatment cost per household

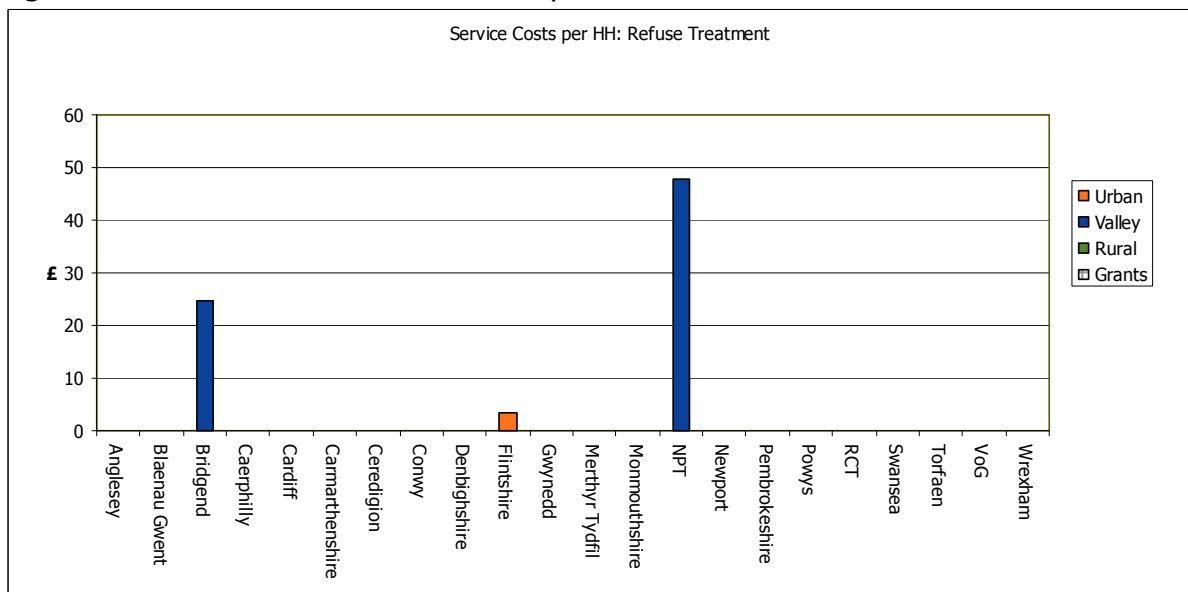
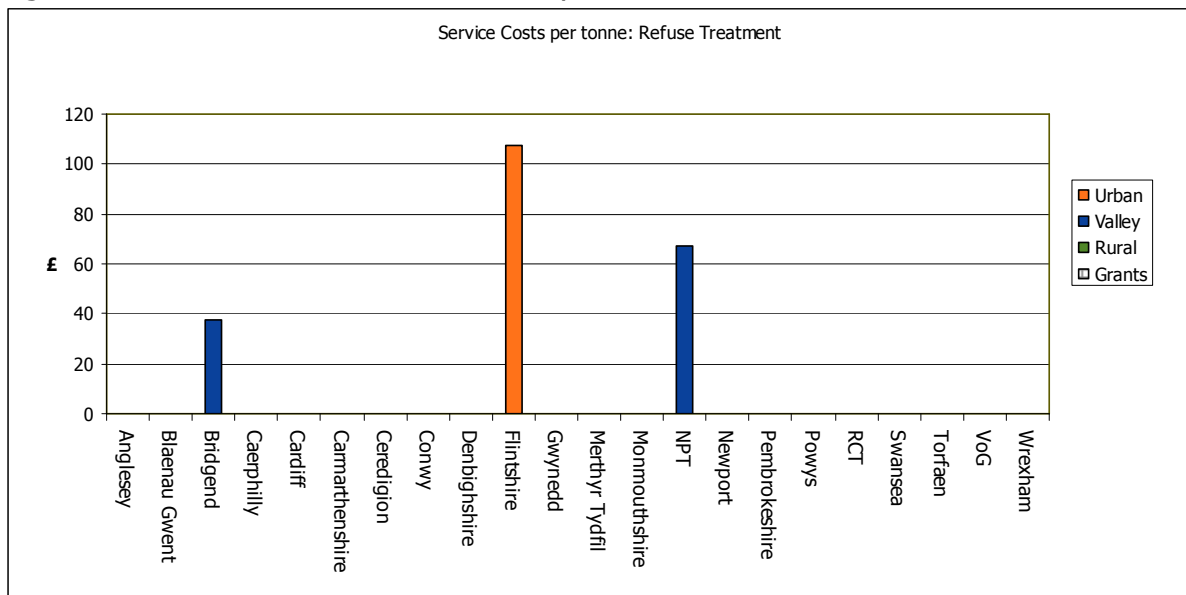


Fig 38 – Residual waste treatment cost per tonne



Disposal costs

77. This shows the cost of disposing of all residual waste collected. These are based on fixed-price contracts and costs will vary based upon local circumstance (such as availability of landfill options nearby), length of contract and date of contract commencement. Data is shown on a cost per household basis (Fig 39) and as a cost per tonne (Fig 40)

Fig 39 – Residual waste disposal cost per household

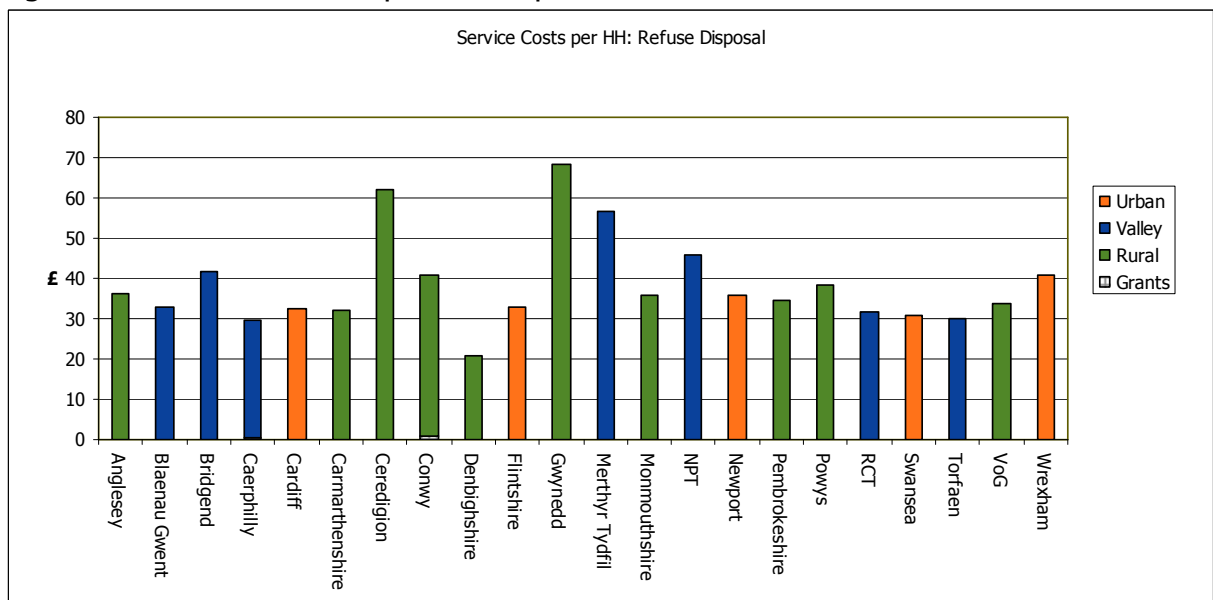
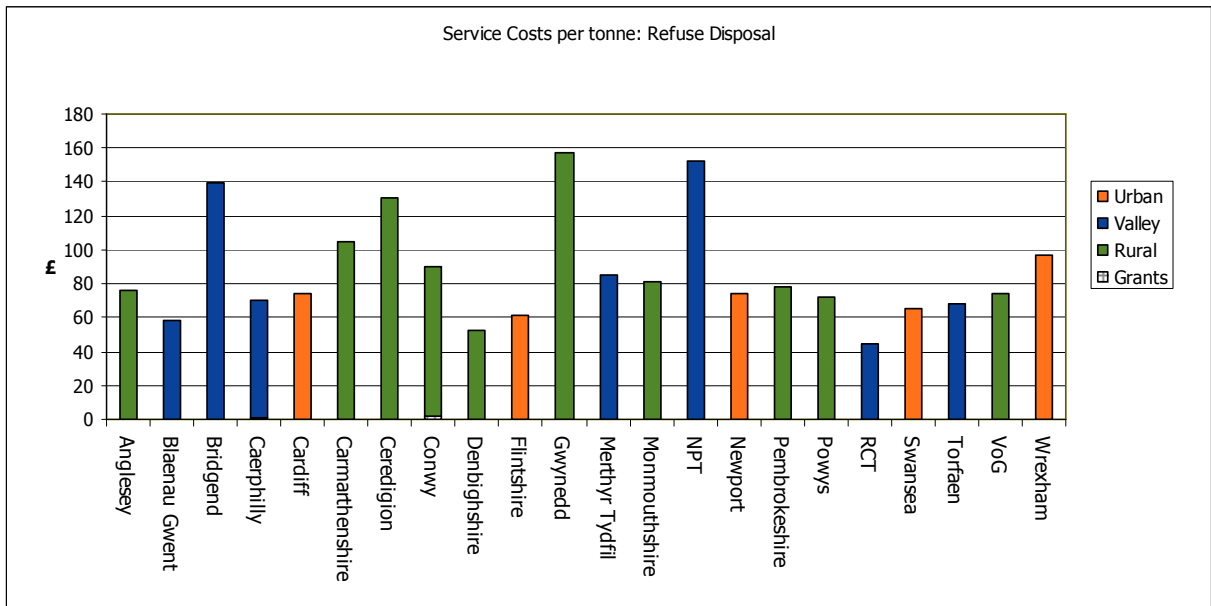


Fig 40 – Residual waste disposal cost per tonne



Civic Amenity Sites

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

Fig 41 – CA site service cost per household

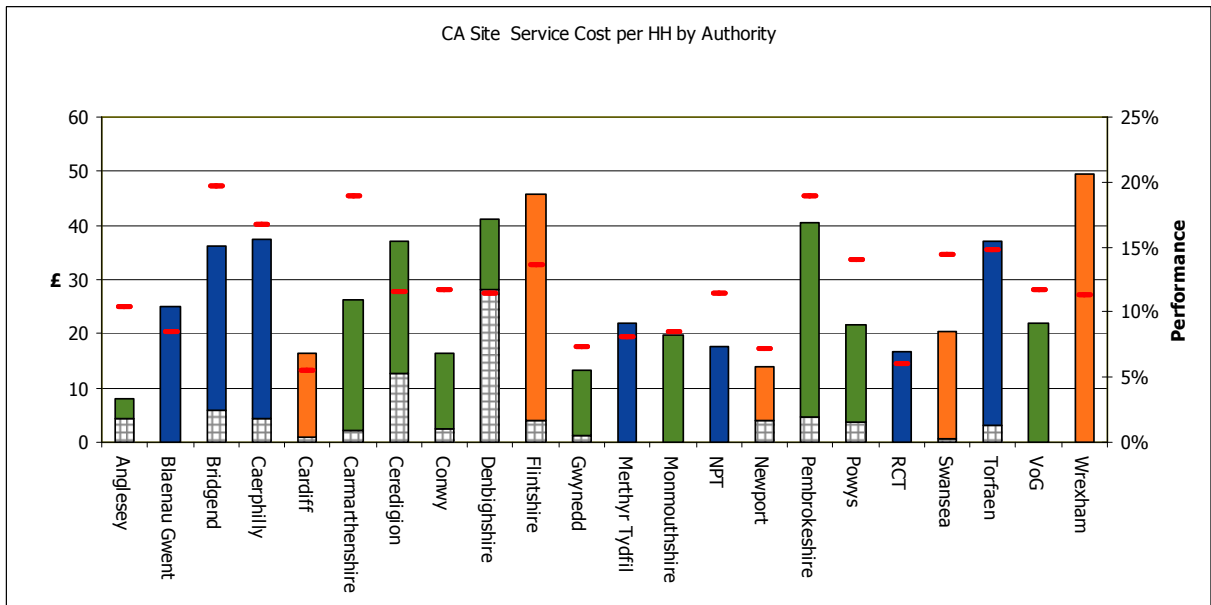
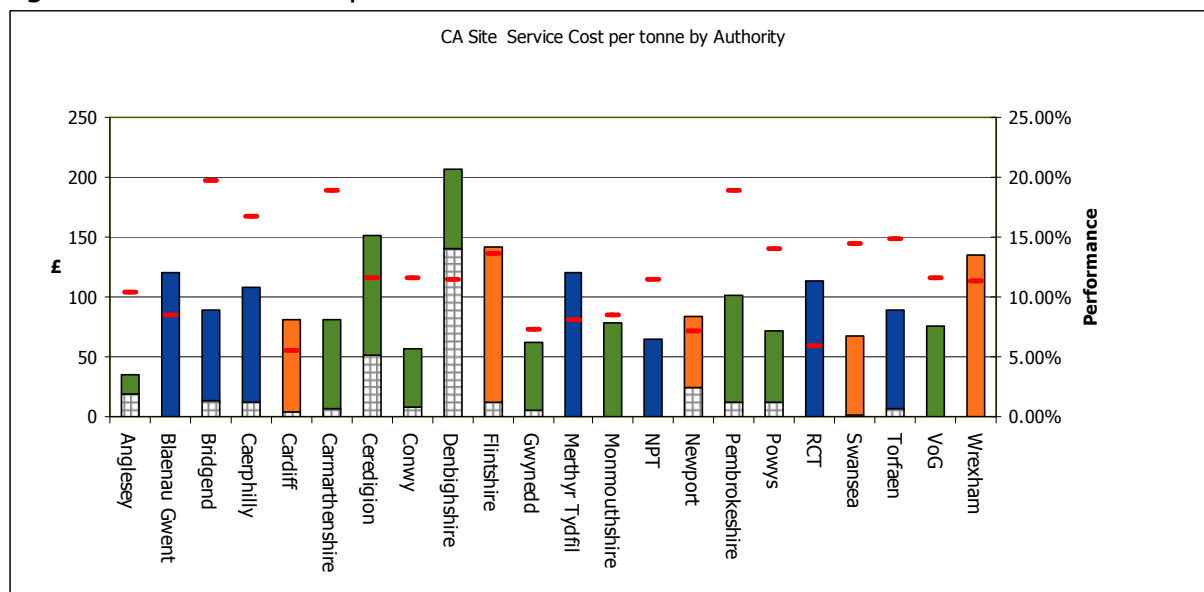


Fig 42 – CA service cost per tonne



79. Performance data indicates that contribution made by CA site network to overall recycling rates can be considerable. In the case of Bridgend, nearly 20% of the total MSW generated is recycled via its CA sites. Costs on a per household basis are relatively high for Bridgend, but as the amount of material dealt with through their sites is large, the cost on a per tonne basis is lower, placing them at around the median cost.

80. From the core data it is possible to compare 2009/10 overall CA site service expenditure with that of 2008/09:

	08/09	09/10	% change
CA/HWRC	£34,281,721	£35,751,300	+4.29%
Grant	£4,268,128	£5,127,724	+20.14%

81. It can be seen that expenditure on CA/HWRC has increased moderately in 2009/10. There has been a more significant increase in amount of grant funding allocated to CA/HWRC by local authorities, but allocation remains at a relatively low level compared to whole service cost.

Bring Sites

82. The figures shown reflect the service cost divided by number of households (Fig 43) and by mass collected (Fig 44).

Fig 43 – Bring site costs per household

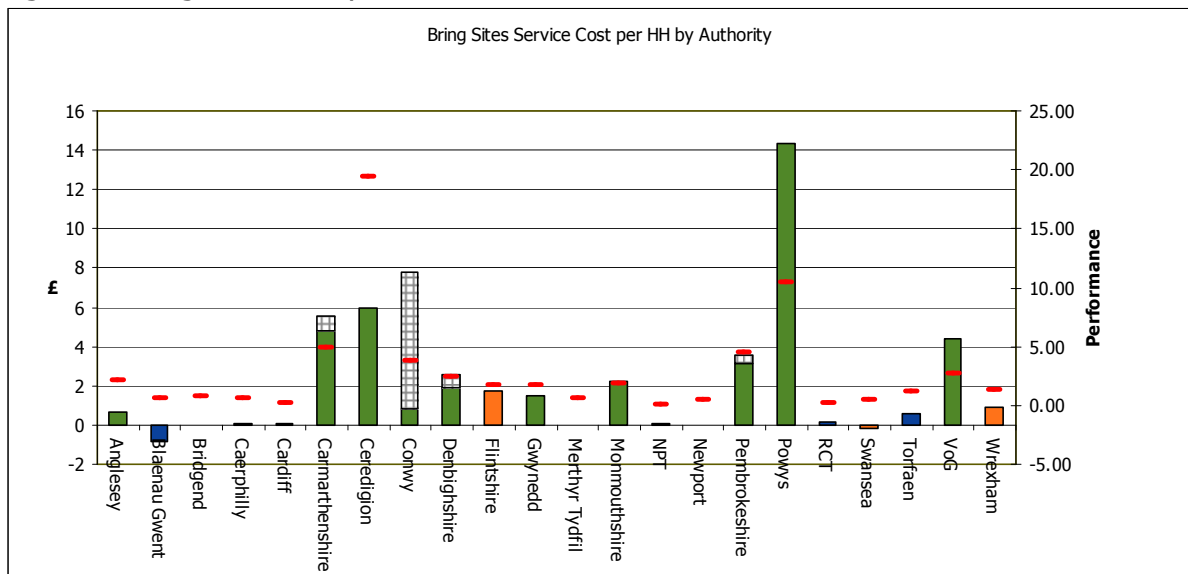
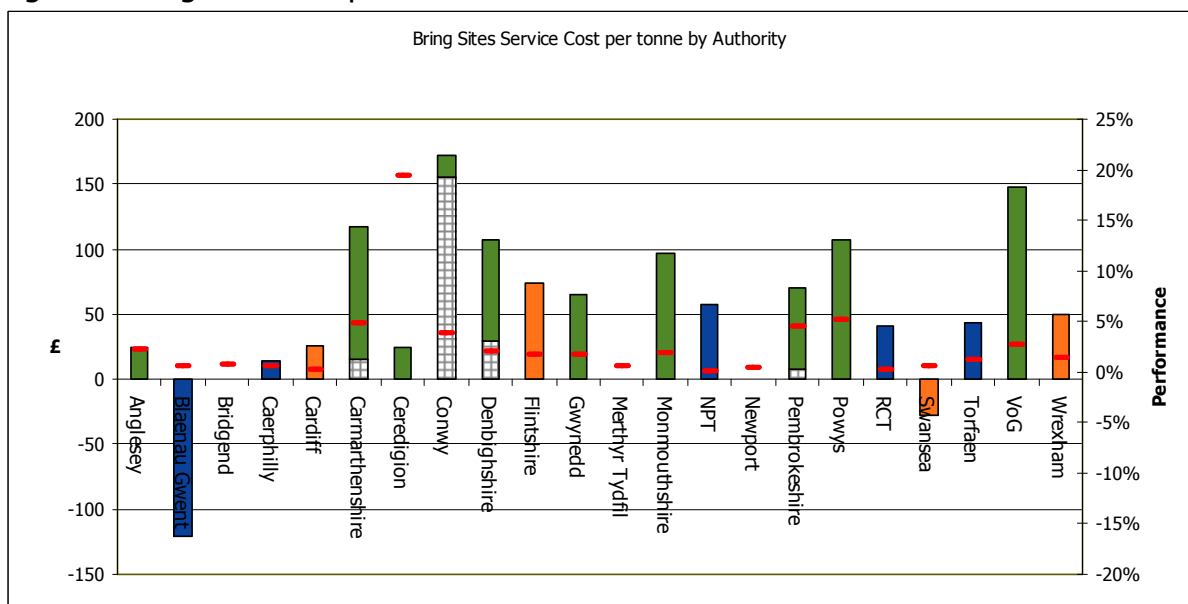


Fig 44 – Bring site costs per tonne



83. It can be seen that both cost and performance vary widely across group. This reflects the different services provided by each authority. Number of bring sites provided by each authority ranges from 6 to 173 which demonstrates why such a difference in costs arises.

84. From the core data it is possible to compare 2009/10 overall Bring site service expenditure with that of 2008/09:

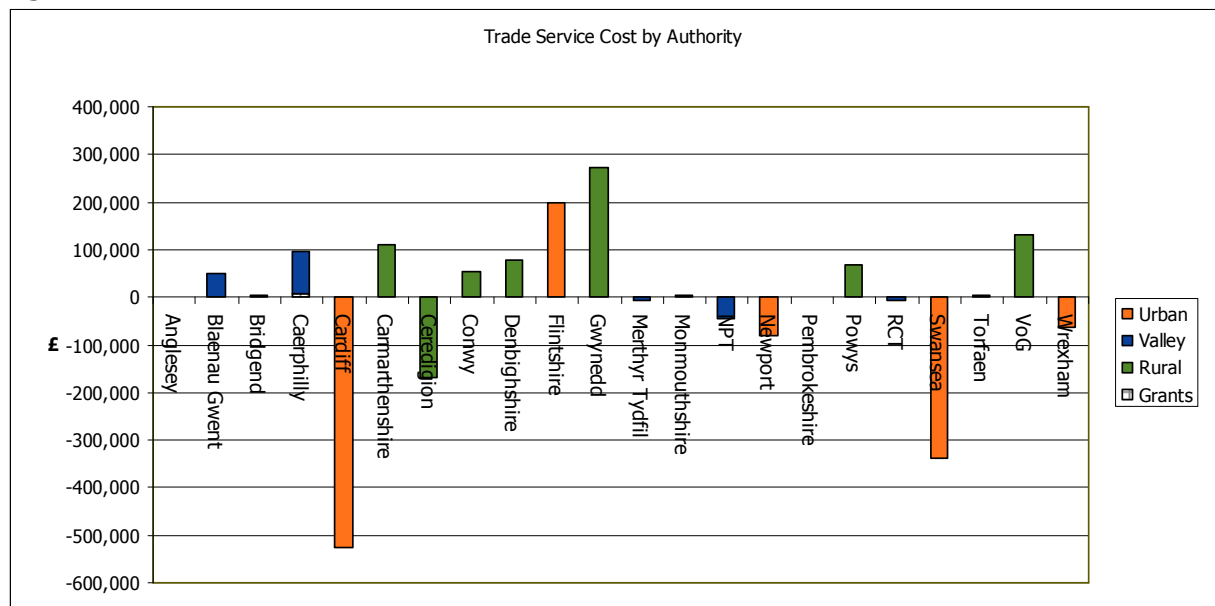
	08/09	09/10	% change
CA/HWRC	£3,351,328	£3,224,670	-3.78%
Grant	£1,151,360	£812,187	-29.46%

85. It can be seen that there was a relatively modest fall in bring site expenditure during 2009/10. Overall, local authorities attributed less grant funding to bring sites than in previous financial year

Trade Waste Service

Fig 45 shows the total trade waste service cost (net of income).

Fig 45 – Trade waste service cost

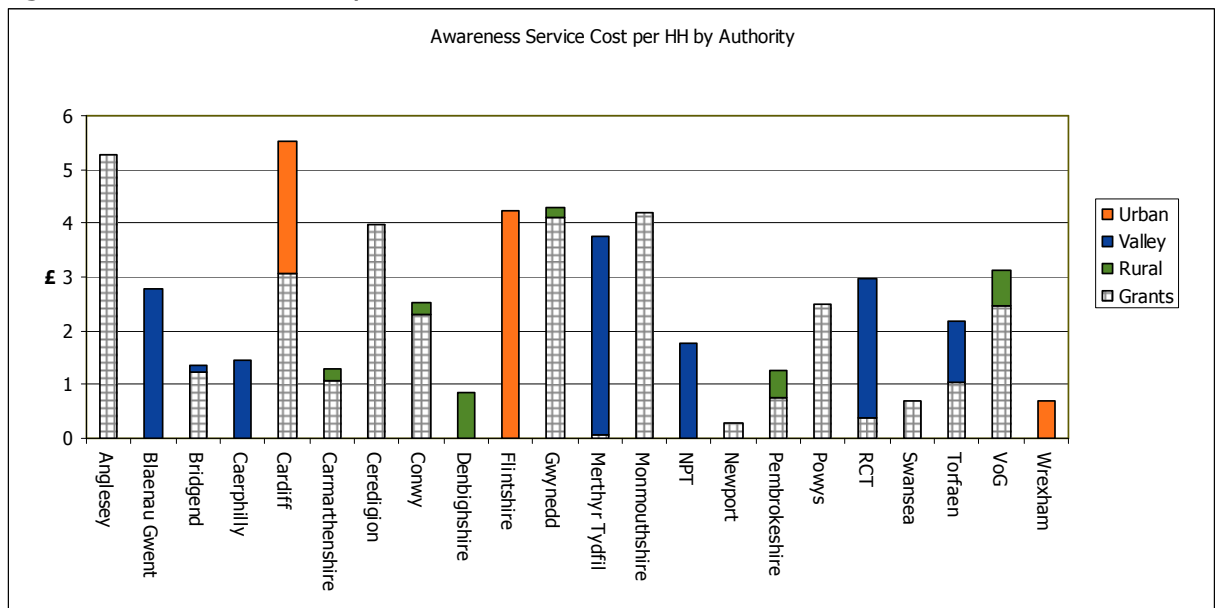


86. Many trade waste services are operated by collecting trade waste co-mingled with household waste: tonnages and associated costs are often apportioned from average bin weights therefore costs shown above may not be wholly representative of true service cost.

Awareness Raising

87. The following shows spend per household on awareness raising activities, though it is also likely, in some cases, to include the cost of employing awareness officers. Greater clarity will be provided in guidance for authorities to better enable separation of staff costs from awareness costs in future years.

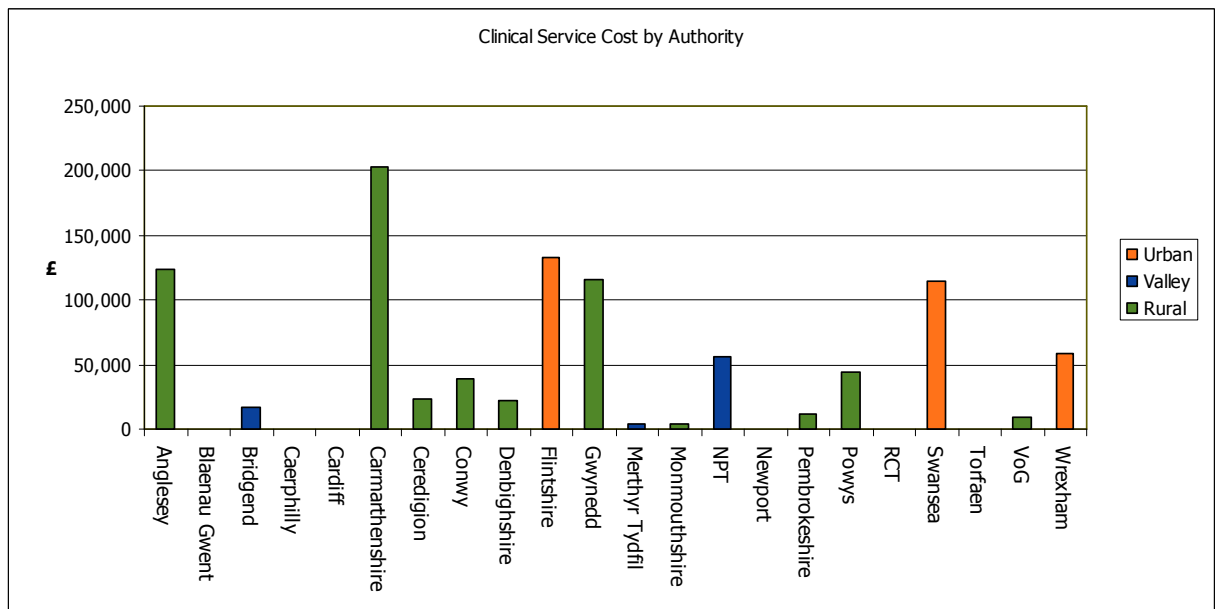
Fig 46 – Awareness cost per household



Clinical Waste

88. Many authorities provide clinical waste collection services. Costs associated with such services are shown in Fig 48.

Fig 47 – Clinical waste service cost



Conclusions

89. Overall net expenditure on waste services during 2009/10 was £240,069,117 (£274,063,034 gross). This represents an increase of £13,356,736, a rise of 5.89%.

90. Overall net expenditure on household waste services⁵ (Dry Recycling, Organic, Residual, CA and Bring) during 2009/10 was £223,585,296. This represents an increase of £11,075,923 over 2008/09 figure, a rise of 5.21%.

91. Household waste services figure comprises expenditure on dry recycling, residual waste and organic waste services, along with provision of civic amenity and bring sites. Contribution made to overall cost by each component service shown below along with % change in expenditure from 2008/09 level:

	08/09	09/10	% change
Dry recycling	£39,862,853	£42,814,326	+7.4%
Residual waste	£114,553,997	£110,458,224	-3.58%
Organic waste	£20,459,474	£31,336,775	+53.17%
CA/HWRC	£34,281,721	£35,751,300	+4.29%
Bring	£3,351,328	£3,224,670	-3.78%

92. Overall expenditure on recycling services as proportion of total has increased from 46 % in 2008/09 to 51% in 2009/10 with a corresponding decrease in expenditure on residual waste services.

93. Expenditure on organic waste services increased from £20,459,474 in 2008/09 to £31,336,775 in 2009/10 a rise of 53.17% over 2008/09 levels.

94. Overall recycling and composting rates have increased from 35.85% in 2008/09 to 39.27% in 2009/10

Project Development: the future of the national project

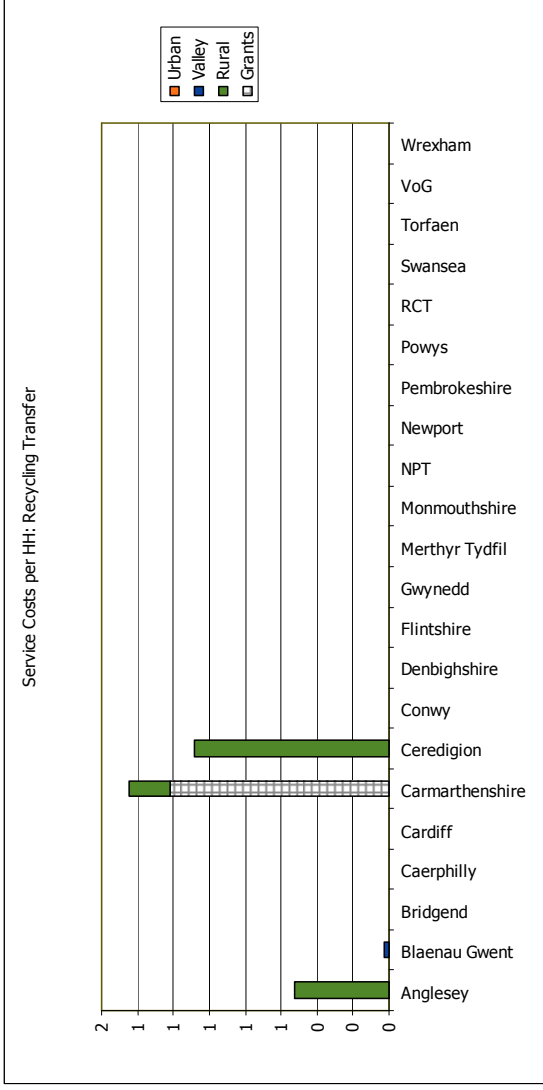
95. The data presented is in a purely quantitative form and is yet to undergo further qualitative analysis.

⁵ 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

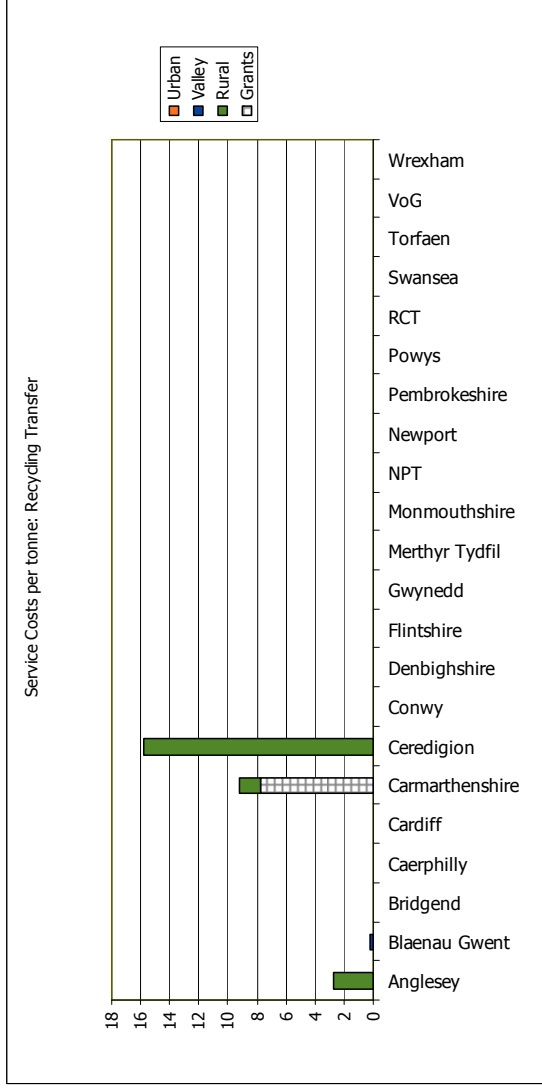
96. The first additional qualitative analysis has been completed based on 08/09 data. Recommendations applicable to all local authorities have been made based on findings of further analysis, and have been incorporated in annual WAO benchmarking report.
97. A similar benchmarking exercise will be carried out by the WLGA for 09/10 data, with any recommendations arising to be incorporated in future WAO benchmarking reports. Progress made by local authorities in addressing recommendations will be monitored by WAO and included in future annual reports to Ministerial programme board.
98. As in previous years, data extracted from Wastedataflow required a certain degree of cleansing to remove anomalies. This process took place between September and December 2010. It is envisaged a similar period of data validation will be required in future years. Work undertaken by Waste Improvement Assistant in conjunction with individual local authorities.
99. 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 will be reviewed and improved. In addition where anomalies are identified the WLGA will work with that specific authority to ensure the 2010-11 data reporting process is as free of data issues as possible. Further refinement of the data model and WDF will ensure better recording of mass data to improve accuracy of per tonne comparisons. Further work will also be conducted to ensure that collection frequencies and household numbers are reported more accurately.

Annex 1 – Additional supporting data

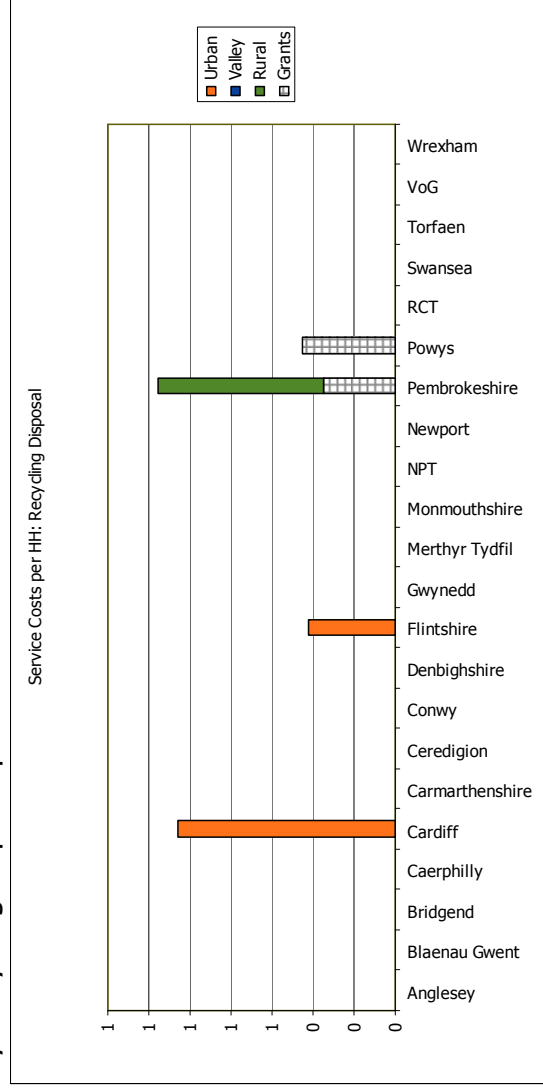
Dry Recycling transfer per household



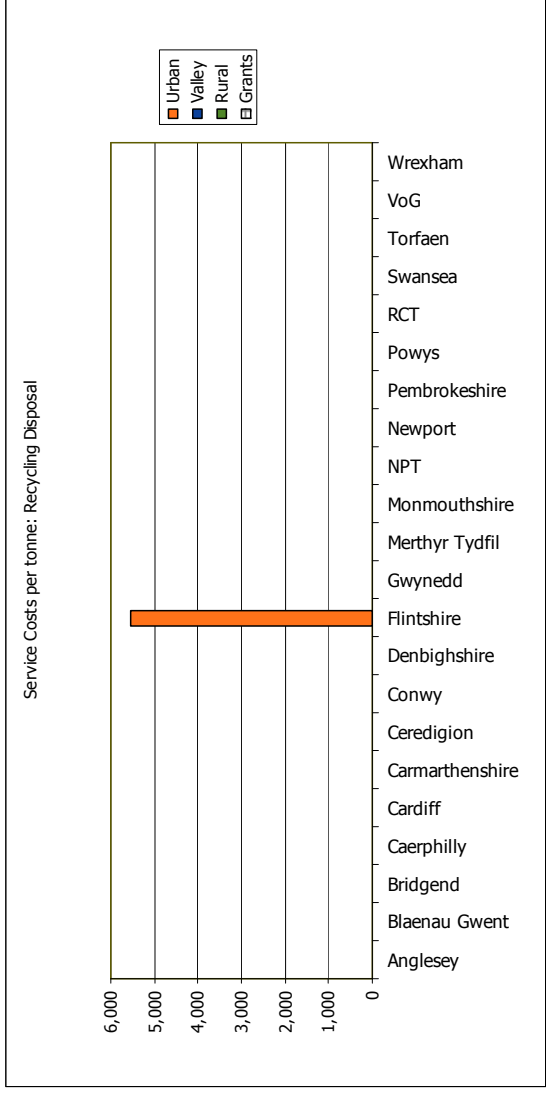
Dry Recycling transfer per tonne



Dry Recycling disposal per household

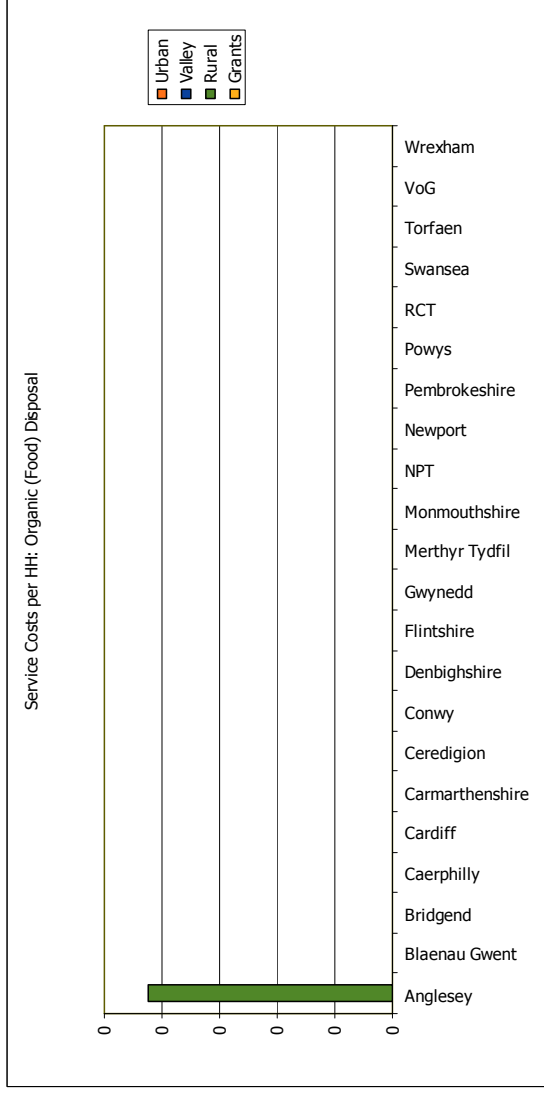


Dry Recycling disposal per tonne

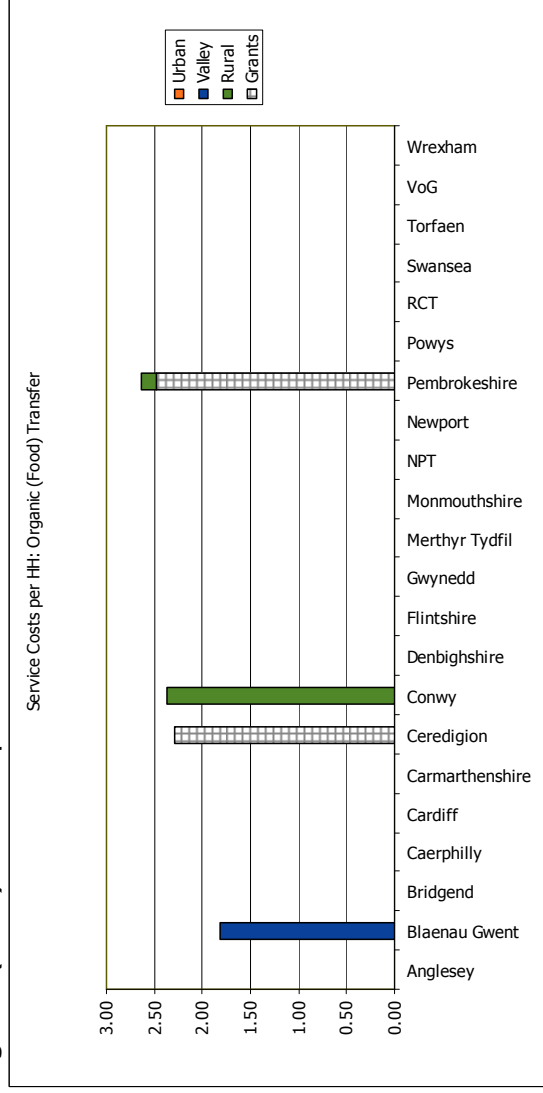


n.b – 3 x authorities disposal mass data not entered on WDF

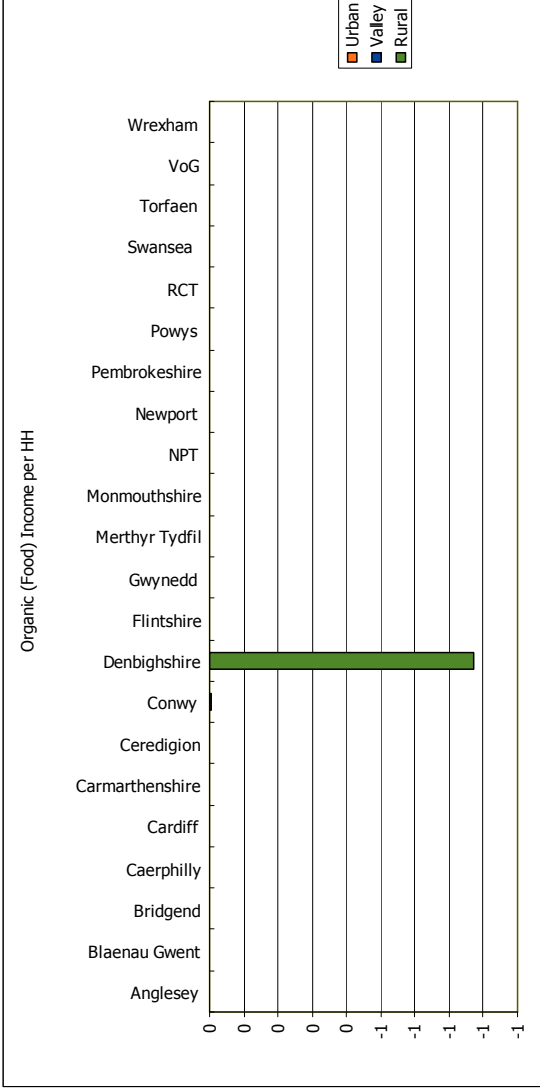
Organic (Food) disposal per household



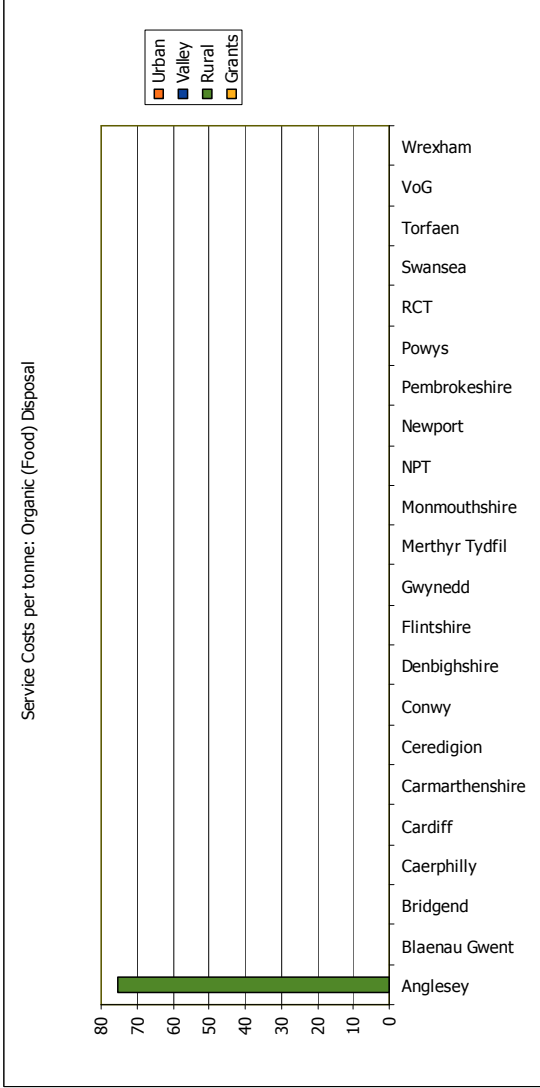
Organic (Food) transfer per household



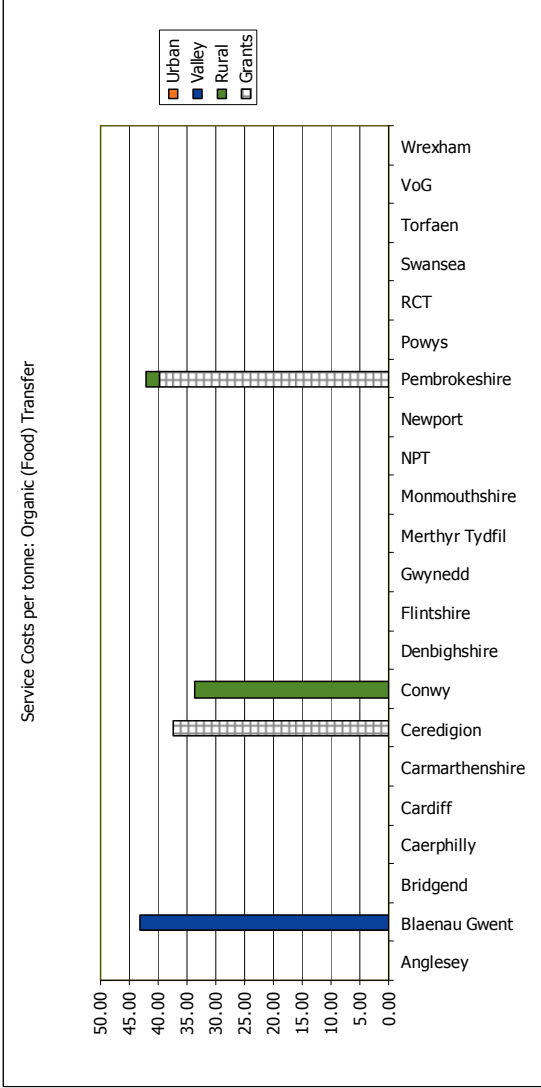
Organic (Food) income per household



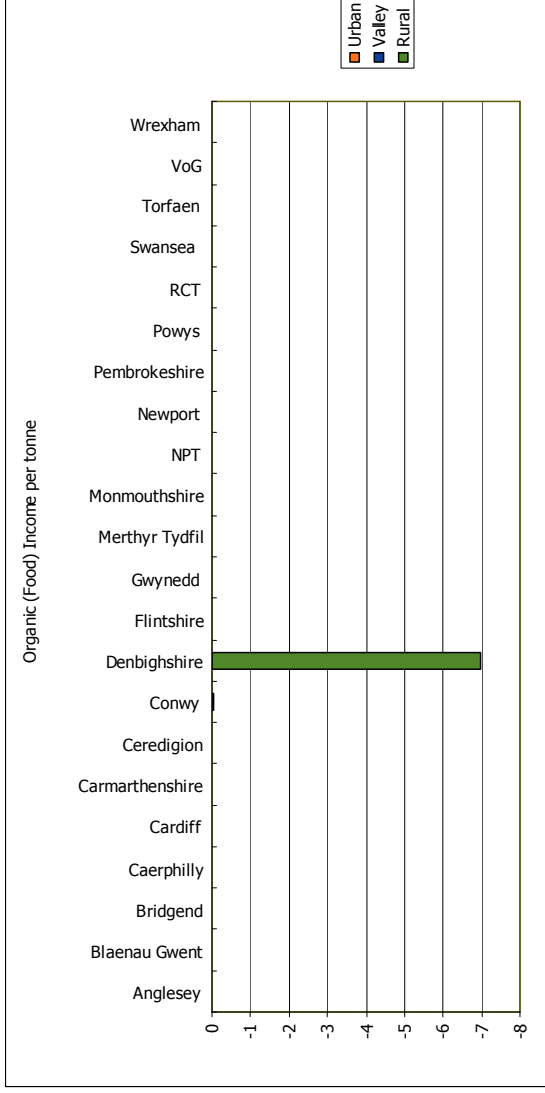
Organic (Food) disposal per tonne



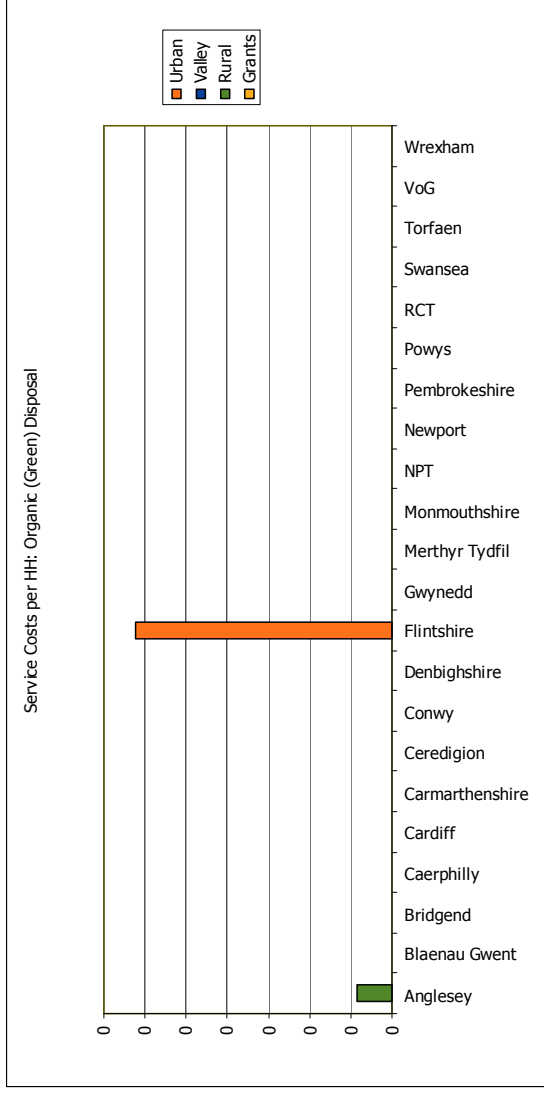
Organic (Food) transfer per tonne



Organic (Food) income per tonne



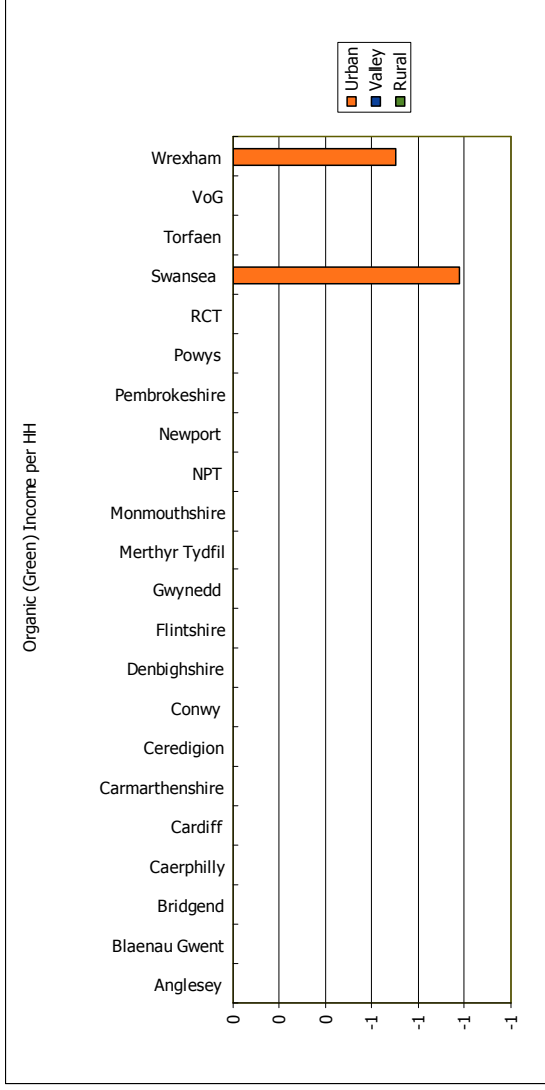
Organic (Green) disposal per household



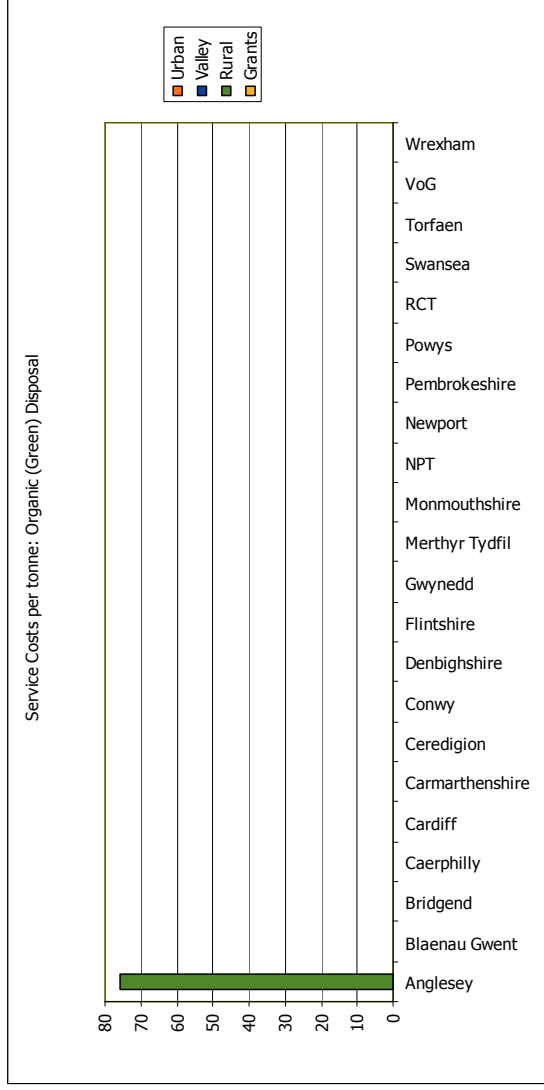
Organic (Green) transfer per household

No costs recorded in WDF.

Organic (Green) income per household



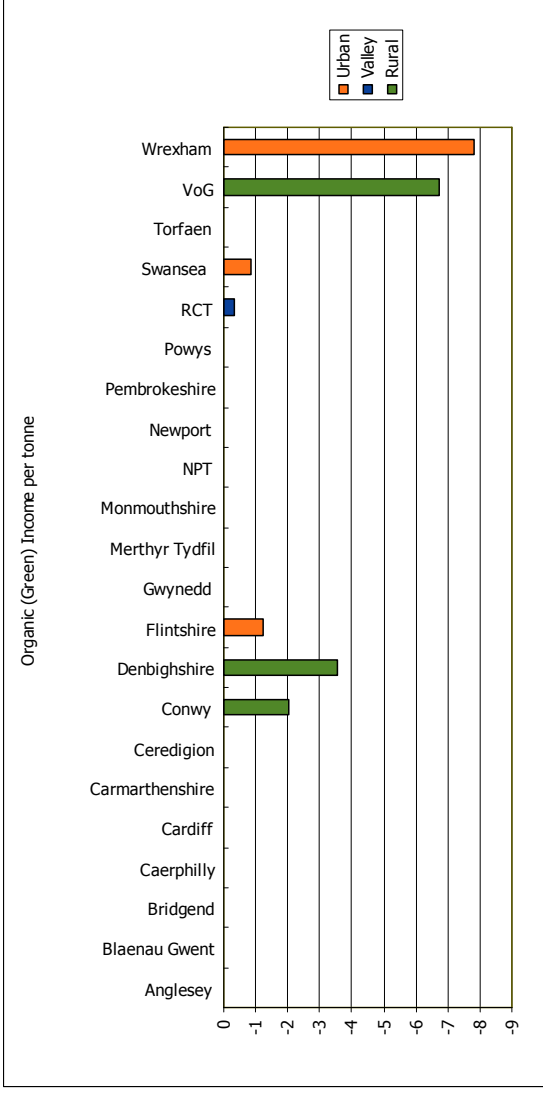
Organic (Green) disposal per tonne



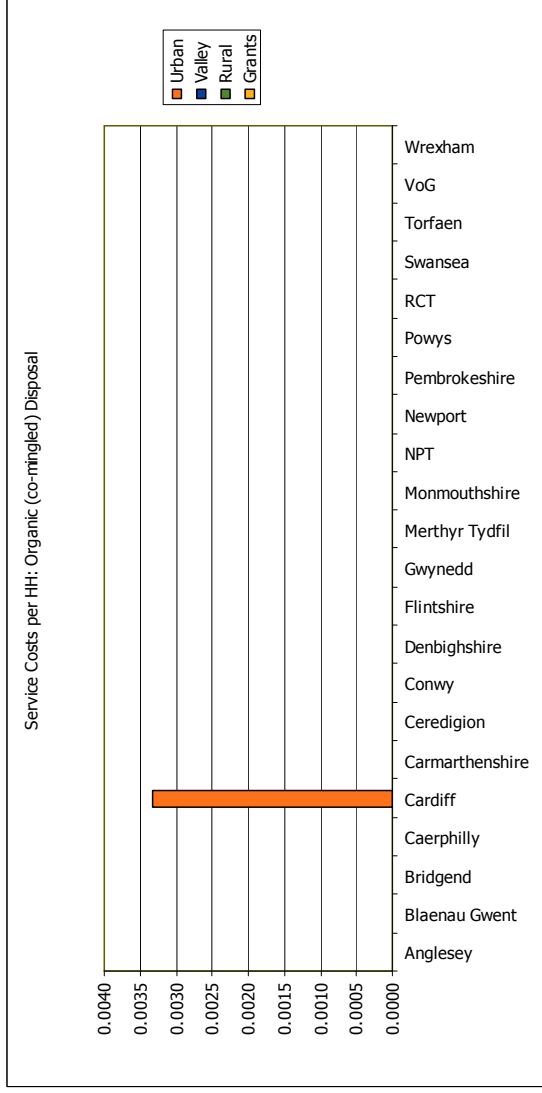
Organic (Green) transfer per tonne

No Data in WDF

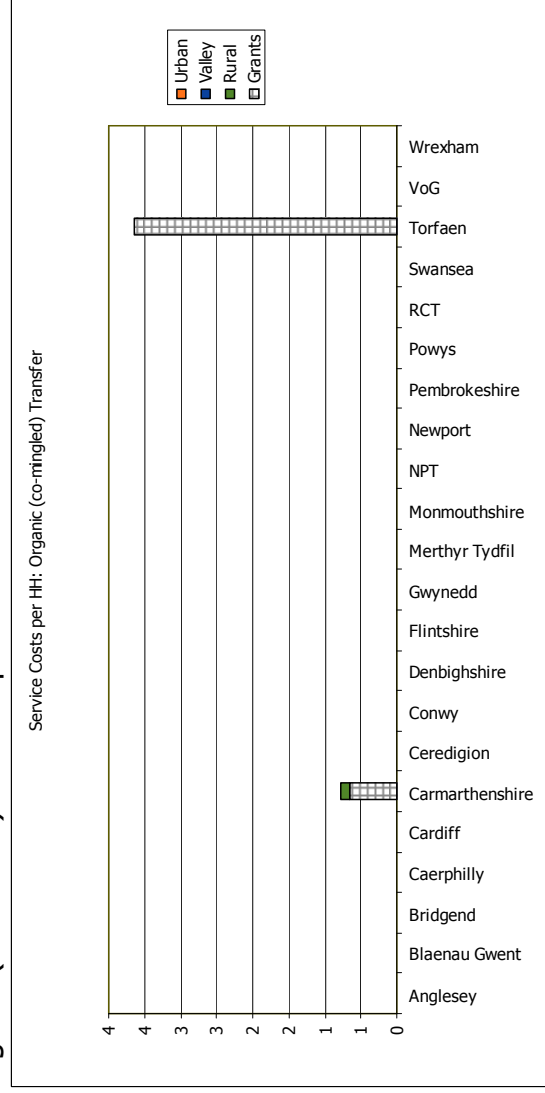
Organic (Green) income per tonne



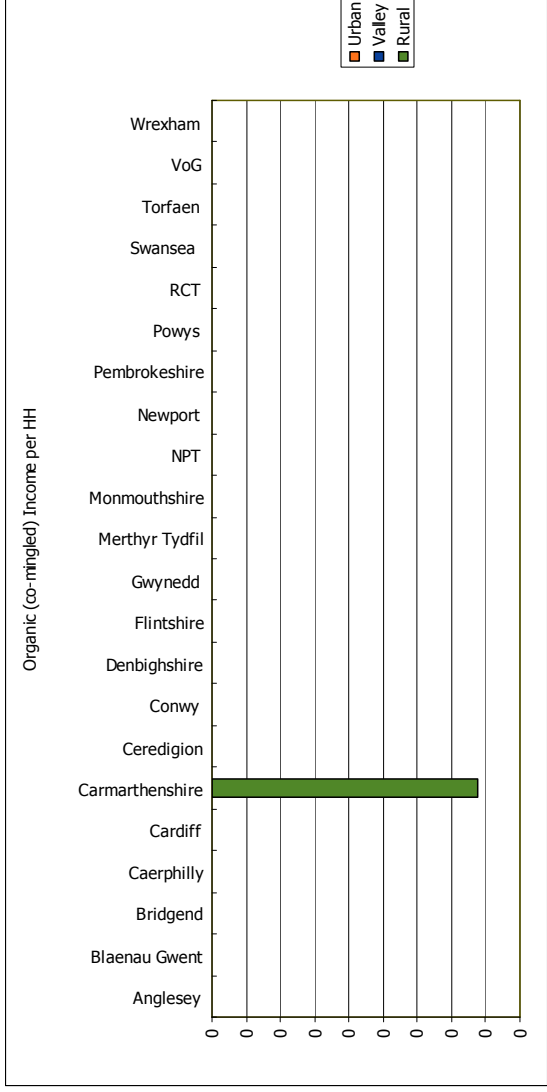
Organic (Combined) disposal per household



Organic (Combined) transfer per household



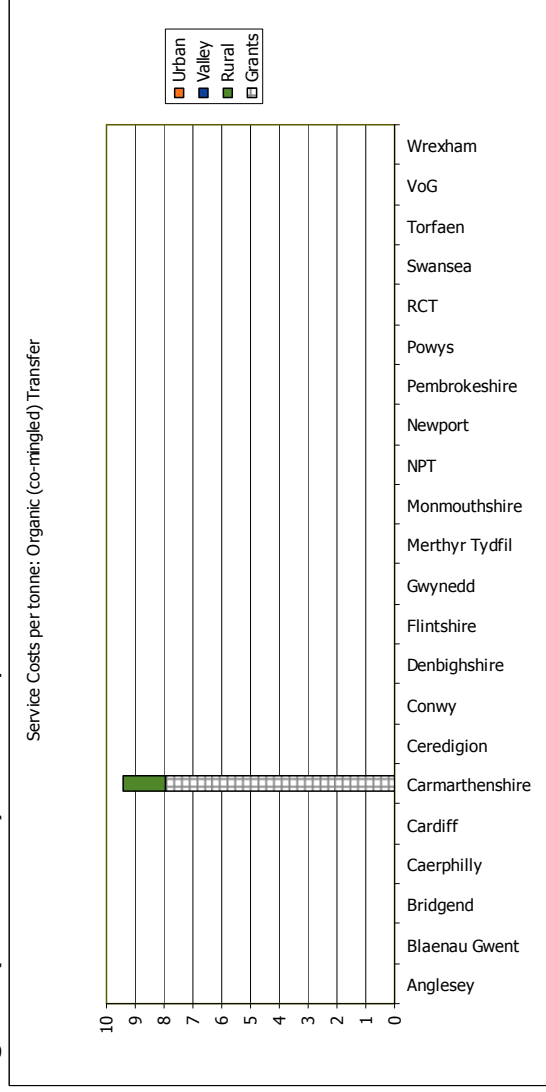
Organic (Combined) income per household



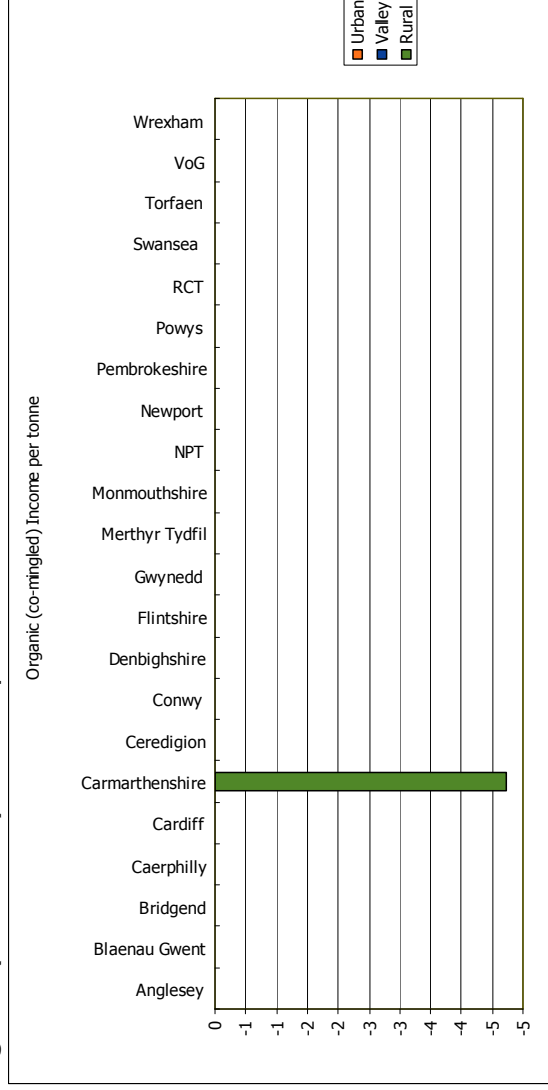
Organic (Combined) disposal per tonne

No costs recorded on WDF

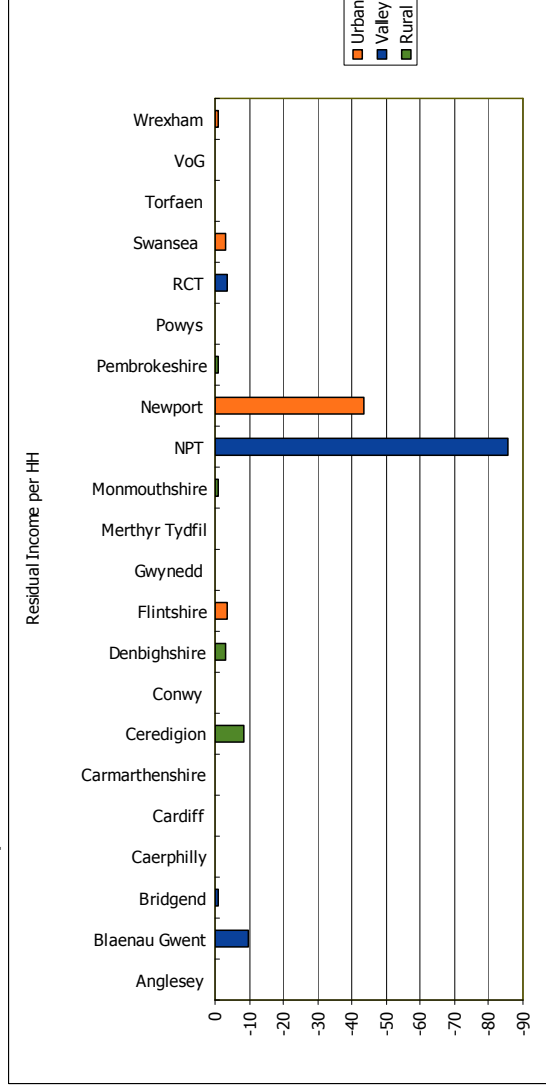
Organic (Combined) transfer per tonne



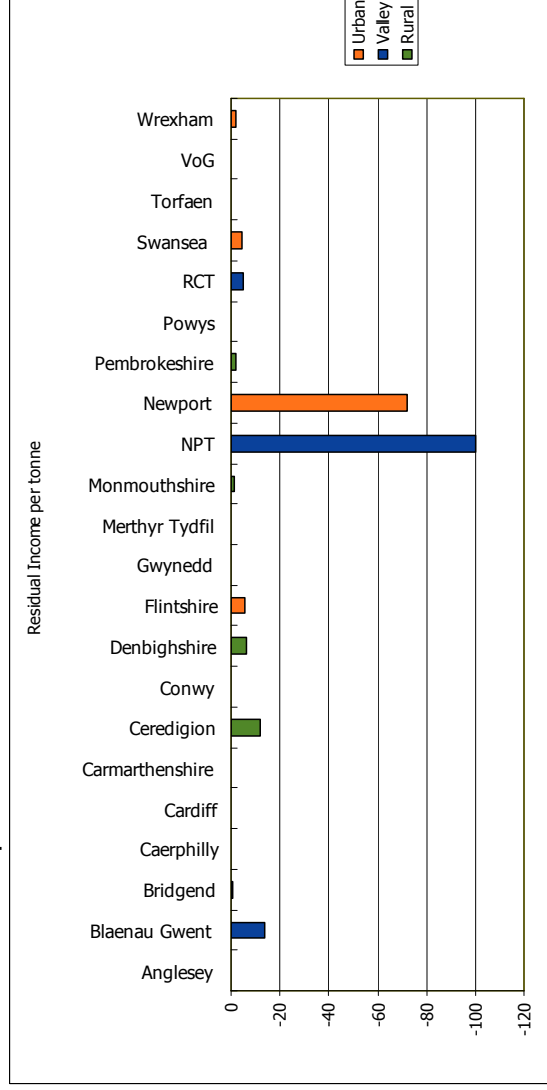
Organic (Combined) income per tonne



Residual income per household



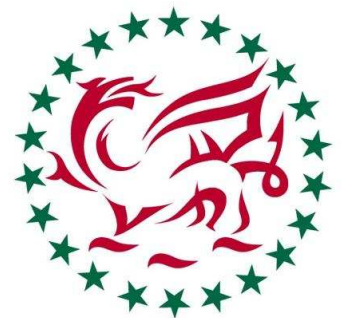
Residual income per tonne





Waste Finance Data Report 2012-13

February 2014



WLGA • CLILC

Executive Summary

1. Building upon the work previously carried out from 2008/09 to 2011/12 financial data, 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 2012/13.
2. Analysis of 2012-13 finance data suggests that Welsh local authorities continued to make steady progress during the year, with the recycling rate for Wales increasing by nearly four percentage points in exceeding the 52% target. At the same time a reduction in gross expenditure was seen, though falling incomes, partly as a result of fluctuations in the secondary commodities market, resulted in a rise in overall net service costs. The continued reduction in residual waste costs has freed resources to enable increased investment in recycling services, with more households benefitting from more comprehensive collection services.
3. Data supplied has undergone a process of checking by WLGA, and where anomalous data was identified, corrections were made by local authorities¹. 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 and in the associated annex. 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 a role for the wider Waste Improvement Programme run by the WLGA in partnership with the WG Collaborative Change Programme.

Key Findings

5. Expenditure on waste services has stabilised following a period of increasing investment, though net costs have increased when compared to 2011/12.
6. In 2012/13, gross expenditure totalled £291,575,522. This represents a reduction of £384,466 over the 2011/12 figure of £291,959,988 a fall of 0.1%. RPI for the 12 months to April 2013 was 2.9%.
7. Net expenditure on waste services was £260,996,109 which represents an increase of £6,925,680 over the 2011/12 figure of £254,070,429, a rise of 2.7%.

¹ This does not mean that all inaccuracies have been removed – there is still further work by LAs and WLGA on improving data collection and reporting

8. Overall net expenditure on household waste services² (Dry Recycling, Organic, Residual, CA and Bring) during 2012/13 was £244,076,000. This represents an increase in expenditure of £9,620,764 compared to 2011/12 figure, a rise of 4.1%.
9. Investment in organic waste services has again increased. Expenditure in 2012-13 rose by 12.3% to £50,238,816. This investment has seen a further increase of 8,113 tonnes of organic waste collected during 2012/13 (an uplift of 4%).
10. Despite an £8 per tonne increase in landfill tax, expenditure on residual waste services continued to decrease. Expenditure in 2012-13 reduced by £3,497,255 to £99,172,668 a reduction of 3.4%. This demonstrates the benefits of increased recycling and composting.
11. Kerbside dry recycling costs increased by £6,460,024 to £51,100,449 a rise of 14.5%. However during the same period, the mass of dry Recyclate collected also increased. An additional 15,882 tonnes was collected compared to the previous year, an uplift of 6.4%.
12. CA/HWRC expenditure increased by 4.7% to £41,346,688. The average diversion rate increased from 69.8% to 71.25% over the same period.
13. Overall re-use, recycling and composting rates have increased from 48.53% in 2011/12³ to 52.26% in 2012/13
14. The table below demonstrates the differences in net expenditure on the household service elements:

	11/12	12/13	% change
Dry recycling	£44,640,425	£51,100,449	+14.5%.
Residual waste	£102,669,923	£99,172,668	- 3.4%
Organic waste	£44,740,997	£50,238,816	+12.3%
CA/HWRC	£39,506,739	£41,346,688	+ 4.7%
Bring	£2,897,152	£2,217,379	- 23.5%
Total	£234,455,236	£244,076,000	+ 4.1%

² 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

³ Source : WasteDataFlow

INTRODUCTION

15. The information in this report is the continuation of a project undertaken by the WLGA which started in February 2008. Until 2007/08 local authorities reported their waste management financial data in line with individual practices. Whilst these practices 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) has had limited impact in identifying transferable efficiencies.

16. The WLGA engaged this process for three main reasons:

- To provide annual finance reports on waste management undertaken by local authorities. A significant proportion of recycling activities are funded through Sustainable Waste Management Grant (SWMG) 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.
- To allow for greater comparisons between authorities; allowing the sharing of best practice, bringing service improvement and efficiencies.

17. 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.

18. 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.

Economy and Efficiency – making use of national data locally – Benchmarking

19. The data presented in this report feeds in to the national programme of benchmarking. The County Surveyors Society (CSS) Waste Sub-group, consisting of heads of service, will select key areas for analysis which meet the strategic needs of local authorities. The WLGA Waste Improvement Programme coordinates the qualitative analysis of the selected areas and develops working documents with the Wales Audit Office (WAO) for each.

20. Using the 2011/12 data as a foundation, two areas of expenditure were chosen by CSS to be analysed in greater detail. Food waste services were examined during the first half of 2013 with kerbside dry recycling services examined during the second half of the year. Data from all 22 local authorities was analysed.

21. Results of analysis were circulated to local authorities and CSS in working papers authored by the WLGA. The findings and recommendations made have been incorporated in a WAO report as per agreed benchmarking process. Progress made by local authorities against recommendations made will be monitored by WAO who will provide an annual progress report to ministerial programme board.

22. Reports detailing main findings and recommendations made are available from WAO, based on the detailed findings and related data from the working papers authored by the WLGA.

23. Key findings and recommendations are summarised below:

Findings - Food Waste

- 1 Wide variation between highest and lowest cost within the two collection type sub-groupings. However, when the outliers are excluded, there is a greater convergence of costs overall than in other services that have been benchmarked previously.

- 2 Most food and organic waste collection services are co-dependant on other waste collection services. Consequently, costs and efficiency will be linked to the co-dependant service operated.
- 3 For 21 of 22 authorities, collection cost is greatest single contributor to overall cost.
- 4 High expenditure on materials exhibited by some authorities, mainly from purchase of caddies and biodegradable liners.
- 5 In general, treatment costs are similar across the group ranging from £45 to £55 per tonne.
- 6 Average yield seen in food only collections broadly similar across sub-group.
- 7 Capture of available food waste is generally fairly low, with authorities typically collecting less than half of the available material. (based on 2009 WRAP compositional analysis)

Recommendations

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

Key findings & recommendations: (full list of findings and recommendations can be found in benchmarking working papers)

1. Broad variation in costs across the 22 authorities.
2. Broad variation in costs within collection method sub group; kerbside sort, commingled and twin-stream.
3. Overall costs have reduced in most cases between 9/10 and 11/12. A reduction in overall expenditure, in real terms, was seen by 15 of the 22 authorities.
4. Collection cost is the biggest single contributor to overall cost. On average six times greater than the next higher cost.
5. Labour is the biggest cost element within the collection service, on average amounting to 41% of total collection cost.
6. Broad variation in treatment costs across group and within collection sub-group.
7. Average income realised from sale of recyclate varies significantly across the group.
8. Little difference in mean or median costs of kerbside sort, twin stream and commingled services.
9. Broad variation in yields across group & within each collection method sub group.
10. Four authorities achieving the highest yields of over 200kg per household per year operate a commingled or twin stream collection system; however the two authorities achieving the lowest yields also operate a commingled system.
11. Yields have increased, considerably in some cases between 9/10 and 11/12. On average across the group yields have increased by 14%.
12. Twin stream collections exhibit higher average yields, approximately 11% higher than average yield from kerbside sort systems. However with increased reporting of rejected material, this differential may be reduced. Median Yields: Commingled – 163kg, Twin stream 182kg, kerbside sort – 182kg.
13. Large differences in labour levels across group and within collection sub-group.
14. Between 2009/10 and 2011/12 a total of 12 authorities reduced the number of front line staff.

Summary and Recommendations

Data analysis has shown a significant variation across all authorities both in terms of cost and yield. Given the extent of variation seen, it is clear that a number of potential opportunities exist for authorities to reduce their costs and increase yields. During the data gathering process it became clear that a number of authorities are already going through the

process of re-shaping their collection services, therefore further analysis in the future would be likely to reveal significant changes in costs since the period under review in this paper.

The findings show that one collection method does not tend to be significantly more effective than another. Examples of high performing and lower performing services of each type can be seen. It is likely that many factors affect costs and performance, in addition to collection method, and in many cases the effect collection method has on overall service costs and performance is less significant than other factors.

Since dry recycling services were last benchmarked in 2009/10 it can be seen that variation in costs has reduced. A number of outliers exist among the group of 22 authorities i.e. Gwynedd, Powys and Wrexham. Whilst the range of values seen previously remains, when the outliers are removed, service costs of the remaining authorities can be seen to be converging. Overall net service cost at around £30 per household per year in comparison to £34 in 09/10.

Recommendations

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.

Findings and recommendations made have been accepted by the WAO and will be included in their annual waste benchmarking report which is to be presented at MPB on March 12th.

Benchmarking Methodology

Benchmarking work undertaken during 2012 highlighted a number of potential shortcomings of the methodology employed. These have been addressed by adopting a revised methodology for 2013.

- Small sample size makes it difficult to draw firm conclusions – Sample extended from 8 to 22 local authorities
- Selection criteria used often resulted in the same authorities repeatedly being selected for benchmarking and contributed towards a skewed distribution of data – All 22 local authorities sampled from 2013
- Benchmarking schedule - Number of topics examined reduced from three to two per year to allow better scheduling of activities (to avoid busy periods such as financial year end) and to allow for the additional data from extended sample size to be analysed.

Benchmarking 2012/13 data

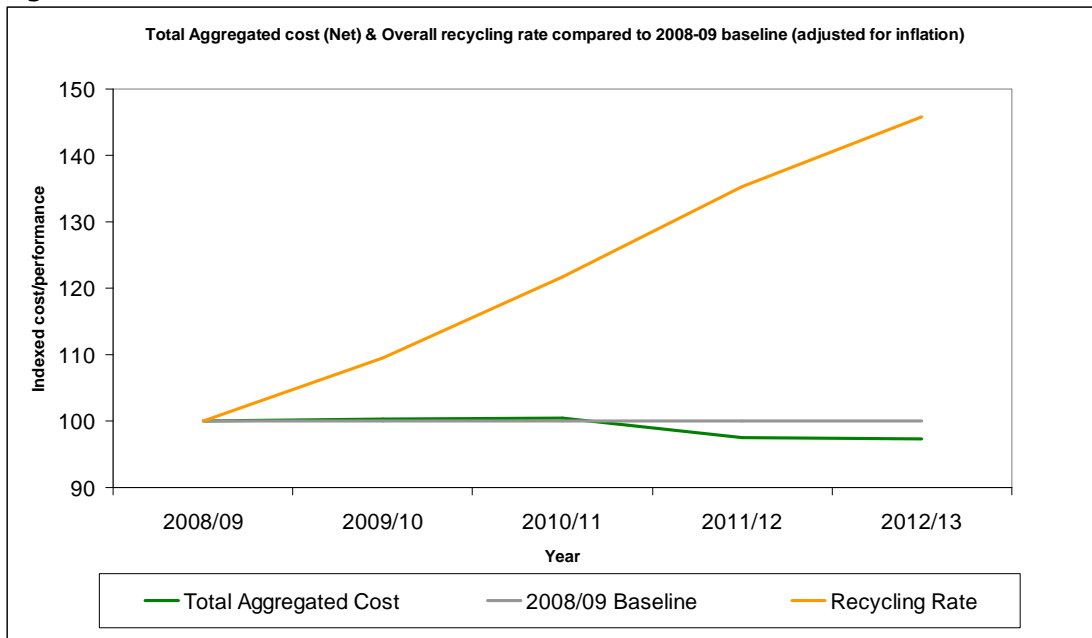
24. Two topics will be examined during 2014. Topics to be selected by CSS group.

Detailed Findings

Total Service Data

25. From the data it can be seen that overall expenditure on waste services during 2012/13 was £291,575,522 (£260,996,109 net of income). This represents a fall of £384,466 when compared to the 2011/12 figure of £291,959,988 a drop of 0.1%. It appears as though total expenditure has stabilised following a period of significant investment, supported by the Sustainable Waste Management Grant (SWMG). However, a reduction in incomes, partly as a result of lower incomes realised for the sale of dry recyclate due to deterioration in the secondary commodities market, has seen net costs increase by £6,925,680 to £260,996,109. This represents an increase in expenditure of 2.7% which is roughly in line with inflation (RPI for 12 months to April 2013 2.9%, CPI 2.4%). The chart in Fig 1 (below) shows how net expenditure on all waste services has changed in the 5 years since the finance project began. Costs have been adjusted for inflation (RPI) 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 5 years, exhibiting a small reduction compared to 2008/09 levels. However, during the same period recycling rates have increased significantly, from 35.85% in 2008/09 to 52.26 in 2012-13.

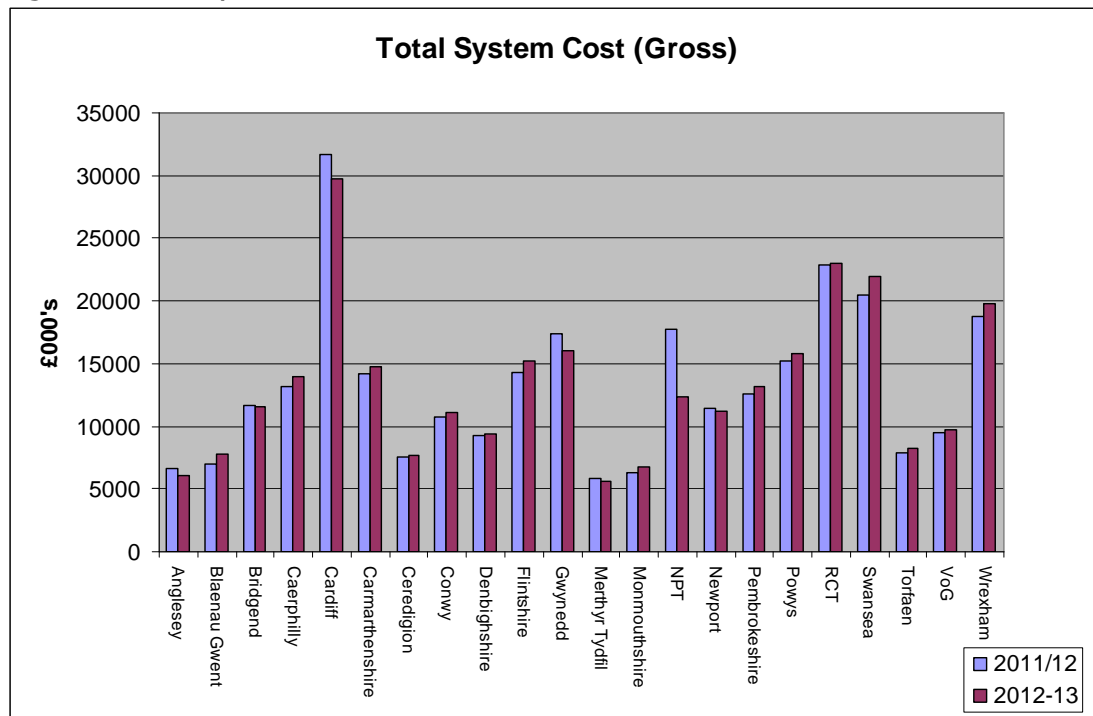
Fig 1



26. Sustainable waste management grant allocated to local authorities totalled £71,000,000 during the same period. A reduction of £1,000,000 compared to the 2011/12 allocation.

27. Graph in Fig 2 Below shows total expenditure on Waste services by each local authority in Wales for financial years 2011/12 and 2012/13.

Fig. 2 – Total System Costs



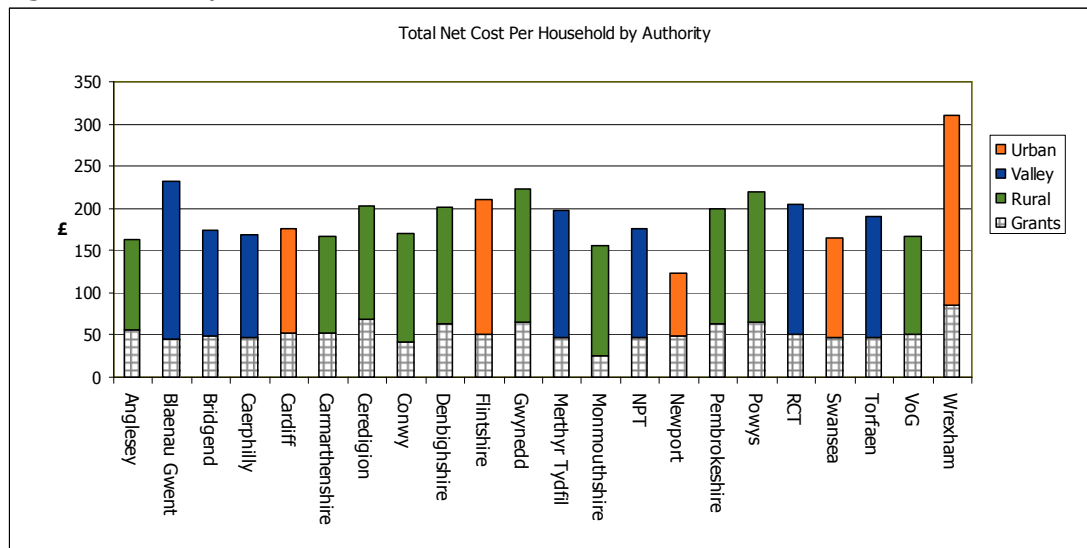
28.15 Local authorities have demonstrated an increase in expenditure whilst 7 local authorities exhibited a reduction in expenditure. The data collection exercise does not determine “why” these changes have been made, but it is intended, via the CSS facilitated benchmarking process to further investigate the factors affecting service costs.

Use of Grants⁴

29. The graph in Fig 3 Below shows total net expenditure on waste services for each local authority during financial year 2012/13. Contribution made by grant is represented as ‘hatched’ portion of bar. Expenditure is shown on a cost per household basis.

⁴ Grants = Sustainable Waste Management Grant plus other grants received e.g. procurement support, SCIF, RCAF, WAW funding

Fig 3 – Total System Costs 2011/12



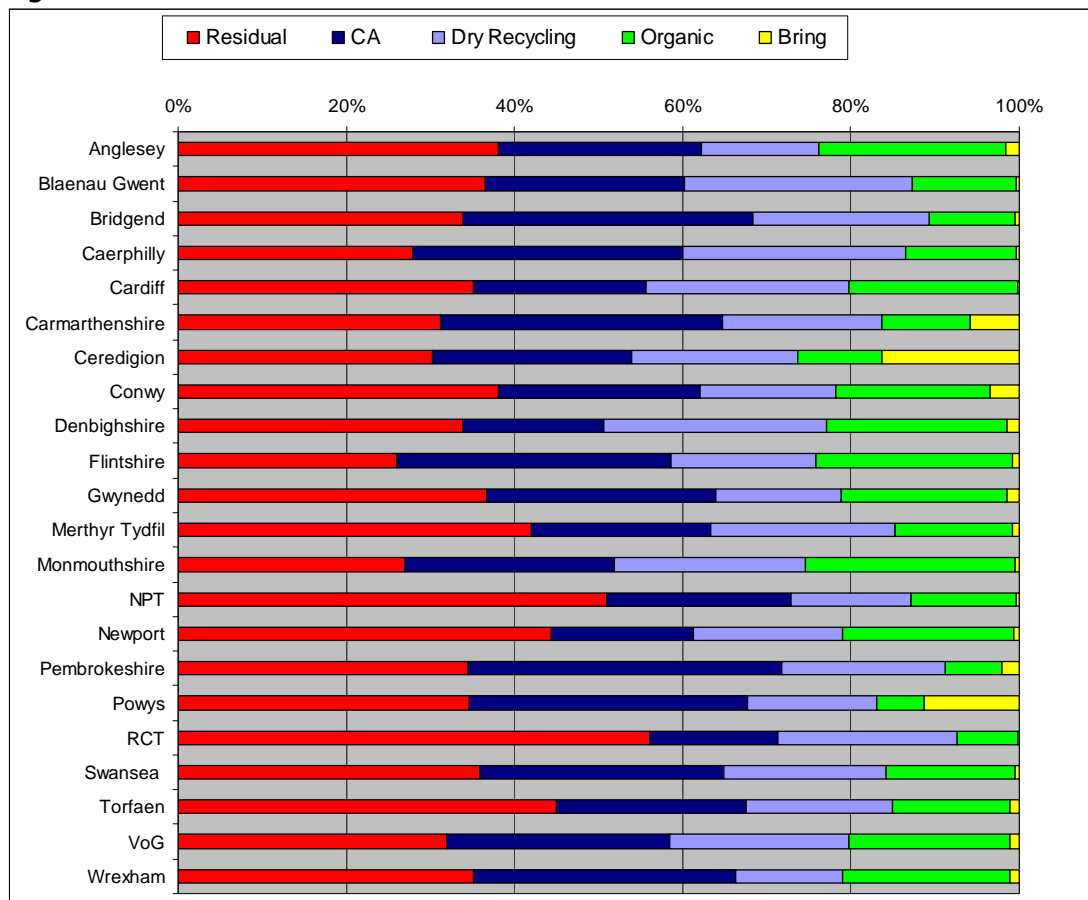
30. This graph demonstrates that on a per household basis, grants are distributed fairly evenly across the group. As the graph shows only revenue grants, (capital grants are not shown) Authorities that attribute a greater proportion of Sustainable Waste Management Grant (SWMG) to capital projects will 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.

31. 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

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

Fig 4



N.B. above does not include trade, clinical, bulky or other MSW.

Household Waste Service Costs

33. The following data compares expenditure on household waste services across Welsh local authorities. *The Household Waste Service cost can be defined as the aggregated total of cost associated with Kerbside dry recycling, Kerbside food waste, kerbside green waste, civic amenity sites, 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.

34. 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 analysis will be required to determine whether the type of local authority impacts upon cost. 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 offered, 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 red bars on the chart.

35. It is not possible to differentiate between SWMG and other types of grant when allocated against service area in WDF. Therefore grant contribution shown in the following graphs includes other grants in addition to SWMG.

36. From the data provided, total revenue grants allocated add up to £73,495,756. Total SWMG in 2010-11 was £71,000,000. When RCAF, SCIF and other grants are removed and capital element of SWMG taken into account, total SWMG allocated from the data adds up to £71,230,131. The relatively small error seen is likely to be a result of rounding of figures within the data submitted.

Fig 5 - Total household waste service cost per household

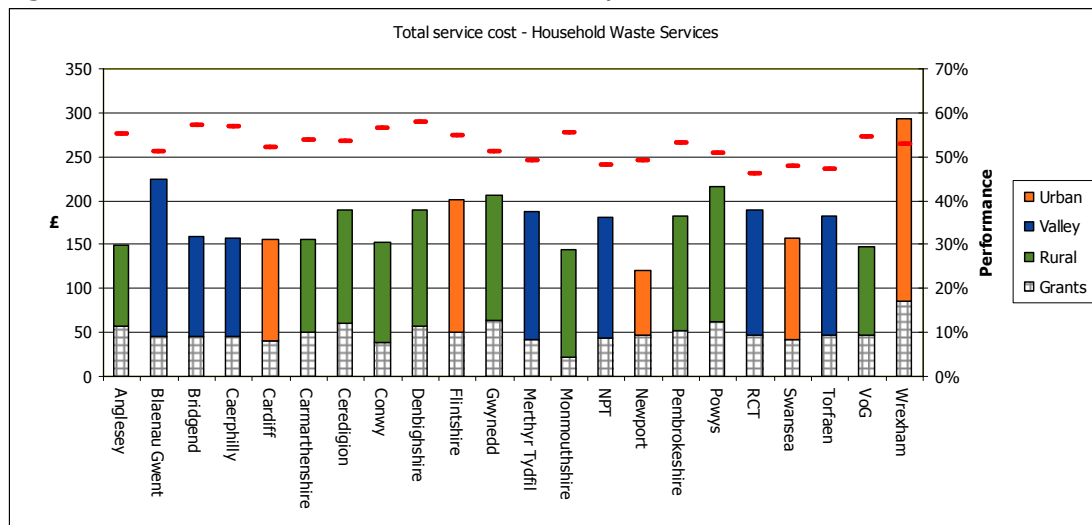
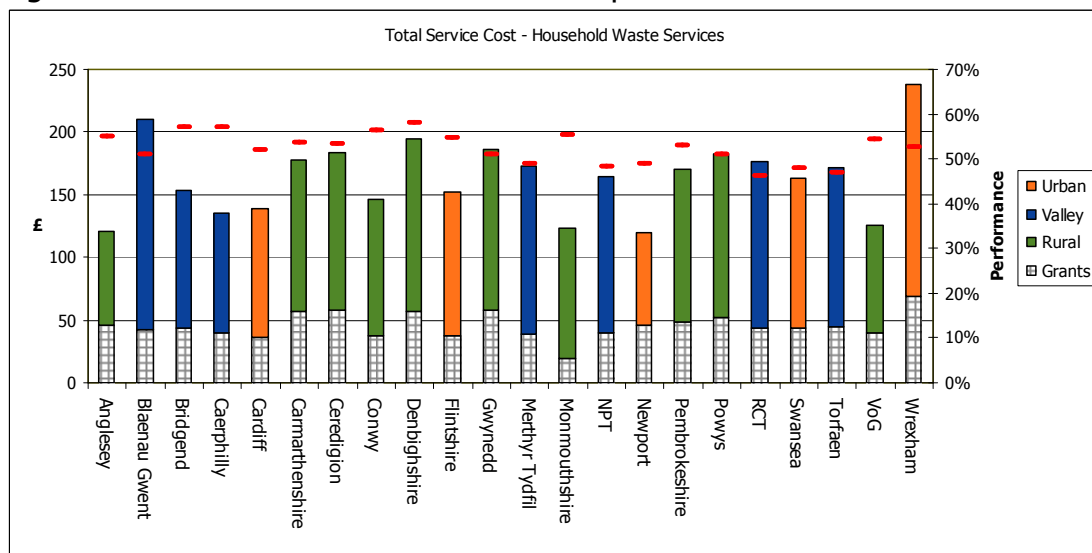
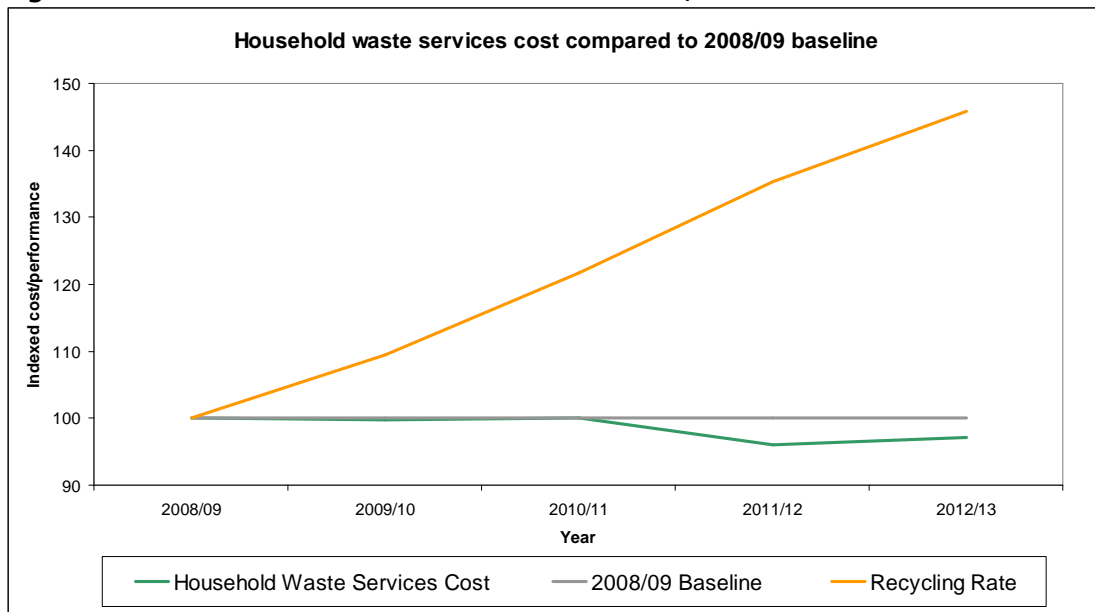


Fig 6 – Total household waste service cost per tonne



37. Overall net expenditure on household waste services during 2012/13 was £244,076,000. This represents an increase in costs of £9,620,764 compared to 2011/12, a rise of 4.1%. During the same period, the overall recycling rate for Wales increased from 48.53% to 52.26%.

Fig 7 – Household waste service cost since 2008/09



38. The longer term trend in household waste service costs are shown in Fig 7. It can be seen that costs, adjusted for inflation, have remained fairly stable, currently slightly lower than the 2008/09 baseline. However, recycling rates have increased significantly over the same period.

Recycling

39. 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 axis on right hand side of graph.

Total dry recycling service cost

40. Figs 8 & 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 authority type and contribution made by grant is retained.

Fig 8 – Dry recycling service cost per household

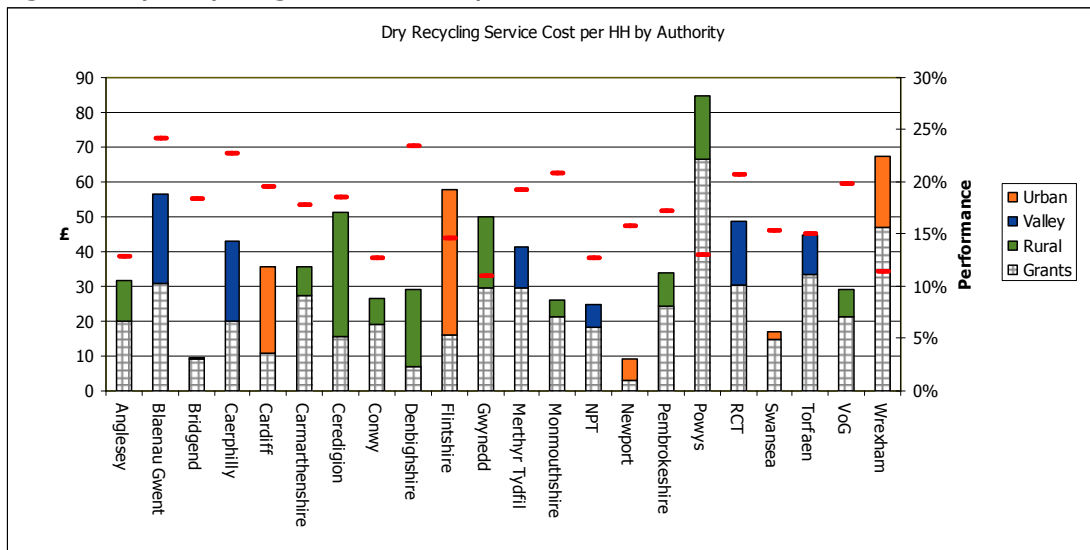
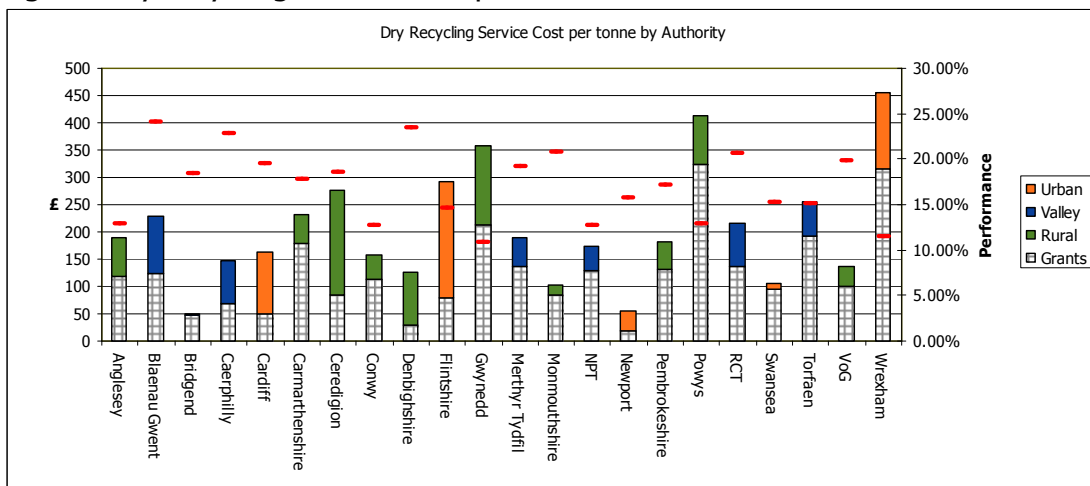


Fig 9 – Dry recycling service cost per tonne



What are the graphs telling us?

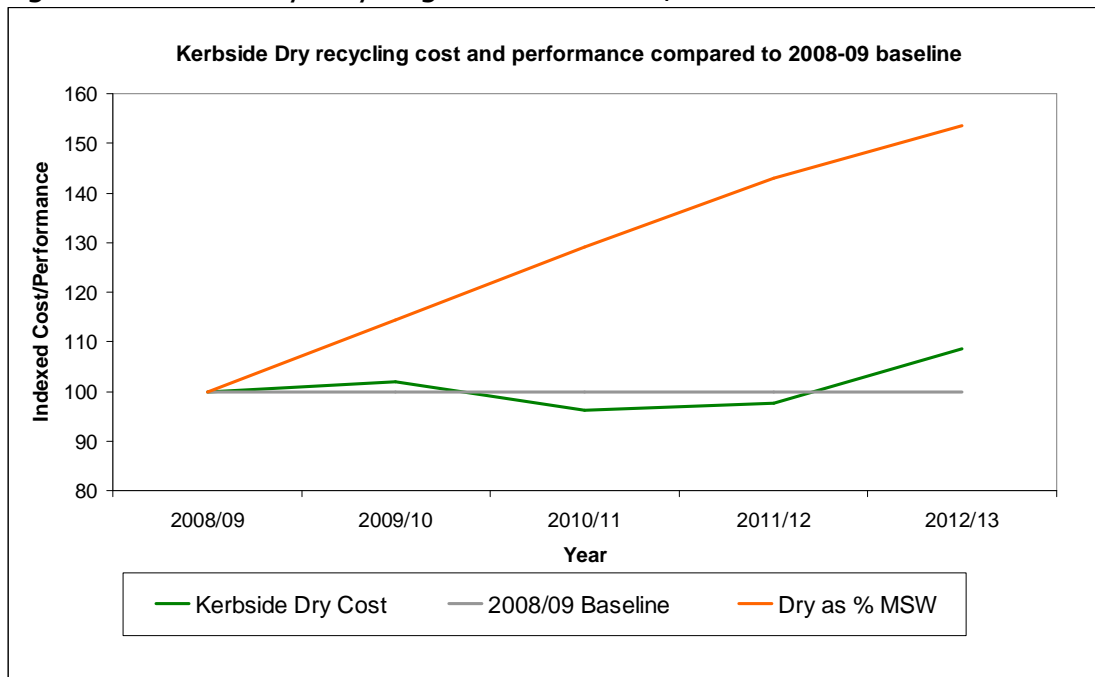
41. Both cost and performance vary significantly. Ideally, services should deliver high performance, in terms of mass collected, whilst exhibiting lowest cost possible. For example, Denbighshire’s service collects 10,248 tonnes of dry recyclate, which equates to 23.5% of their total MSW arisings, placing their performance within the top quartile. The cost of the service is around the average value for the group at £29.26 per household. Therefore a high level of performance is being achieved at a reasonable cost. Likewise, Bridgend’s dry recycling service makes a significant contribution to their overall recycling rate, with 18.4% of total MSW being collected via their kerbside collection scheme, whilst service cost is the lowest seen across the group at £9.66 per household. What we want to see is a high value recorded against performance (red line) and a low value recorded for service cost (solid bars) – the wider the gap the more effective and efficient the service.

42. 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.
43. The range of values seen in the data is similar to that seen for 2011/12. The service exhibiting highest cost is approximately eight times that of the lowest cost authority. However, the range of values seen is not a good indicator of the performance of the group as a whole. The median cost per household has increased from £32.02 to £35.63 per household, but as yields have also increased compared to 2011/12 the increase in median cost per unit mass is less significant, rising from £180 to £185 per tonne.
44. From the core data it is also possible to compare 2012/13 overall dry recycling service expenditure with that of 2011/12, in addition it is also possible to compare the grant contribution to dry recycling services over the same period:

	11/12	12/13	% change
Dry recycling	£44,640,425	£51,100,449	+14.5%.
Grant	£31,948,739	£30,049,362	- 6.0 %

45. Expenditure on dry recyclate services increased by more than 14% during 2012/13. Whilst expenditure did increase, the mass of material collected also increased over the same period. Mass collected increased by 15,882 tonnes an uplift of 6.4%. It can be seen that approximately two thirds of expenditure on dry recyclate collection is supported by grant funding. A significant reduction in income, of over £2 million, was seen in 2012/13 compared to the previous year. This decrease in income was largely due to a weakening of the secondary commodities market during 2012/13. This has contributed to the increase in net expenditure seen. For example, Typical ex works prices for aluminium cans fell from £940-£1010 per tonne in September 2011 to £730-£800 in September 2012. Likewise, waste paper (News & Pams) fell from £129-£139 to £85-£95 per tonne over the same period. This pattern was seen for a wide range of materials. (Data from letsrecycle.com archive).

Fig 10 – Kerbside dry recycling cost since 2008/09



46. The longer term trend in kerbside dry recycling costs is shown in Fig 10. It can be seen that expenditure in 2012/13 has crept above the 2008/09 baseline, but performance, in terms of mass of dry Recyclate collected as proportion of total MSW has continued to increase steadily.

Collection

47. From the data it is possible to plot the individual component costs of the service. Graphs in Figs 11 & 12 show the dry recycling collection cost on both a per household and per tonne basis. Collection frequencies vary across the group and as frequency of collection is likely to affect collection cost, colour coding shows whether authorities collect recyclate on a weekly or fortnightly basis. Where authorities operate both weekly and fortnightly collections, the proportion of households receiving each type of collection is shown. Figures used are a yearly average derived from data entered in WDF by the local authorities themselves. Costs are net of any income.

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

Fig 11 – Dry recycle collection cost per household served

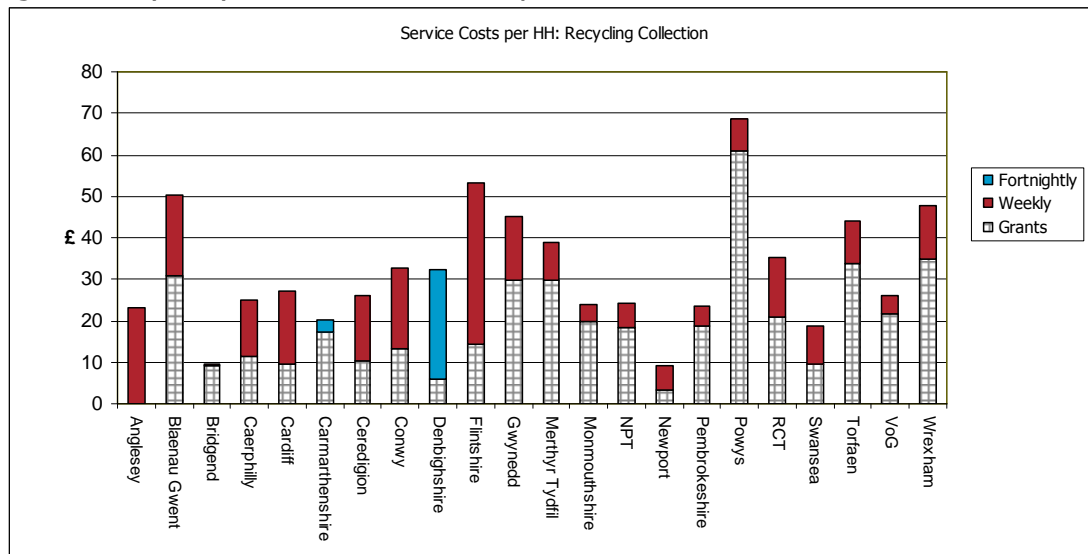
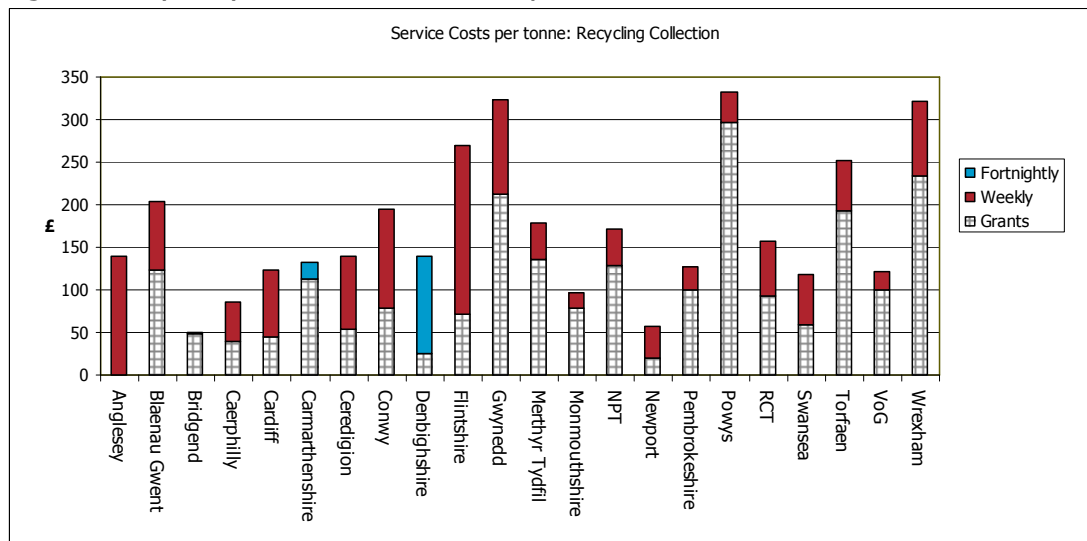


Fig 12 – Dry recycle collection cost per tonne collected.



Transfer costs

49. According to data provided, few authorities incur costs from transfer of recycle following its collection. 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 included in the annexe.

Treatment costs

50. Figs 13 & 14 show the costs incurred from treatment of collected dry recycle. 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.

Fig 13 – Dry recycling treatment cost per household served

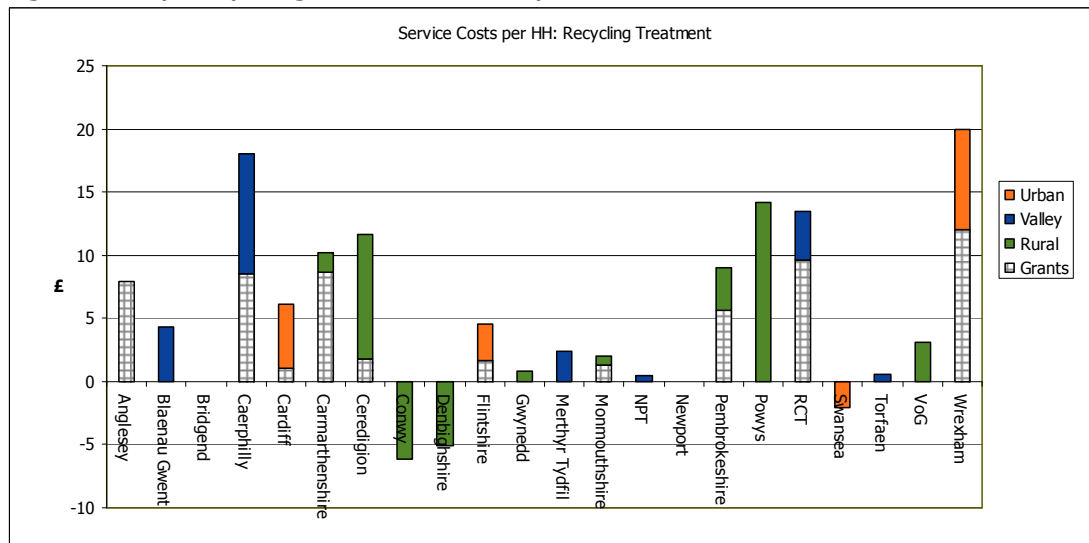
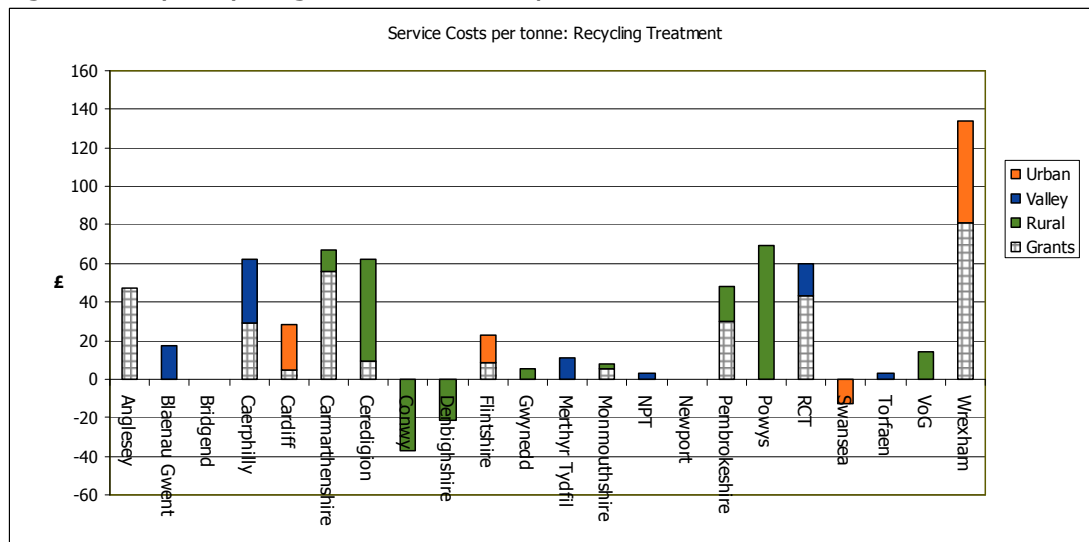


Fig 14 – Dry recycling treatment cost per tonne



51. 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)

52. A number of authorities exhibit a negative cost for treatment activities. This occurs when the income received from the sale of the recyclate treated is greater than the cost of treatment activities themselves.

Income

53. Charts in Figs 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 reduced significantly compared to the previous year.

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

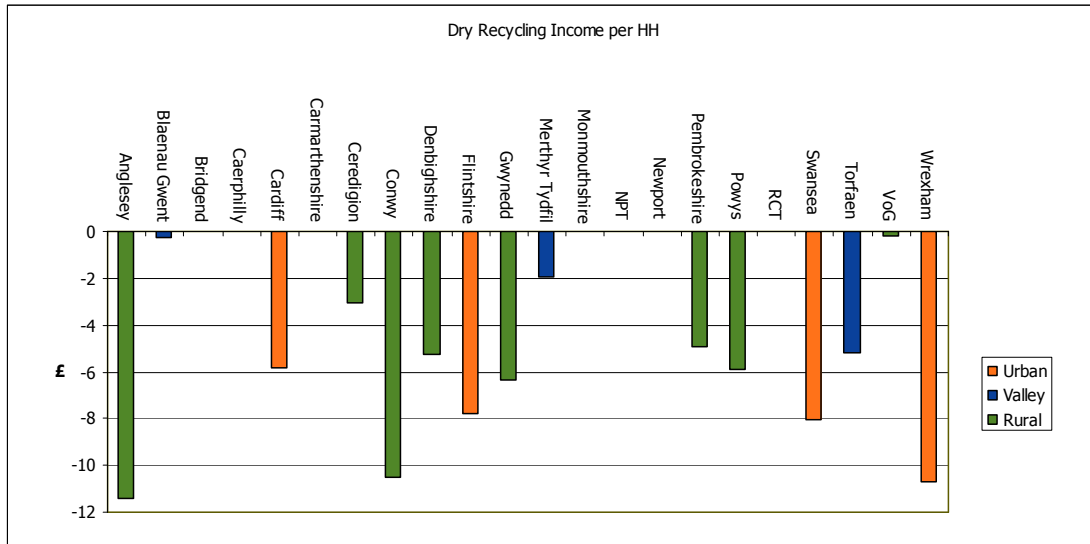
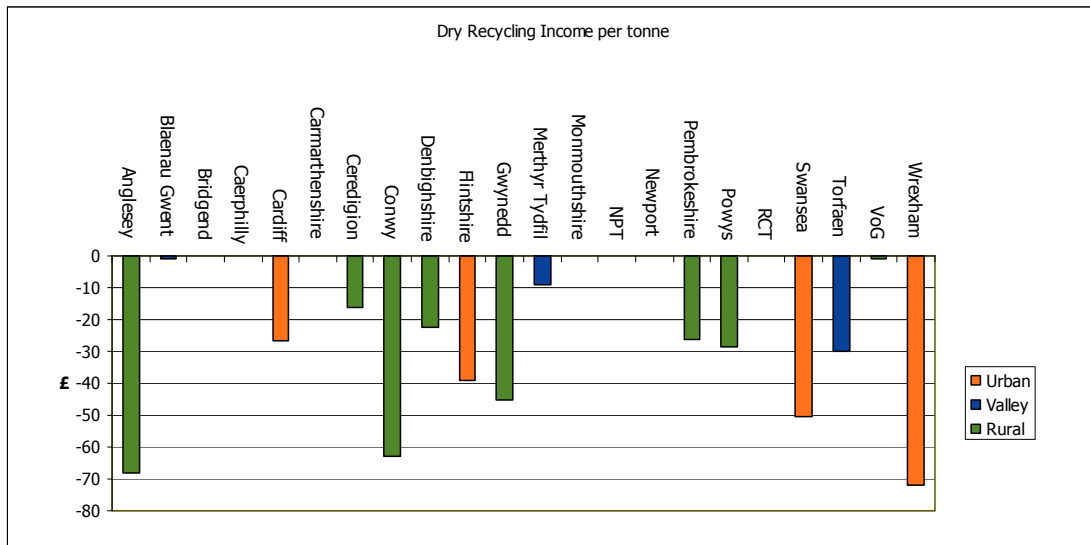


Fig 16 – Income per tonne from sale of dry recyclate



Organic Waste Services:

54. As with recycling, performance is cross referenced against cost in the following graphs. Performance data shows the mass of waste collected by the service as a percentage of total MSW.

55. Data is split across three headings covering food-only collections, green-only collections, and co-mingled green and food collections.

Food waste only

56. The total cost of providing food waste collection are shown in Figs 17 (cost per household served) and Fig 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.

Fig 17 – Food waste service cost per household served.

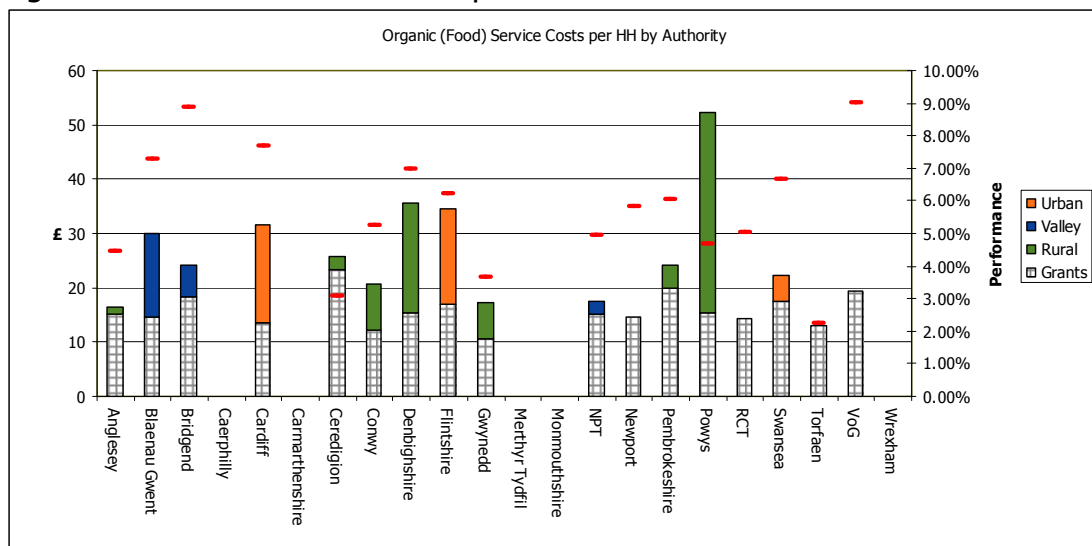
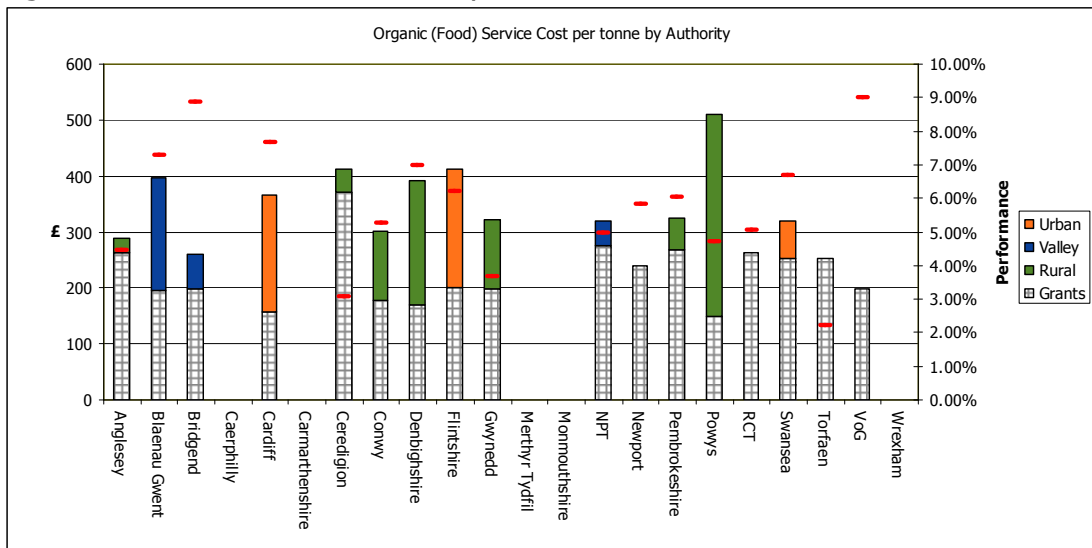


Fig 18 – Food waste service cost per tonne



57. Both cost and performance vary across the group. A wide variation can be seen in yield as % of total MSW, from around 2% to 9%. Greater divergence between cost bar and performance bar is likely to signify a higher performing service. For example, the service operated by the Vale of Glamorgan exhibits both the lowest cost and highest yield across the group.

Green waste only

58. The total cost of providing green waste collection are shown in Figs 19 (cost per household served) and Fig 20 (cost per tonne collected). The performance, in terms of mass of green waste collected as proportion of total MSW is shown on the right-hand axis and can be seen as the red line on the chart.

Fig 19 – Green waste service cost per household served.

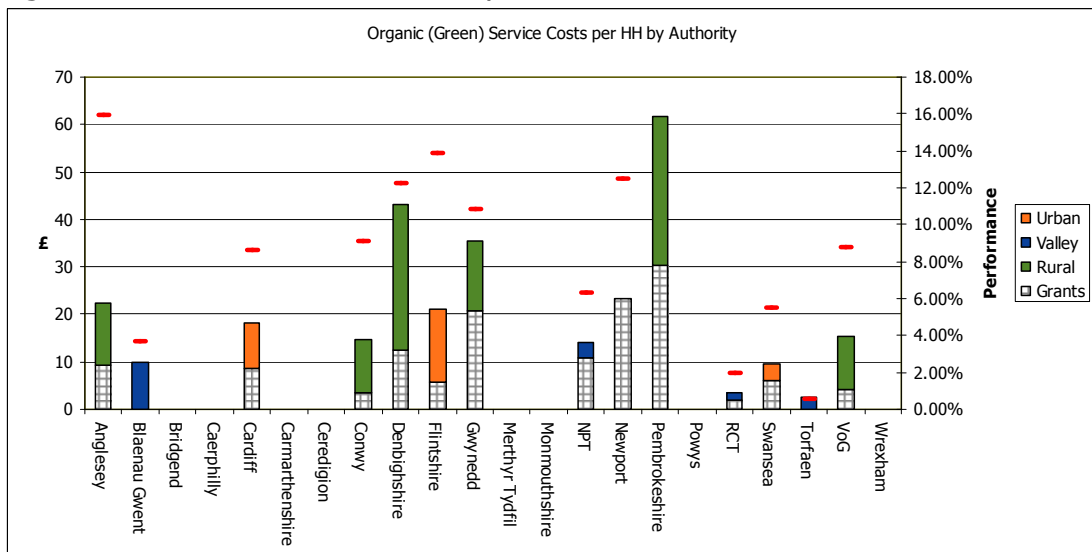
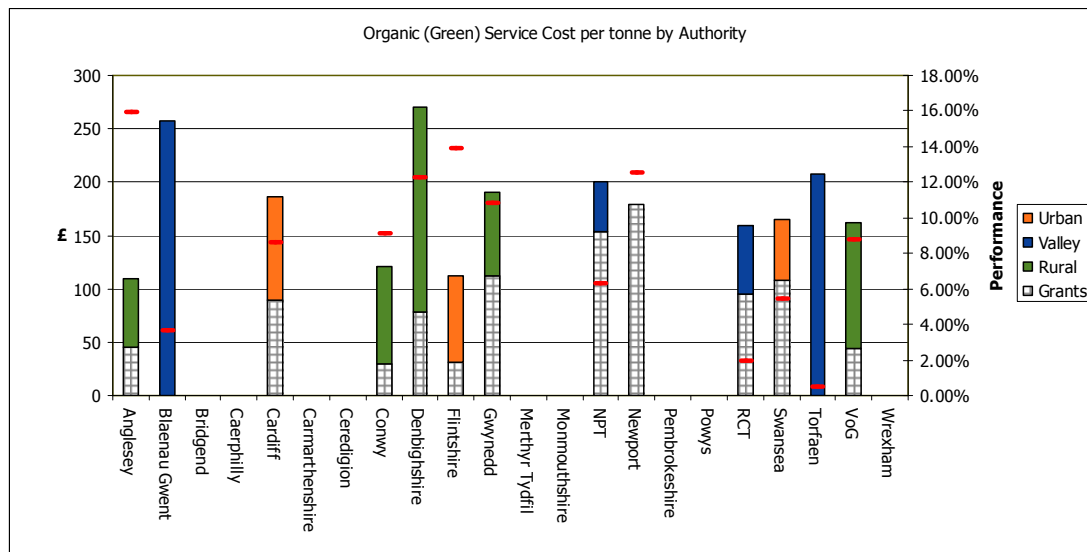


Fig 20 – Green waste service cost per tonne



59. Again, a wide variation in both costs and performance can be seen across the group. The divergence between cost and performance data seen for Anglesey would suggest that it is a relatively efficient service. The high yield seen, approx 16% of total MSW, may also account for the difference in relative unit costs for Anglesey when considered on a per household and per unit mass basis. On a per household basis, Anglesey's cost are slightly higher than the group average, however, due to the large yield, unit cost per tonne is the lowest of the group.

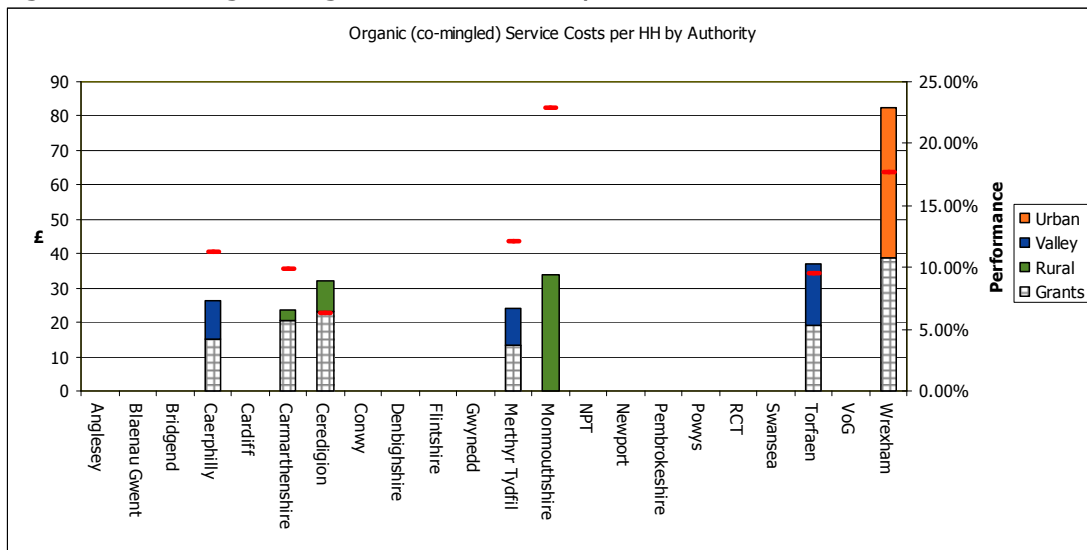
60. When considering the variations seen in yield and cost, it should be noted that some services are provided free of charge to the householder, whilst others operate chargeable schemes. Charging is likely to significantly affect levels of participation which in turn will affect yields seen and overall service costs.

61. During 2012/13 a number of authorities that previously collected their food and green waste in a combined service have moved to a separate collection service for the two organic waste fractions e.g. Gwynedd, Cardiff and Torfaen.

Co-mingled food and green waste

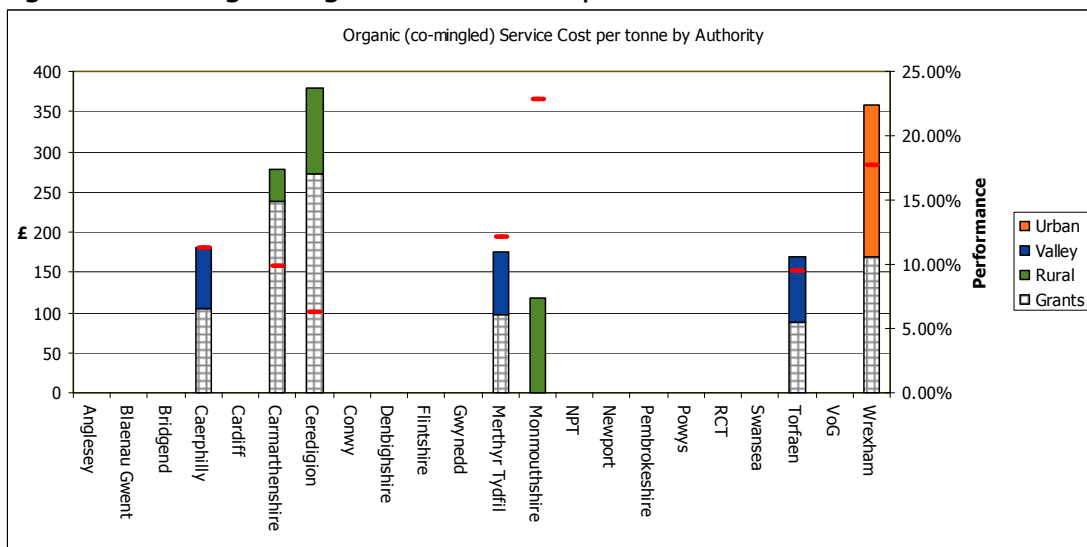
62. Some authorities co-collect the food and green waste fractions. The total cost of providing this combined food and green waste service are shown in Figs 21 (cost per household served) and Fig 22 (cost per tonne collected). The performance of the service, as mass collected as % of total MSW, is shown on the right-hand axis and can be seen as the red line on the chart.

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



N.b. Merthyr Tydfil CBC collect food and green waste segregated in different compartments on the same vehicle. Treatment of both fractions carried out separately with separate costs recorded. However as collection costs cannot be disaggregated, whole service is shown in graphs with combined collection.

Fig 22 – Co-mingled organic service cost per tonne



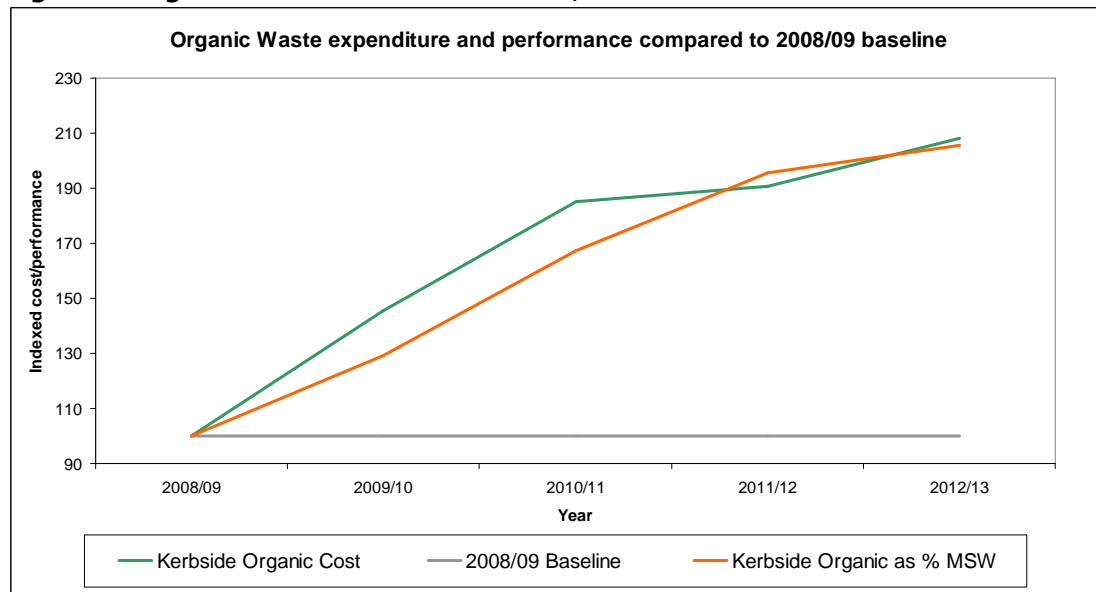
63. For all organics collections it can be seen that there are wide variations in costs across the group. This is likely to result from the fact that a number of services were in the process of being introduced or were undergoing expansion during the year. One off costs arising from the start up of new services, or the expansion of existing schemes may have a distorting effect on the costs seen. It is expected that as these services mature, yields will improve and unit costs will decrease. The variation in costs is most pronounced when comparing on a per tonne basis. Low yields from new services or from chargeable green waste services, coupled with elevated start up costs result in some authorities exhibiting very high service costs.

64.If all costs associated with various organic collection services are aggregated, it is possible to compare total expenditure in 2012/13 with that of 2011/12:

	11/12	12/13	% change
Organic	£44,740,997	£50,238,816	+12.3%
Grant	£30,177,159	£29,173,658	- 3.3%

65.2012/13 saw another increase in expenditure on organic waste services, up by 12.3% when compared to 2011/12. A number of authorities introduced changes to their services, with more authorities moving from combined collection of organic wastes to separate collection of food and green waste. It is likely that additional costs will have been incurred during this process, contributing to the increase in overall costs seen. Whilst expenditure did increase, performance in terms of mass of material collected also improved, with an additional 8,113 tonnes of organic waste collected compared to the previous year.

Fig 23 – Organic waste costs since 2008/09



66. The longer term trend can be seen in Fig 23. The five years since 2008/09 has 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.

Collection costs

67. 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

68. The food waste collection cost is shown in Figs 24 (cost per household served) and Fig 25 (cost per tonne collected). Colour coding denotes frequency of collection.

Fig 24 – Food waste collection cost per household served.

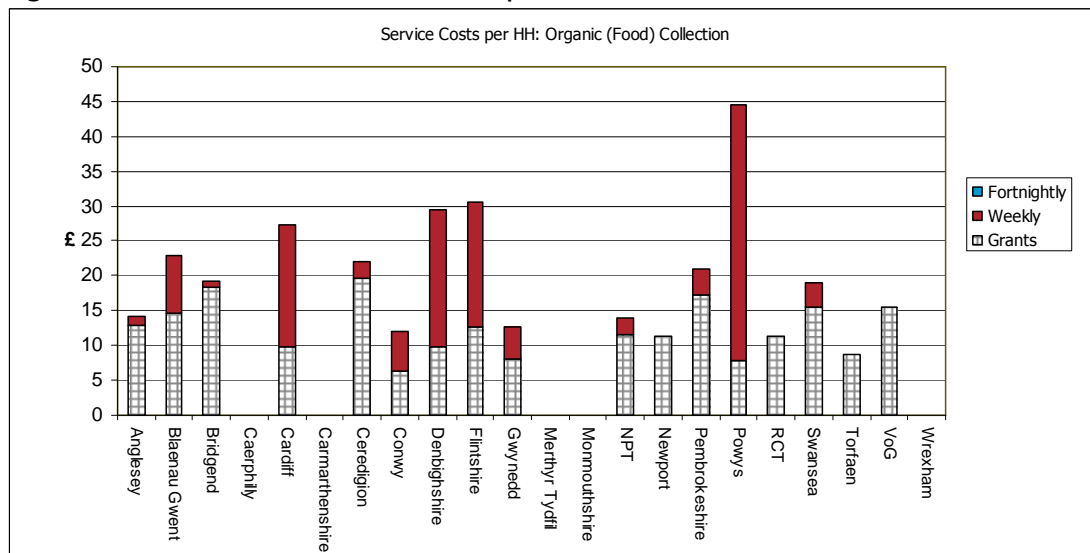
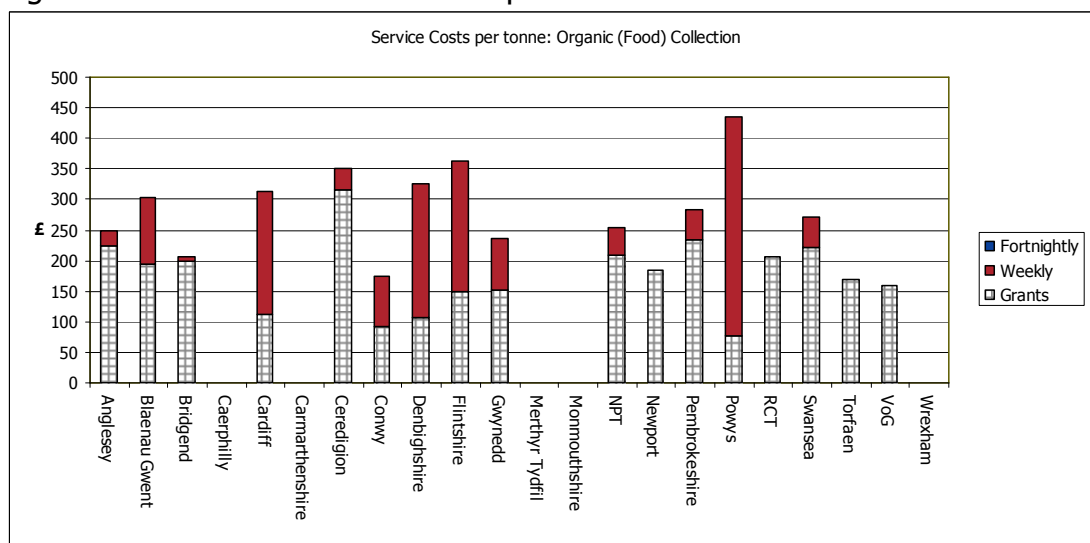


Fig 25 – Food waste collection cost per tonne



Separate green waste collection

69. The green waste collection cost is shown in Fig 26 (cost per household served) and Fig 27 (cost per tonne collected). Colour coding denotes frequency of collection.

Fig 26 – Green waste collection cost per household served.

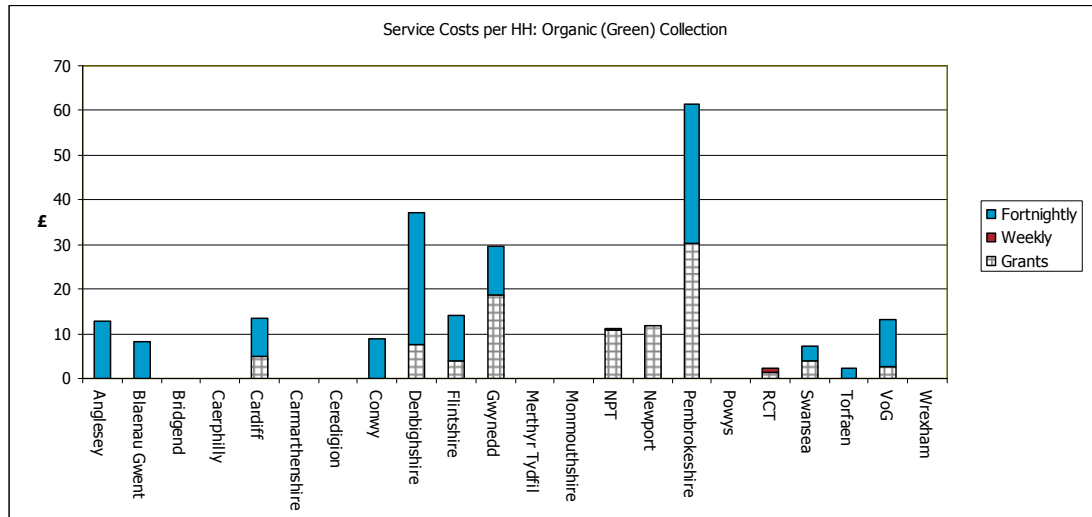
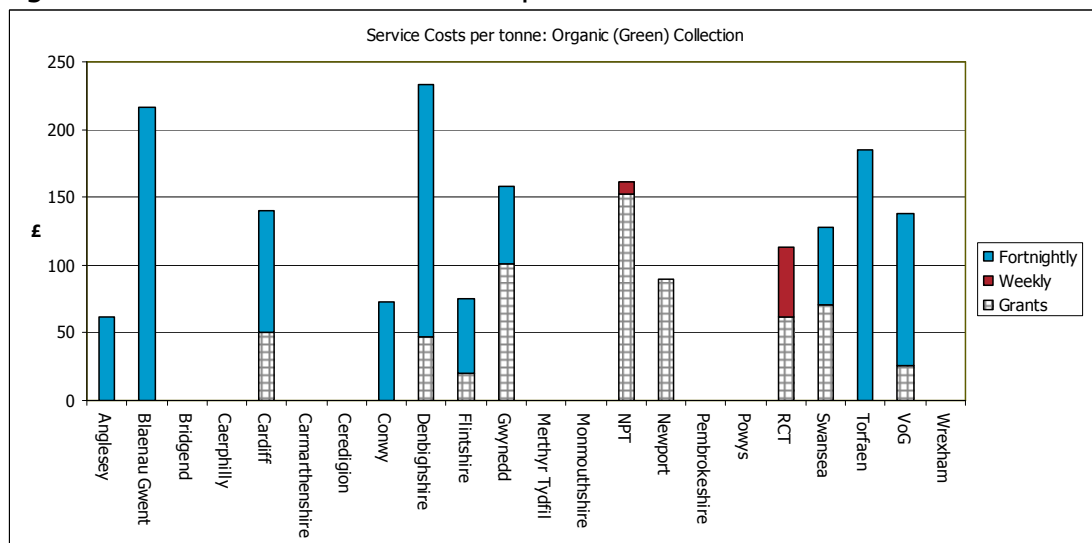


Fig 27 – Green waste collection cost per tonne



Combined food and green waste

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

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

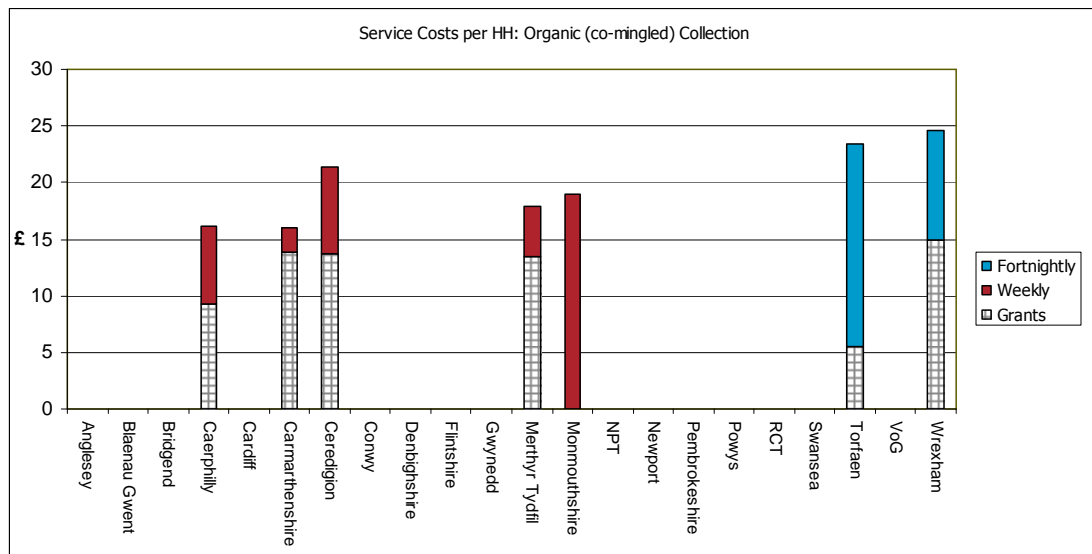
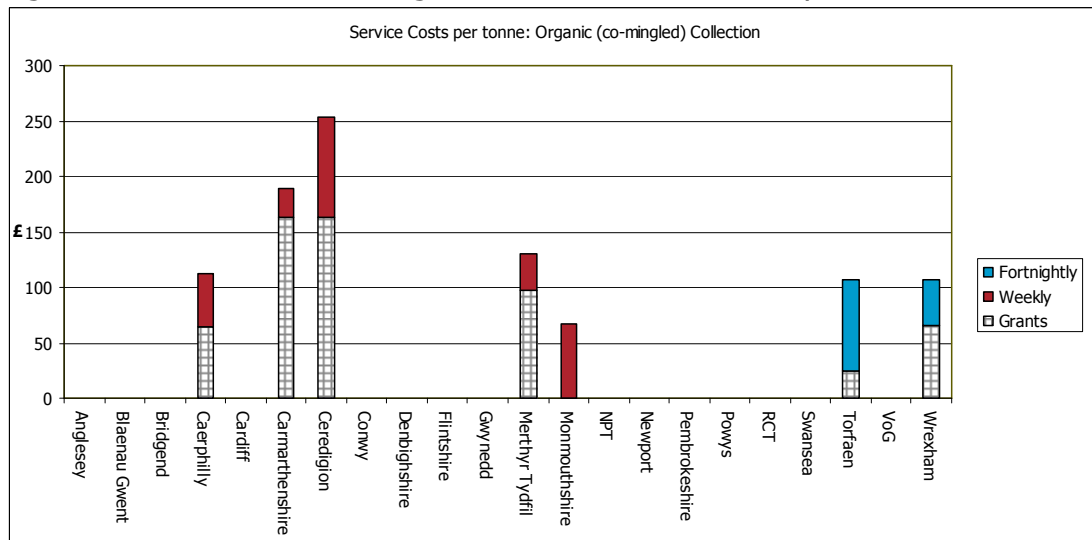


Fig 29 – Combined food and green waste collection cost per tonne



71. It can be seen that for all organic waste services, collection costs are by far the greatest contributor to overall service cost.

Treatment Costs

72. Organic material collected at the kerbside will require some form of treatment. Costs incurred will be dependant 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.

73. During the transition from combined to separate collections, both Cardiff and Gwynedd have attributed at least part of their treatment costs against combined collection. In both instances, as the two organic fractions were collected separately during the whole year, the treatment costs listed against combined collection have been apportioned, based on mass of material collected, to the separate food and green waste service headings.

Separate food waste

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

Fig 30 – Food waste treatment cost per household served.

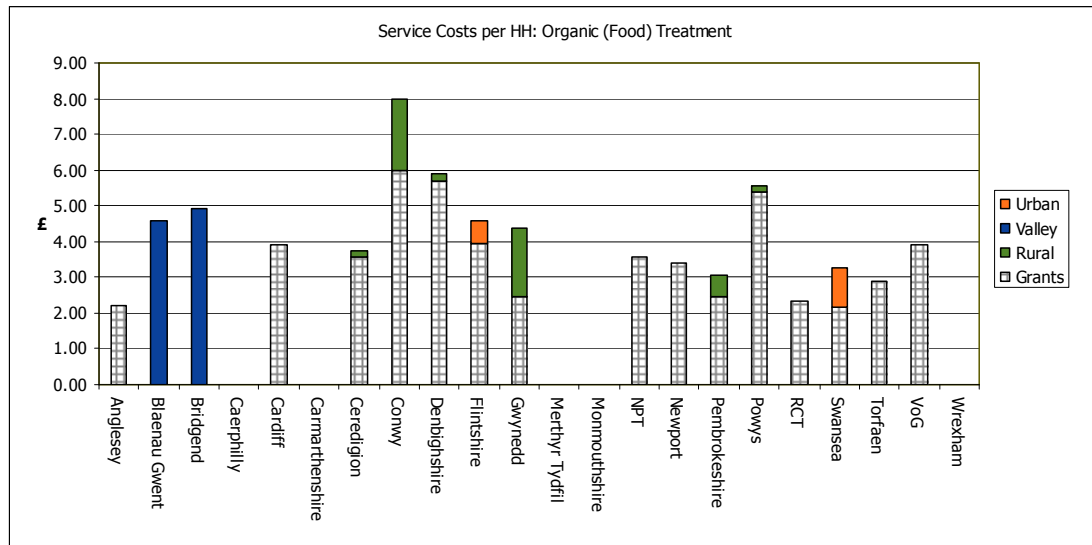
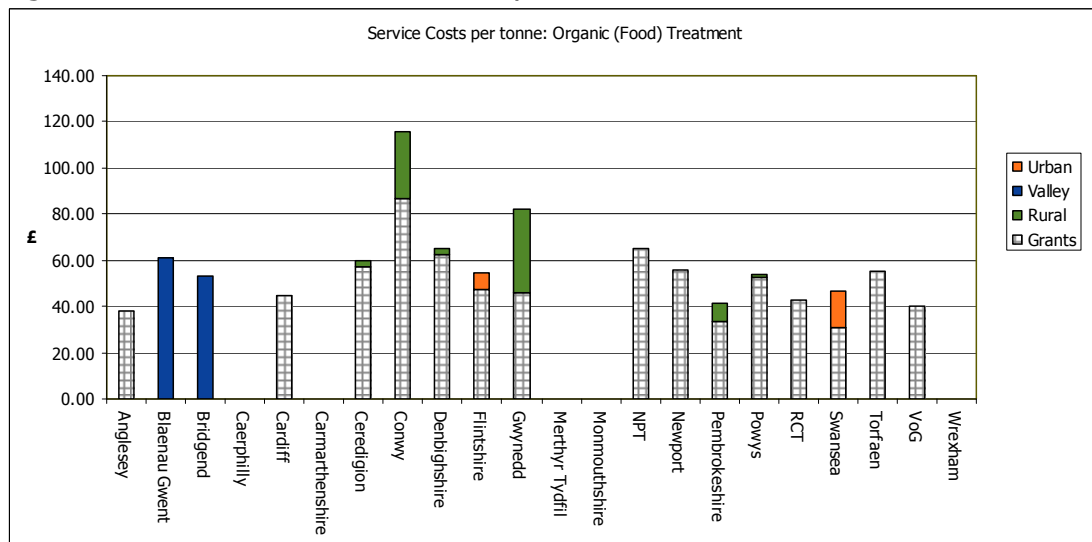


Fig 31 – Food waste treatment cost per tonne



Separate green waste

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

Fig 32 – Green waste treatment cost per household served.

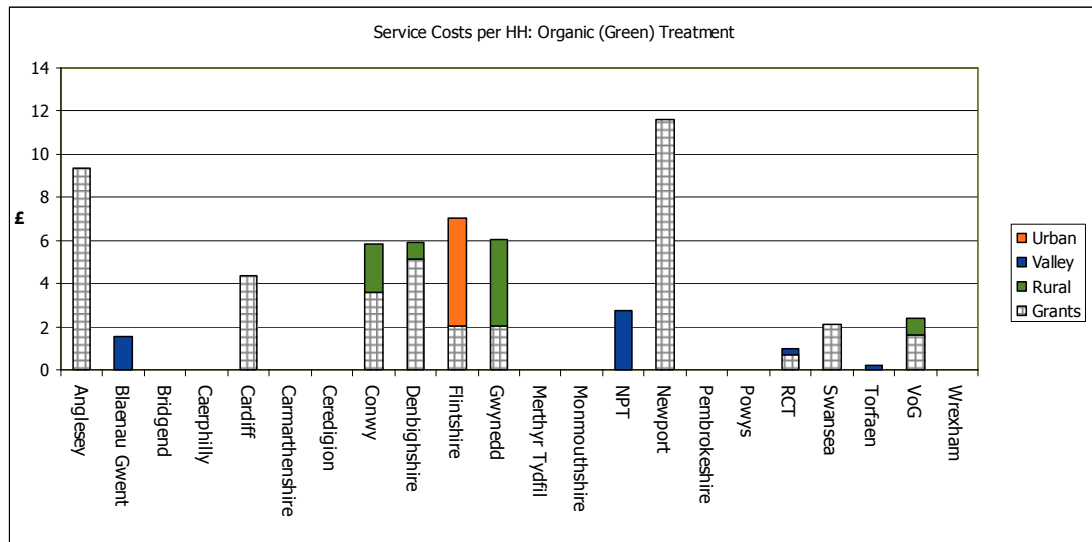
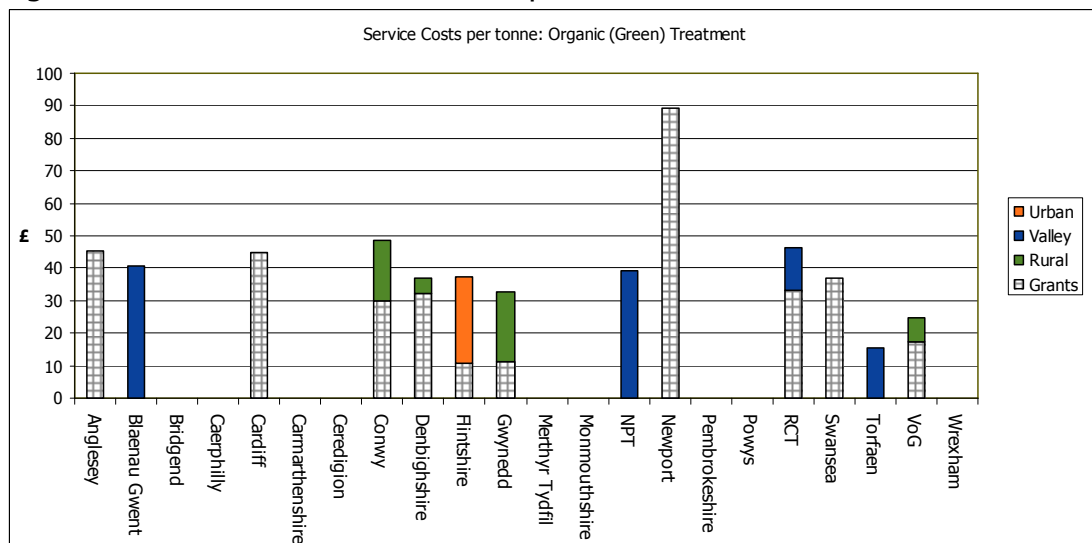


Fig 33 – Green waste treatment cost per tonne



Combined food and green waste

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

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

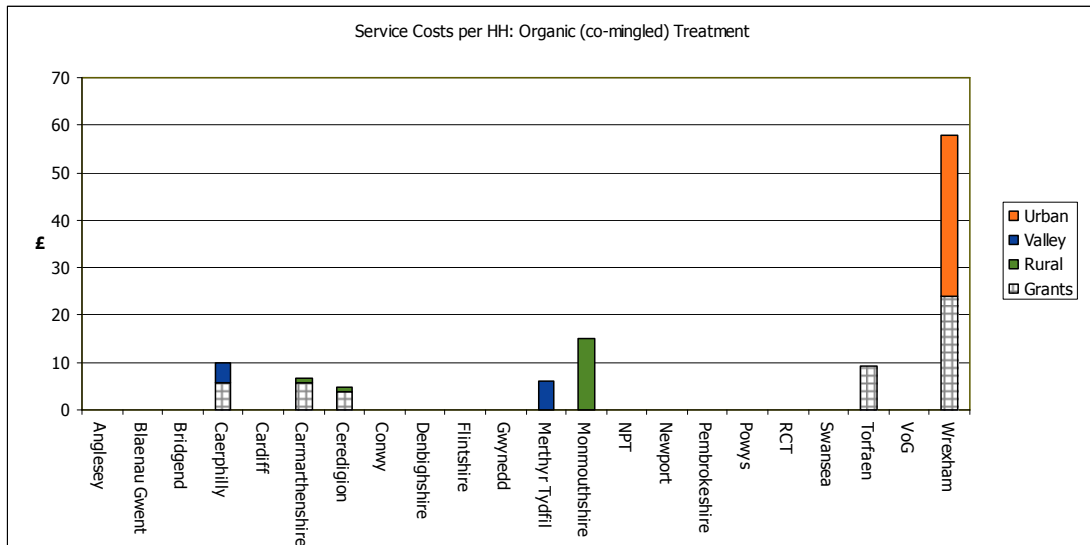
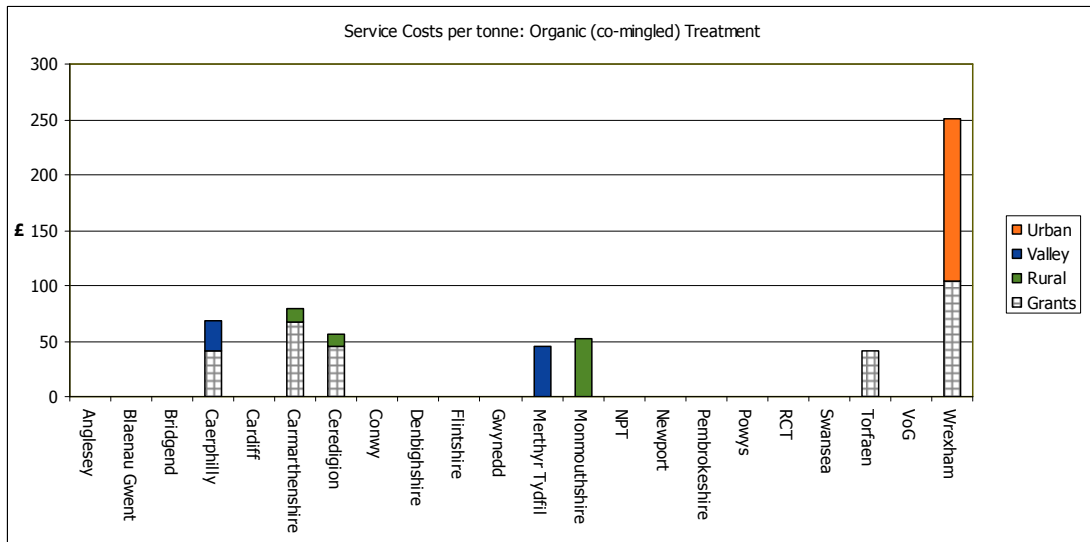


Fig 35 – Combined food and green waste treatment cost per tonne



Transfer, disposal and Income

77. 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 shown in annexe rather than in main body of report. Similarly, costs incurred from disposal of non compostable material (contamination) and incomes generated by organic waste services are low, data is therefore shown in annexe rather than in main report.

Combined kerbside recycling & composting services

78. 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 recycle 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.

79. Fig 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.

Fig 36 – Kerbside recycling and composting services – per household

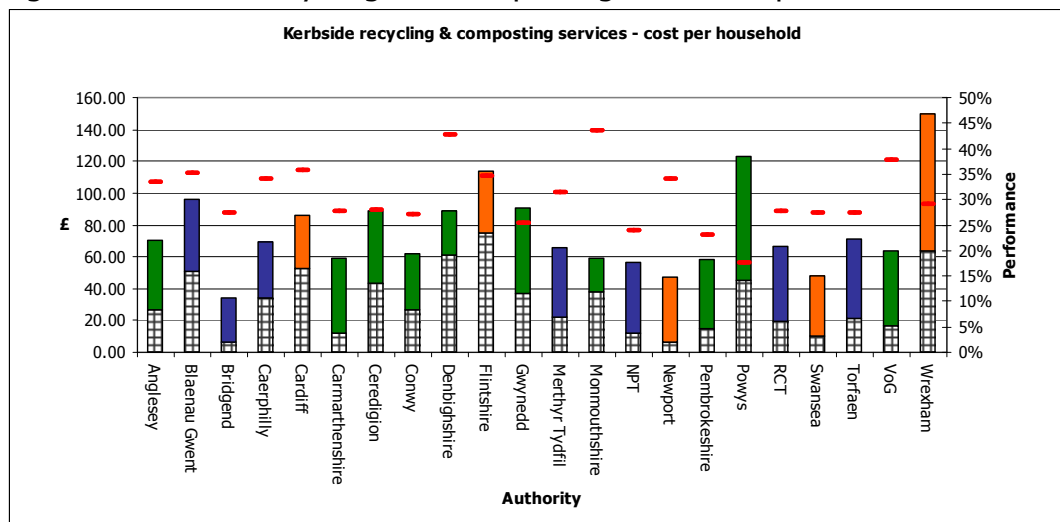
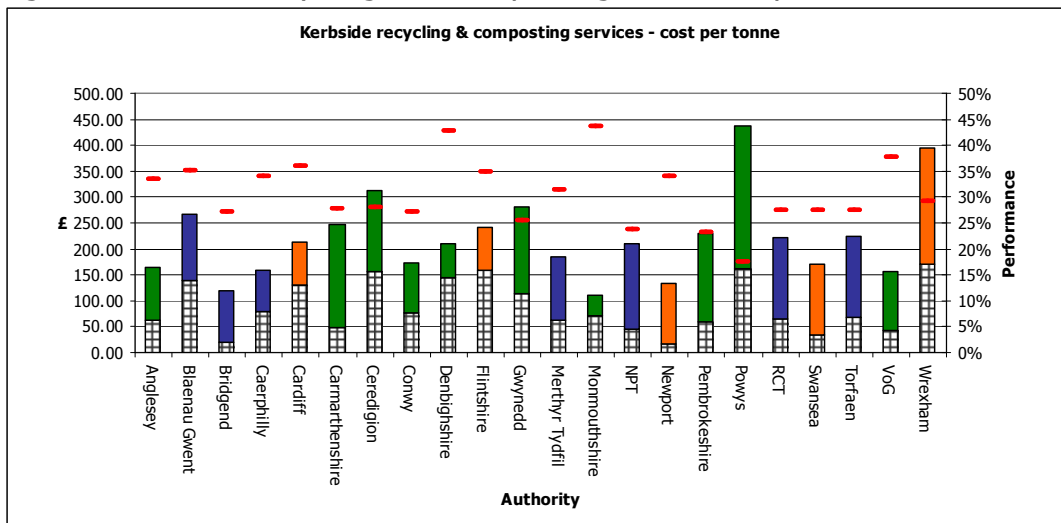


Fig 37 – Kerbside recycling and composting services – per tonne



80. Some variations in costs can be seen across the group, though most authorities are exhibiting combined service costs of less than £70 per household. Performance also varies across the group with between 18% and 44% of total MSW diverted via kerbside collection of material. Median costs for 2012/13 are marginally higher than 2011/12, rising 1.8% to £67.82 per household (from £66.62)

Refuse Collection:

81. Graphs show the aggregate cost of providing collection, transfer, treatment and disposal of residual waste. The following graphs show service costs net of any income (where applicable).

Fig 38 – Residual waste service cost per household

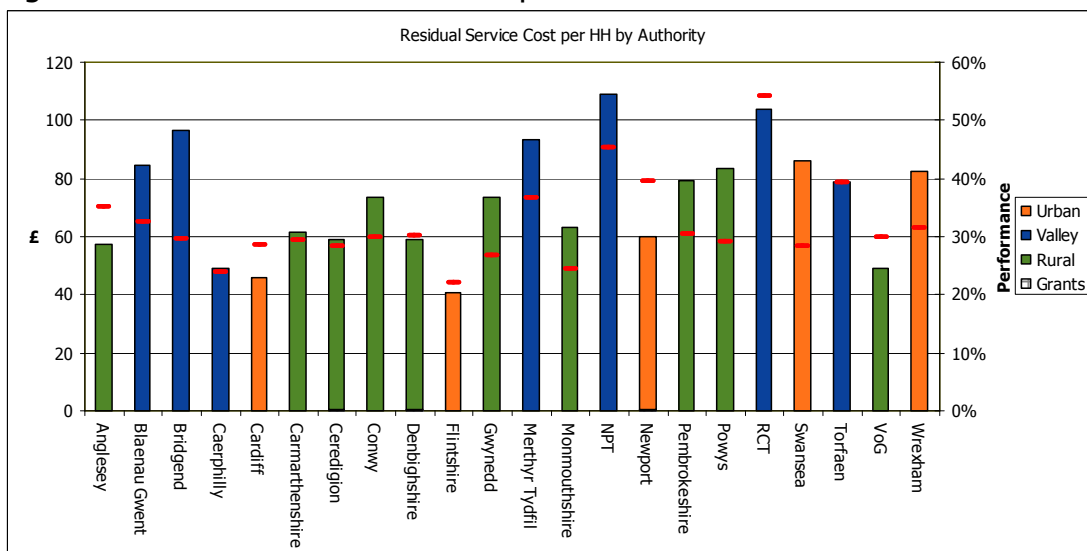
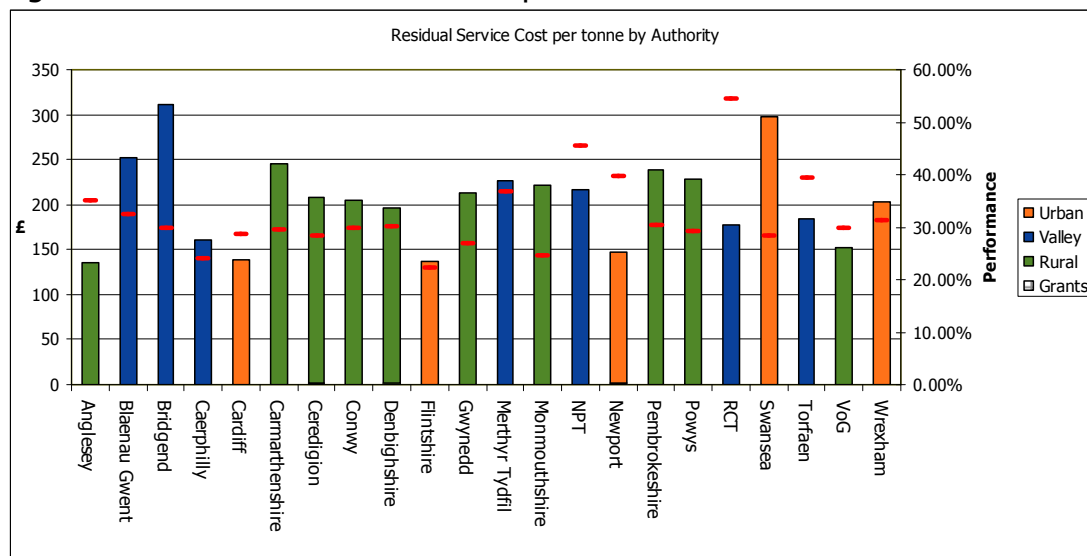


Fig 39 – Residual waste service cost per tonne



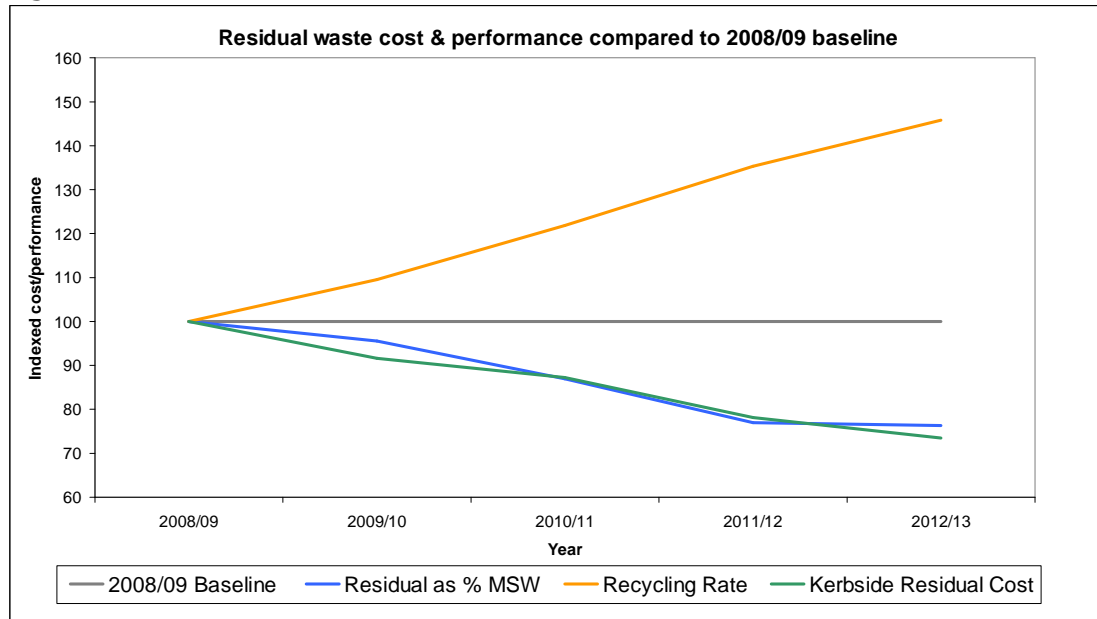
82. Performance data shows the proportion of overall MSW sent to landfill. Therefore in this case, lower figures indicate a better performing service overall. I.e. a greater proportion of the total waste arisings is recycled. For example, Flintshire operated a low cost residual waste collection service relative to the group. In addition, the performance data indicates that the proportion of total MSW sent to landfill is one of the lowest across the group.

83. From the core data it is also possible to compare 2012/13 overall residual waste service expenditure with that of 2011/12:

	11/12	12/13	% change
Residual waste	£102,669,923	£99,172,668	- 3.4%

84. 2012/13 saw another reduction in residual waste service costs, with net expenditure falling nearly £3.5 m when compared to the previous year. The shift away from residual waste collection towards recycling and composting services saw the mass of residual waste collected decrease by more than 8,000 tonnes compared to 2011/12. Despite an increase of £8 per tonne in landfill tax, a combination of service efficiency improvement, avoided disposal and landfill tax costs meant that a significant reduction in overall service cost was seen. Once again, the number of local authorities collecting residual waste on a weekly basis reduced, with only two authorities offering a weekly service in 2011/12. This trend has continued during 2013/14 with all 22 Welsh local authorities now offering alternate weekly collection of residual waste.

Fig 40 – Kerbside residual waste cost since 2008/09



85. The trend over the last five years is shown in Fig 40. It can be seen that both cost and mass of residual waste collected has dropped significantly since 2008/09. The additional investment in recycling and composting services, helped in no small part by the resources diverted away from residual waste collections, has seen recycling rates increase greatly over the same period.

Collection costs

86. The following graphs show residual waste collection costs. Frequency of collection varies across the group, with some authorities providing weekly collections while others provide collections on an alternate weekly basis. A smaller number of authorities have a mixture of properties served weekly and alternate weekly. Where authorities operate both weekly and fortnightly collections, the proportion of households served by each method is shown within the cost bar.

Fig 41 – Residual waste collection cost per household

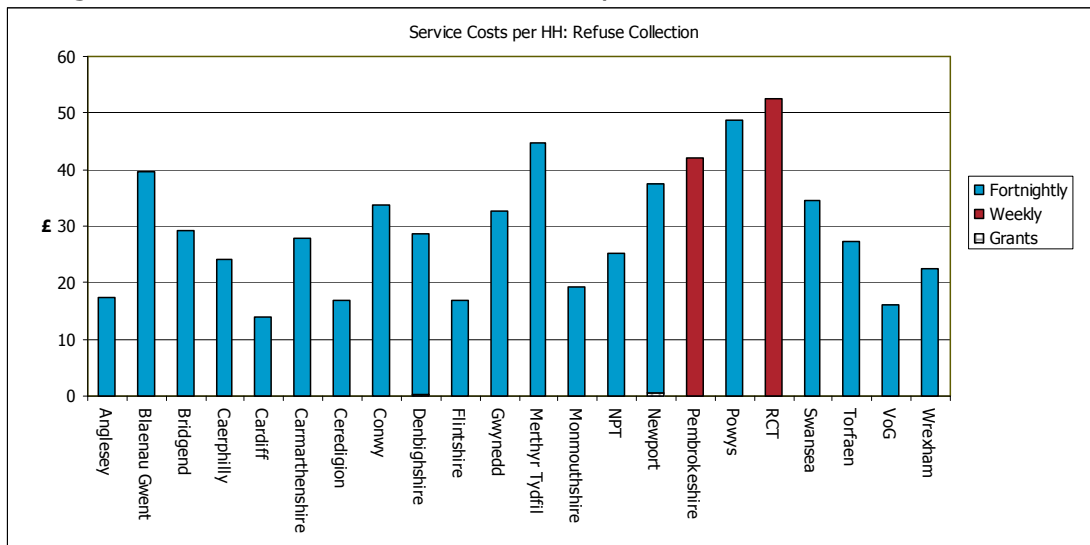
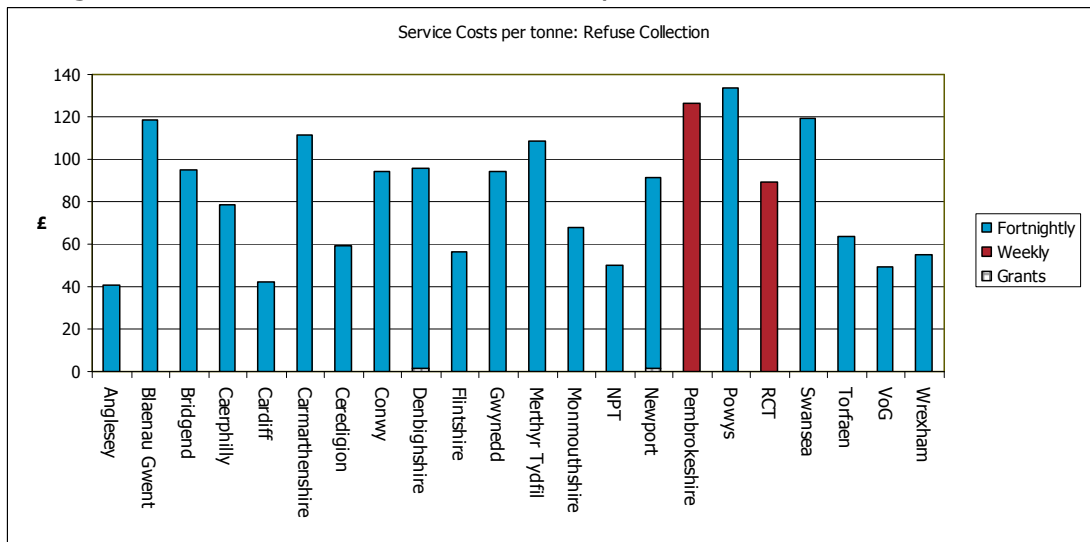


Fig 42 – Residual waste collection cost per tonne



Transfer costs

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

Fig 43 – Residual waste transfer costs per household

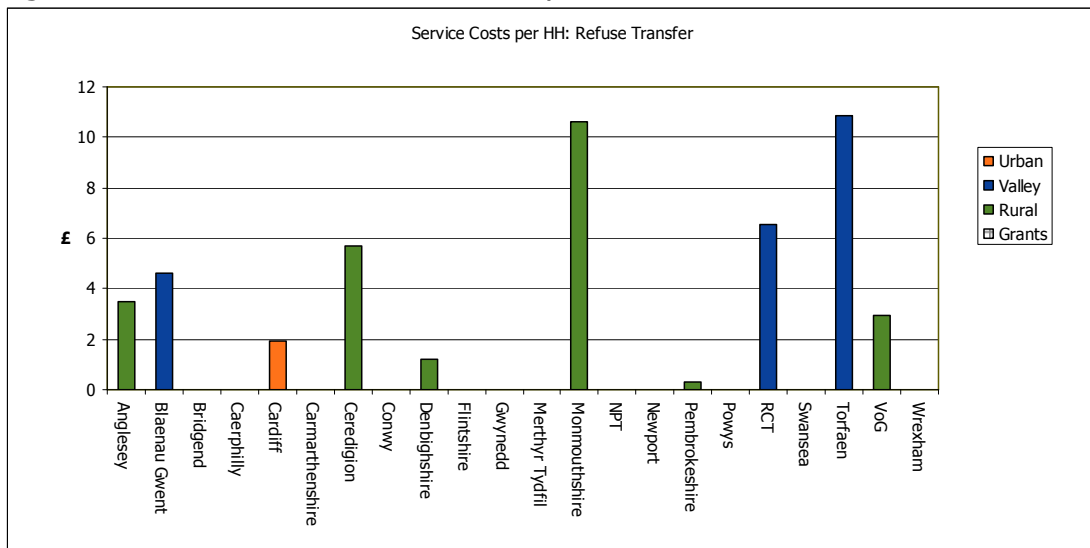
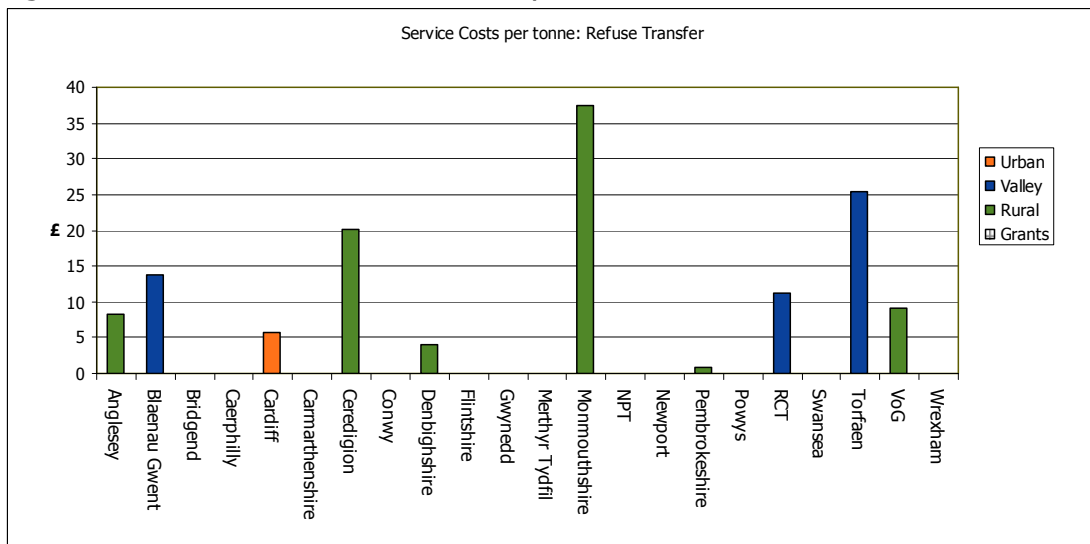


Fig 44 – Residual waste transfer cost per tonne



Treatment / processing costs

88. A relatively small number of authorities treat residual waste prior to its disposal. Those authorities which exhibit treatment costs are shown in graphs below. The cost of treatment or processing waste prior to disposal is shown. At present only a small number of authorities treat residual waste prior to disposal and in some cases not all residual wastes are treated. The constraints of landfill allowances and the ongoing procurement of treatment facilities will mean that all authorities are likely to incur waste treatment costs in the future.

Fig 45 – Residual waste treatment cost per household

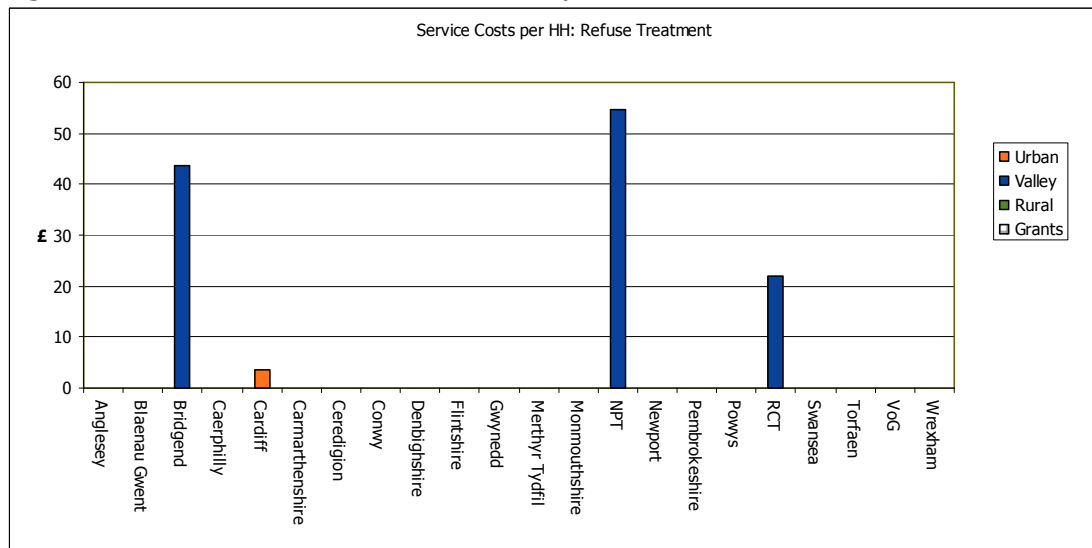
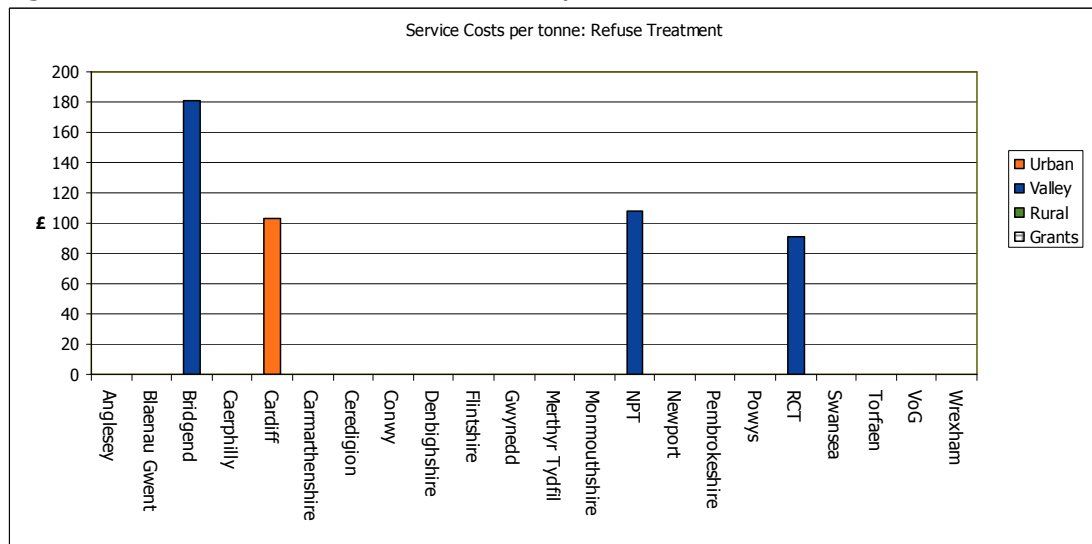


Fig 46 – Residual waste treatment cost per tonne



Disposal costs

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

Fig 47 – Residual waste disposal cost per household

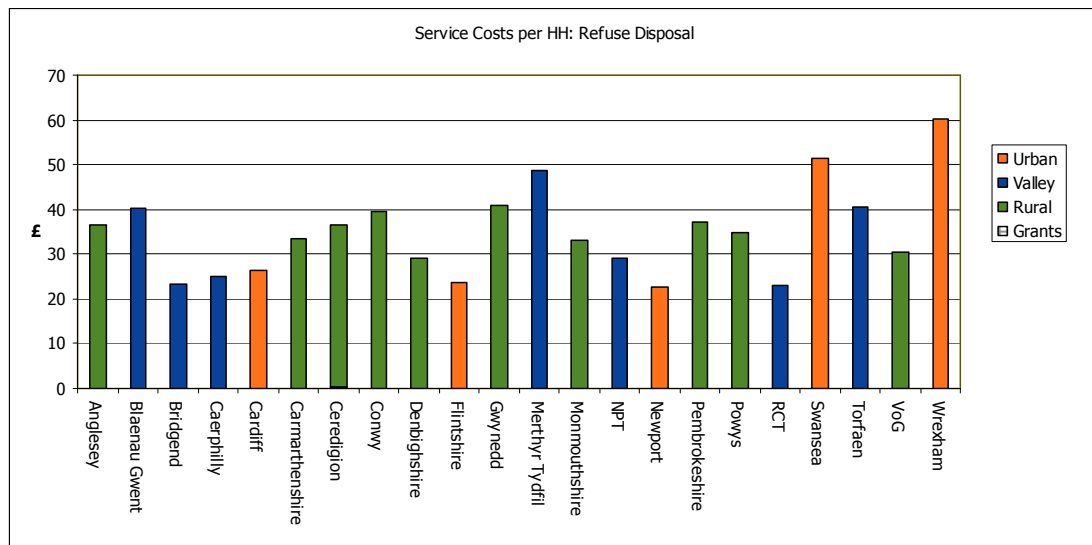
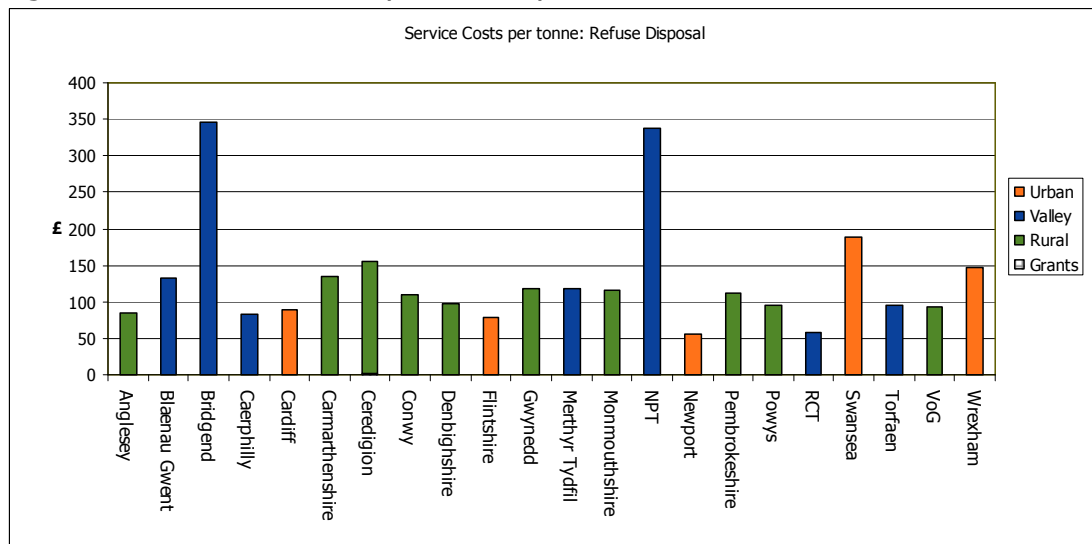


Fig 48 – Residual waste disposal cost per tonne



Civic Amenity Sites / Household Waste Recycling Centres

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

Fig 49 – CA site service cost per household

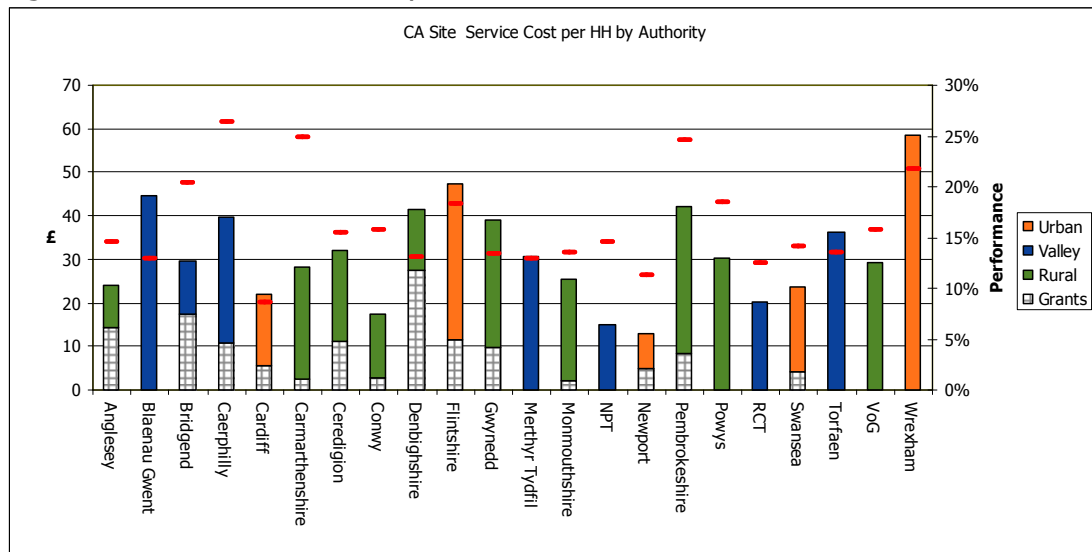
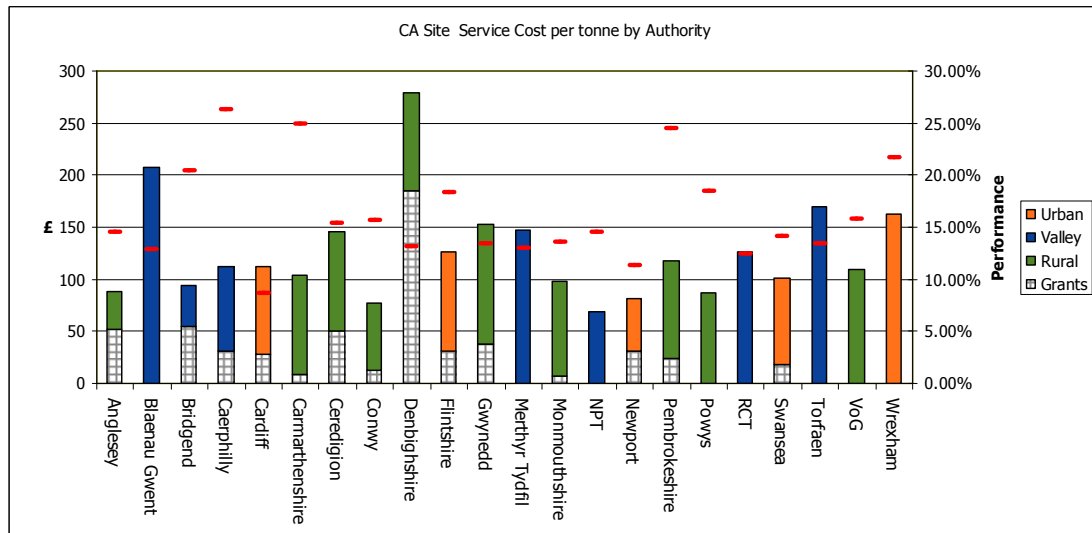


Fig 50 – CA service cost per tonne



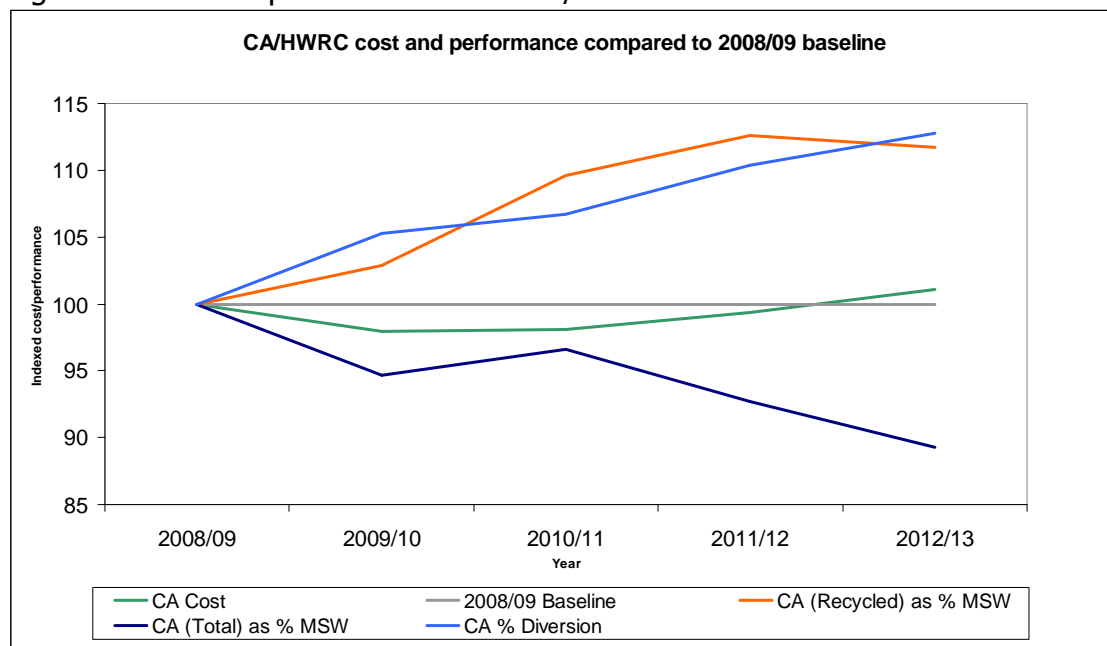
91. Performance data indicates that contribution made by CA site network to overall recycling rates can be considerable. In the case of Caerphilly and Carmarthenshire, more than 25% of total MSW is recycled via CA sites. Once again, divergence between cost and performance bars is likely to indicate a more efficient service. This can be seen in the case of Carmarthenshire, where cost per household and cost per tonne indicators are around the group average, yet with around 25% of total MSW recycled through CA site network, they are amongst the highest performing authorities.

92. From the core data it is possible to compare 2012/13 overall CA site service expenditure with that of 2011/12:

	11/12	12/13	% change
CA/HWRC	£39,506,739	£41,346,688	+4.7%
Grant	£6,266,844	£7,870,829	+ 25.6%

93. It can be seen that expenditure on CA/HWRC increased in 2012/13. Whilst expenditure increased, overall performance, in terms of proportion of waste dealt with at CA/HWRC sites that is recycled/composted, also increased from 69.8% to 71.3%.

Fig 51 – Ca site expenditure since 2008/09



94. Over the longer term, it can be seen that expenditure in 2012/13 is slightly higher than the 2008/09 baseline, however both diversion rate and mass of material re-used, recycled or composted via the CA site network as a proportion of total MSW has improved over the same period.

Bring Sites

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

Fig 52 – Bring site costs per household

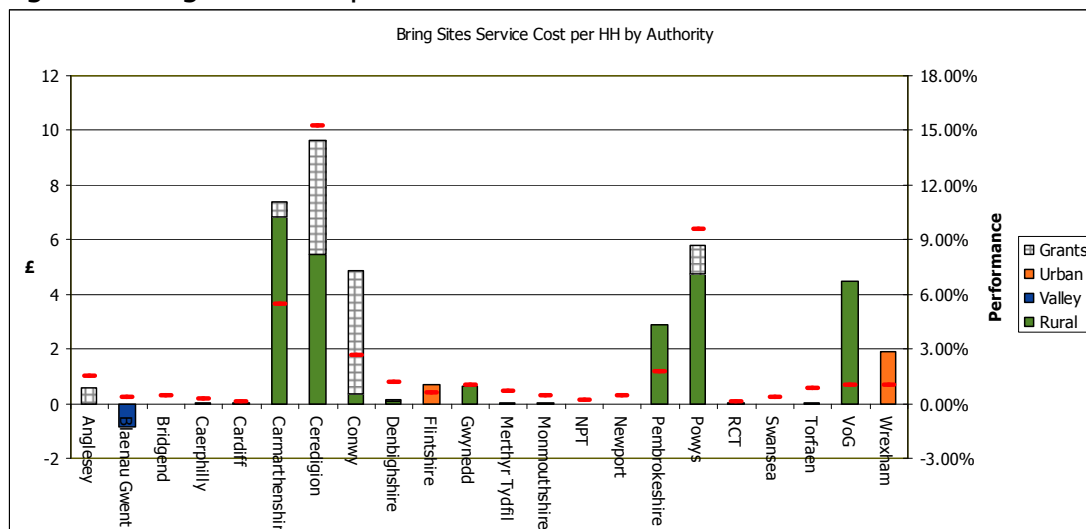
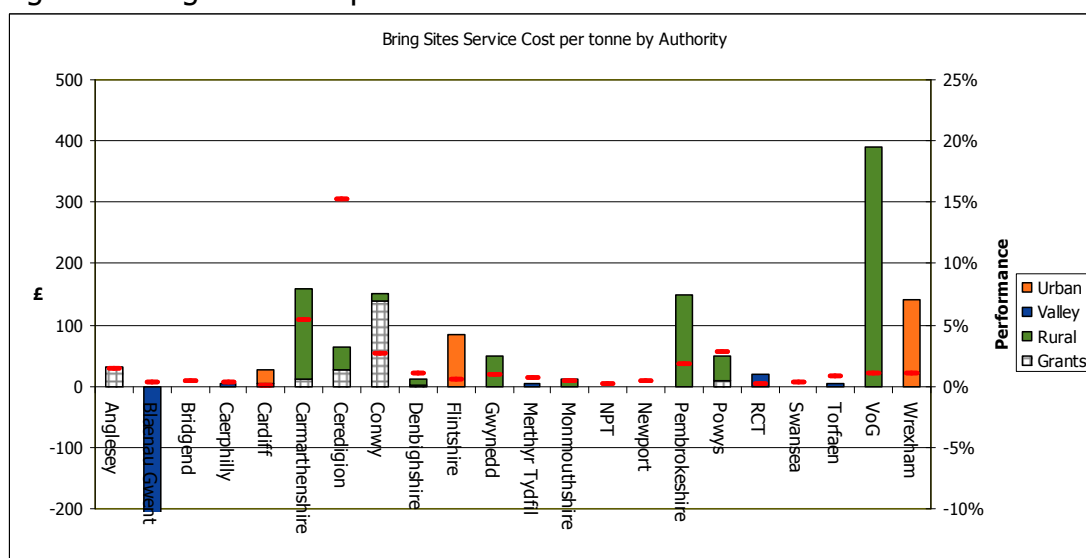


Fig 53 – Bring site costs per tonne



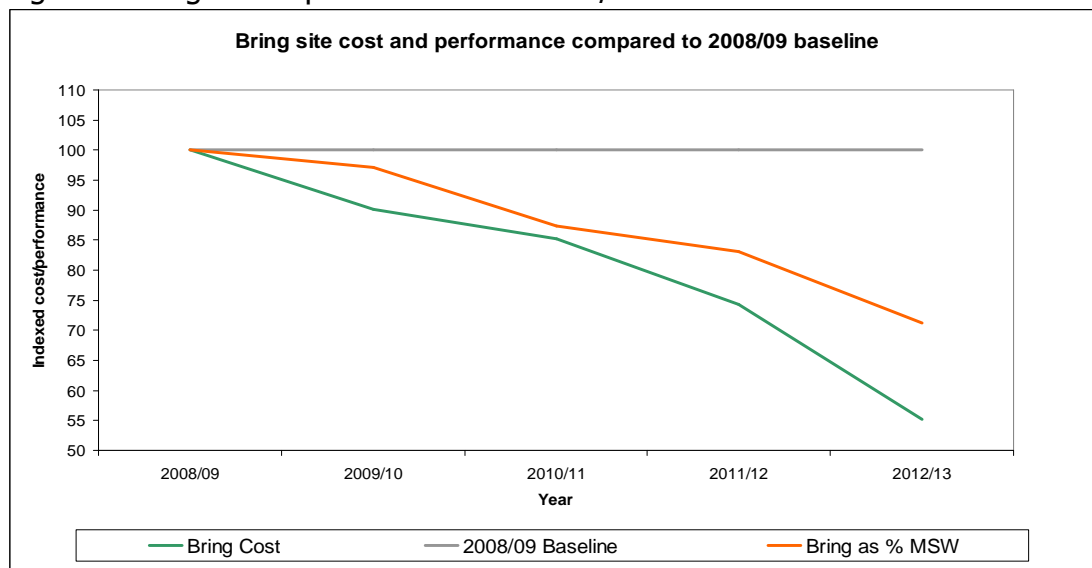
96. It can be seen that both cost and performance vary widely across group. This reflects the different services provided by each authority. The number of bring sites provided by each authority ranges from 3 to 166 which may indicate why such a difference in costs arises. A number of authorities also reported difficulties in disaggregating bring site costs from CA site costs as the two services were, in some cases, provided using common resources.

97. From the core data it is possible to compare 2012/13 overall Bring site service expenditure with that of 2011/12:

	11/12	12/13	% change
Bring	£2,897,152	£2,217,379	-23.5%
Grant	£918,459	£528,135	-42.5%

98. It can be seen that there was a significant fall in bring site expenditure during 2012/13. During the same period, mass recycled via the bring site network also fell by 4,657 tonnes, a reduction of 15%. It is likely that mass of material collected via bring site network is reducing due to expansion of kerbside collection systems. Bring sites do continue to make a valuable contribution to recycling rates for some authorities, though overall, the contribution from bring sites across Wales is low with just 1.7% of total MSW being recycled via bring sites.

Fig 54 – Bring site expenditure since 2008/09

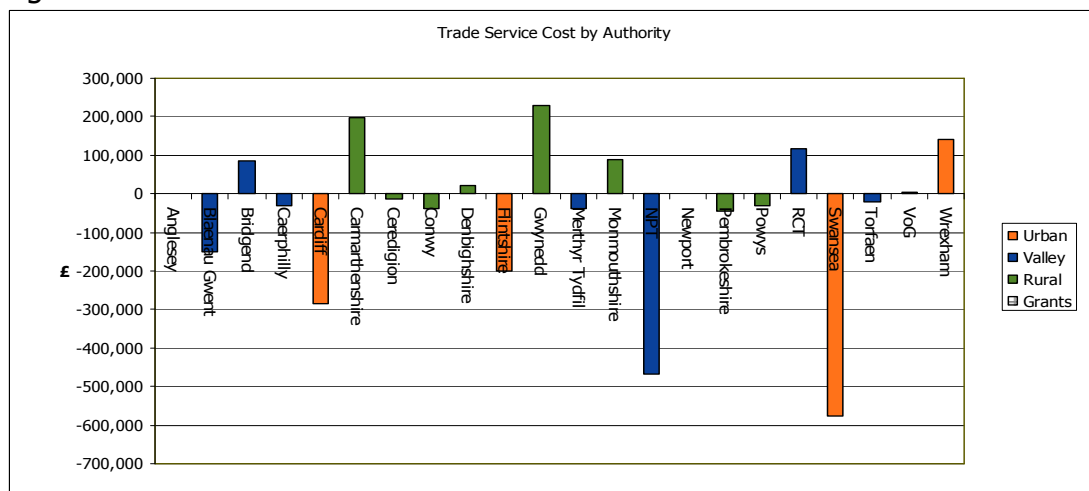


99. Once again the trend over the longer term can be examined. Both expenditure and mass recycled via the bring site network have fallen steadily since 2008/09.

Trade Waste Service

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

Fig 55 – Trade waste service cost

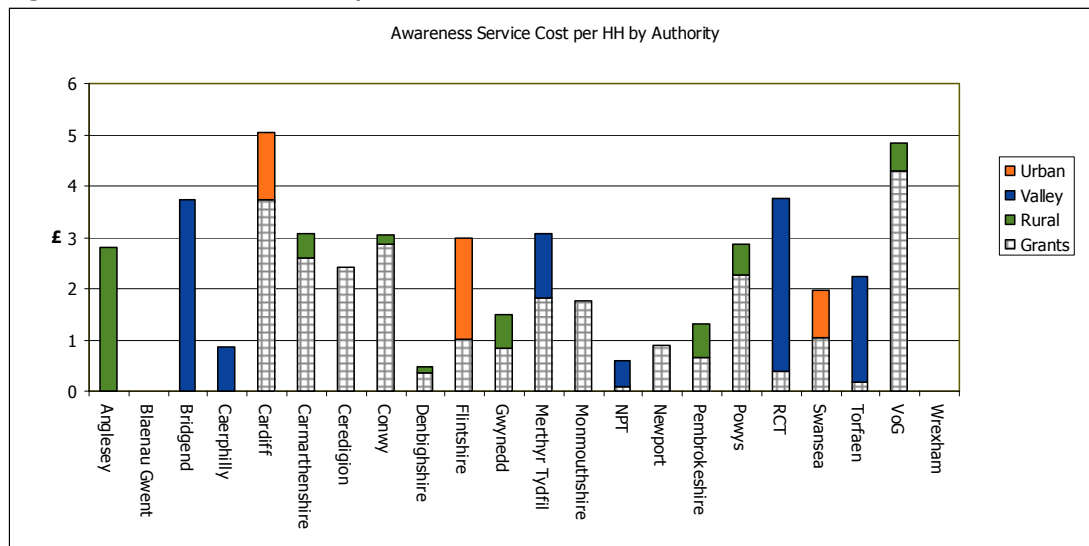


100. Many trade waste services are operated by collecting trade waste co-mingled with household waste: tonnages and associated costs are often apportioned from average bin weights therefore costs shown above may not be wholly representative of true service cost. In addition, some authorities may include incomes raised from the collection of Schedule 2 household wastes in with their trade waste incomes, whilst others attribute this income to their residual household waste service.

Awareness Raising

101. The following shows spend per household on awareness raising activities.

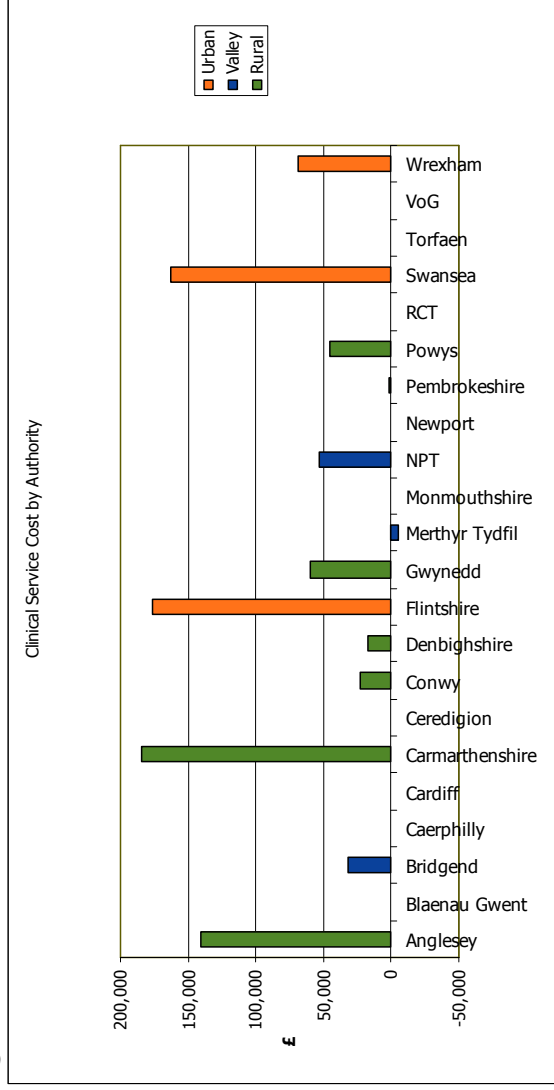
Fig 56 – Awareness cost per household



Clinical Waste

102. Many authorities provide clinical waste collection services. Costs associated with such services are shown in Fig 57.

Fig 57 – Clinical waste service cost



Conclusions

103. Expenditure on waste services has stabilised following a period of increasing investment, though net costs have increased when compared to 2011/12.
104. In 2012/13, gross expenditure totalled £291,575,522. This represents a reduction of £384,466 over the 2011/12 figure of £291,959,988 a fall of 0.1%. RPI for the 12 months to April 2013 was 2.9%.
105. Net expenditure on waste services was £260,996,109 which represents an increase of £6,925,680 over the 2011/12 figure of £254,070,429, a rise of 2.7%.
106. Overall net expenditure on household waste services⁵ (Dry Recycling, Organic, Residual, CA and Bring) during 2012/13 was £244,076,000. This represents an increase in expenditure of £9,620,764 compared to 2011/12 figure, a rise of 4.1%.
107. Investment in organic waste services has again increased. Expenditure in 2012-13 rose by 12.3% to £50,238,816. This investment has seen a further increase of 8,113 tonnes of organic waste collected during 2012/13 (an uplift of 4%).
108. Despite an £8 per tonne increase in landfill tax, expenditure on residual waste services continued to decrease. Expenditure in 2012-13 reduced by £3,497,255 to £99,172,668 a reduction of 3.4%. This demonstrates the benefits of increased recycling and composting.
109. Kerbside dry recycling costs increased by £6,460,024 to £51,100,449 a rise of 14.5%. However during the same period, the mass of dry Recyclate collected also increased. An additional 15,882 tonnes was collected compared to the previous year, an uplift of 6.4%.
110. CA/HWRC expenditure increased by 4.7% to £41,346,688. The average diversion rate increased from 69.8% to 71.25% over the same period.
111. Overall re-use, recycling and composting rates have increased from 48.53% in 2011/12⁶ to 52.26% in 2012/13
112. The table below demonstrates the differences in net expenditure on the household service elements:

⁵ 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

⁶ Source : WasteDataFlow

	11/12	12/13	% change
Dry recycling	£44,640,425	£51,100,449	+14.5%.
Residual waste	£102,669,923	£99,172,668	- 3.4%
Organic waste	£44,740,997	£50,238,816	+12.3%
CA/HWRC	£39,506,739	£41,346,688	+ 4.7%
Bring	£2,897,152	£2,217,379	- 23.5%
Total	£234,455,236	£244,076,000	+ 4.1%

Project Development: the future of the national project

113. The data presented is in a purely quantitative form and is yet to undergo further qualitative analysis.
114. Additional qualitative analysis has been completed for 2008/09, 2009/10, 2010/11 and 2011/12 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 text boxes on pages 49 to 53)
115. Progress made by local authorities in addressing recommendations will be monitored by WAO and will be included in future annual reports to Ministerial programme board.
116. As in previous years, data extracted from WasteDataFlow required a considerable amount of cleansing to remove anomalies. This process took place between September and December 2013. 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.
117. 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 will be reviewed and improved. In addition where anomalies are identified the WLGA will work with authorities to ensure the 2013-14 data reporting process is as free of data issues as possible. Work is continuing to improve service configuration

questions in WasteDataFlow to better record collection frequencies and household numbers which underpin this report.

118. 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.

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 recycle 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.

Assistance on monitoring and evaluation of awareness activities is available from Waste Awareness Wales. For more information contact enquiries@wasteawarenesswales.org.uk

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.

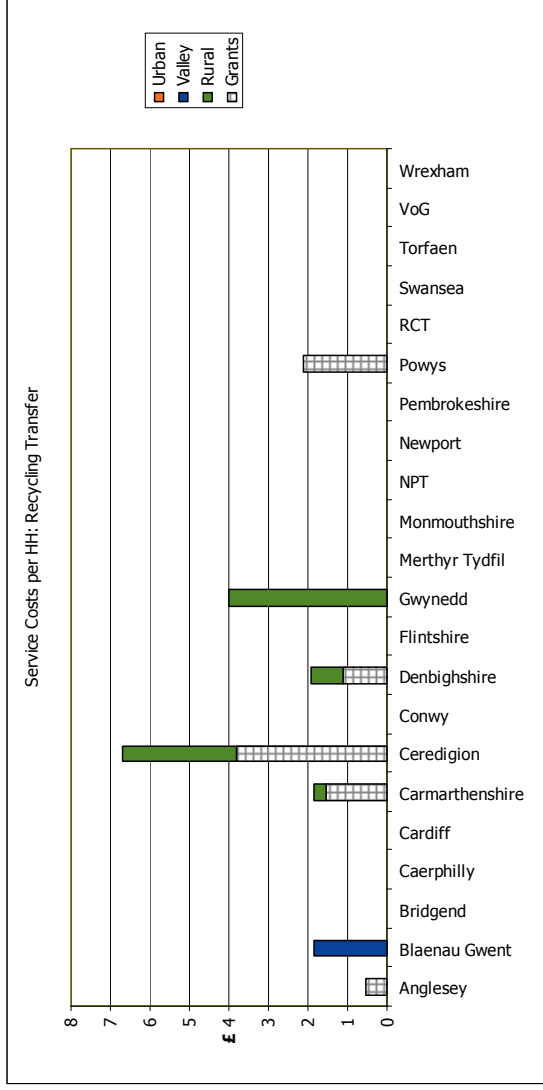
WLGA to work with local authorities and the WPC to establish a procurement framework for compostable food waste caddy liners.

Dry recycling

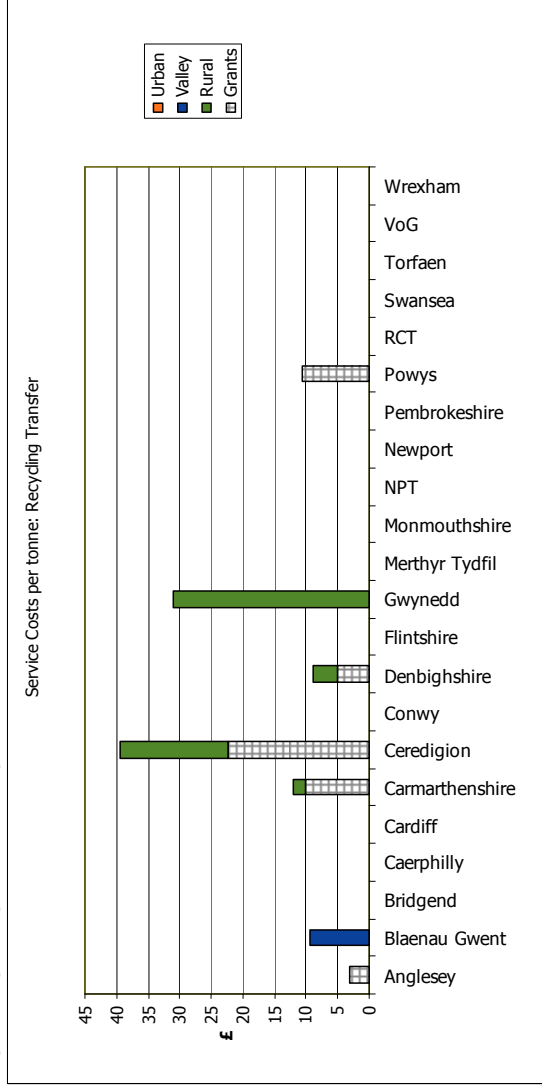
1. Facilitate sharing information and best practice relating to incomes from sale of recyclate and re-processor / MRF costs. Utilise information gathered to ensure value for money for authority in arrangements made with contractors and material re-processors.
2. Investigate any potential for partnership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

Annex 1 – Additional supporting data

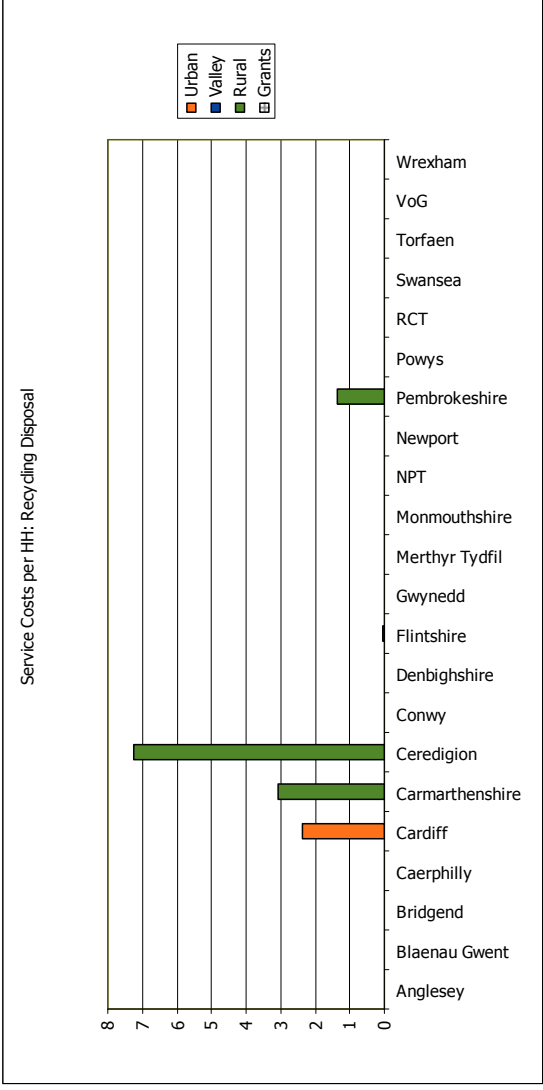
Dry Recycling transfer per household



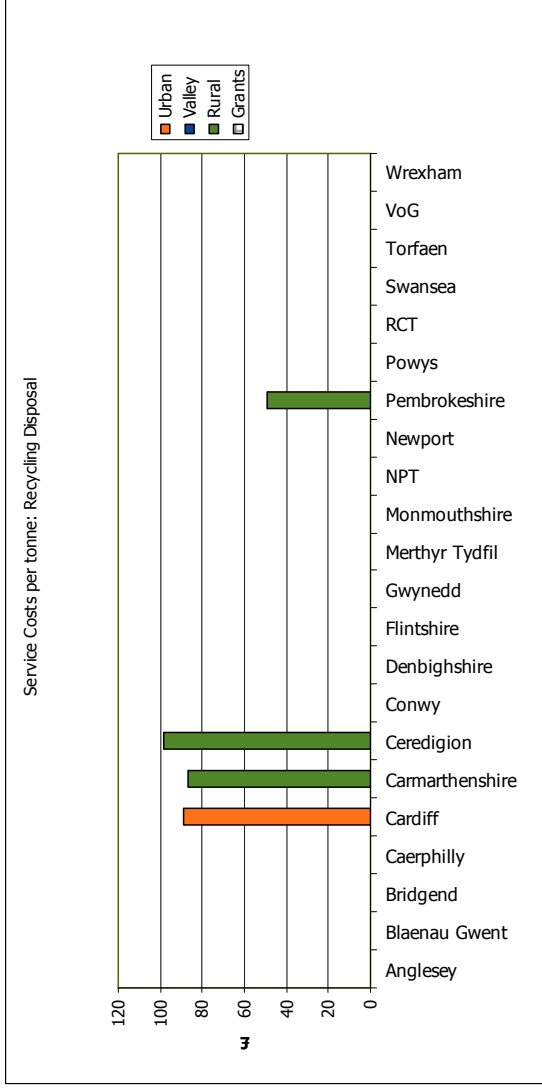
Dry Recycling transfer per tonne



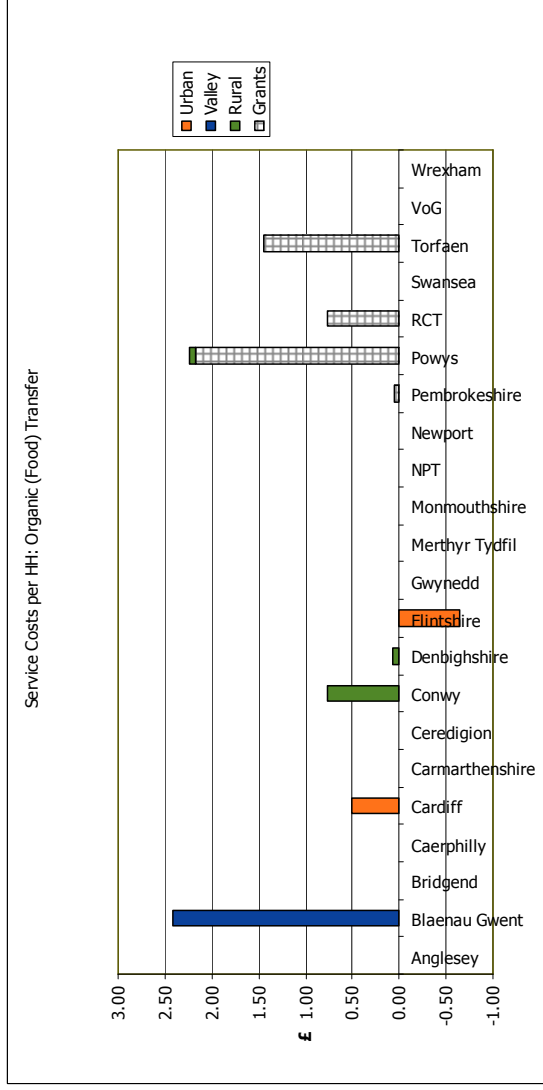
Dry Recycling disposal per household



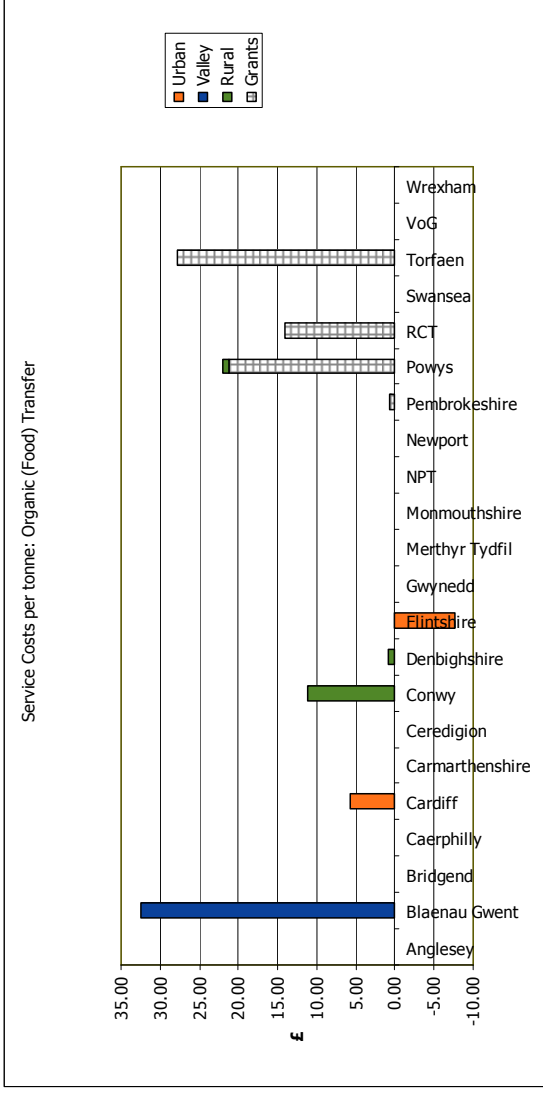
Dry Recycling disposal per tonne



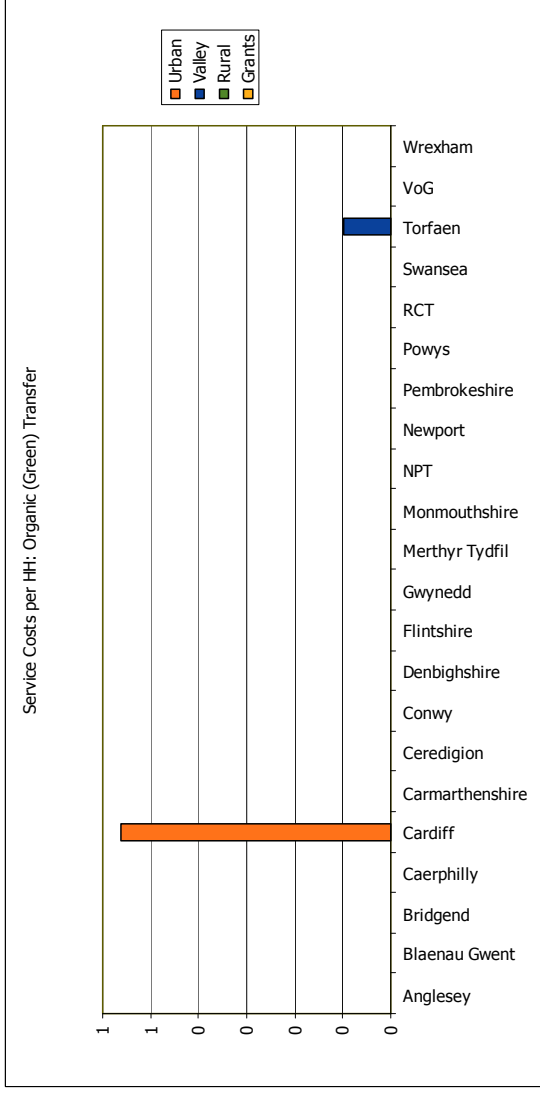
Organic (Food) transfer per household



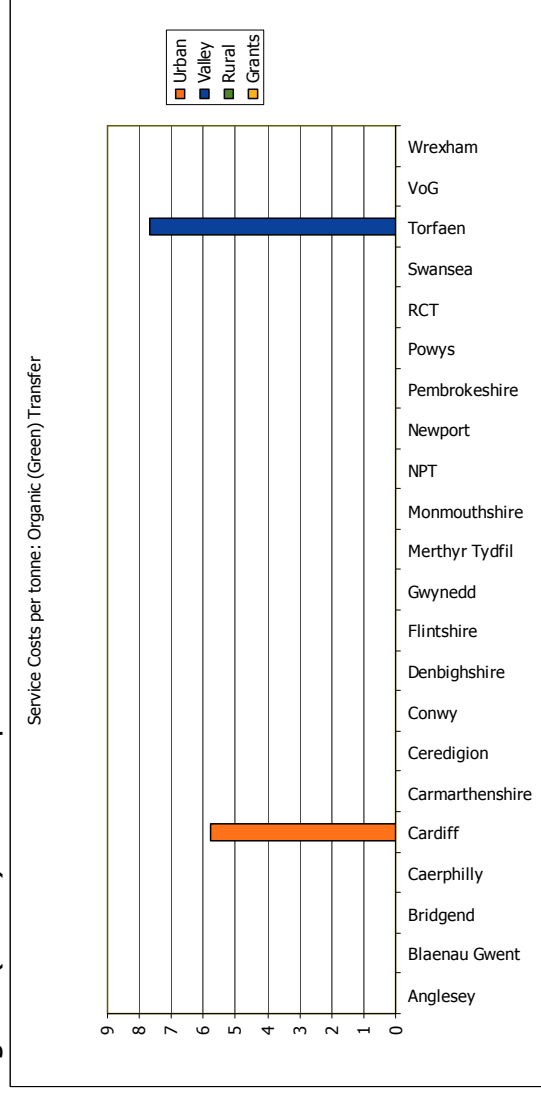
Organic (Food) Transfer per tonne



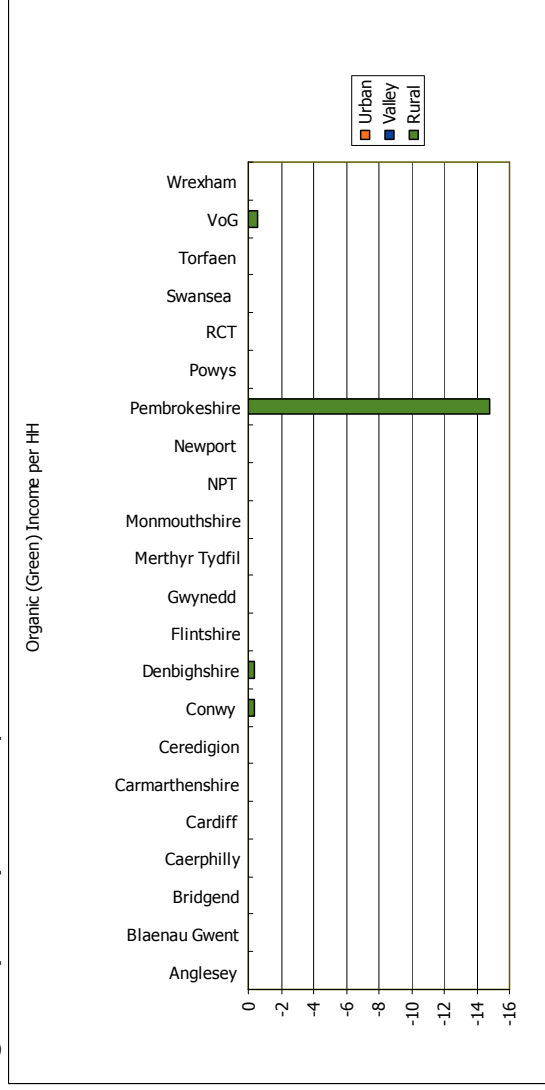
Organic (Green) transfer per household



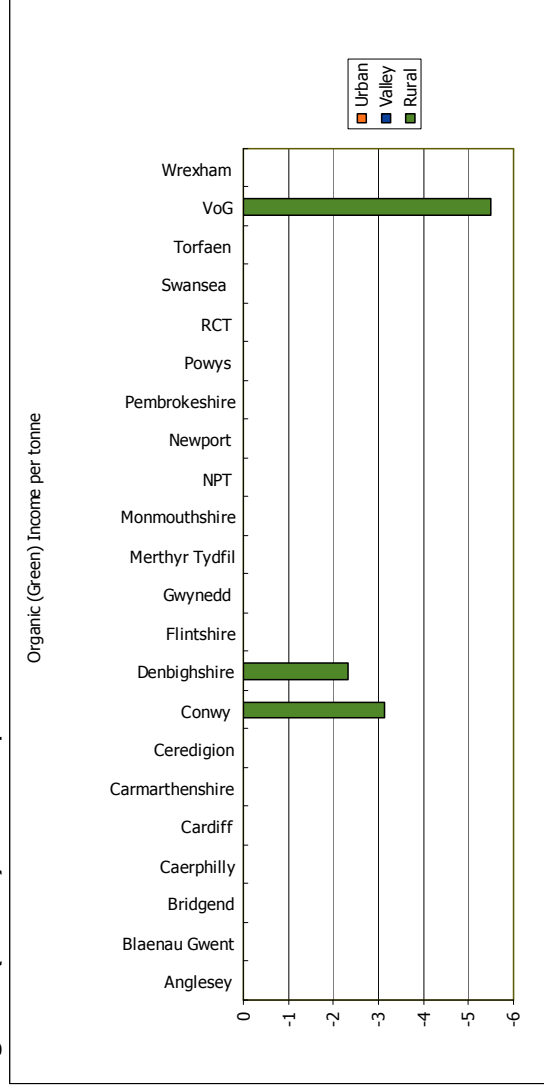
Organic (Green) transfer per tonne



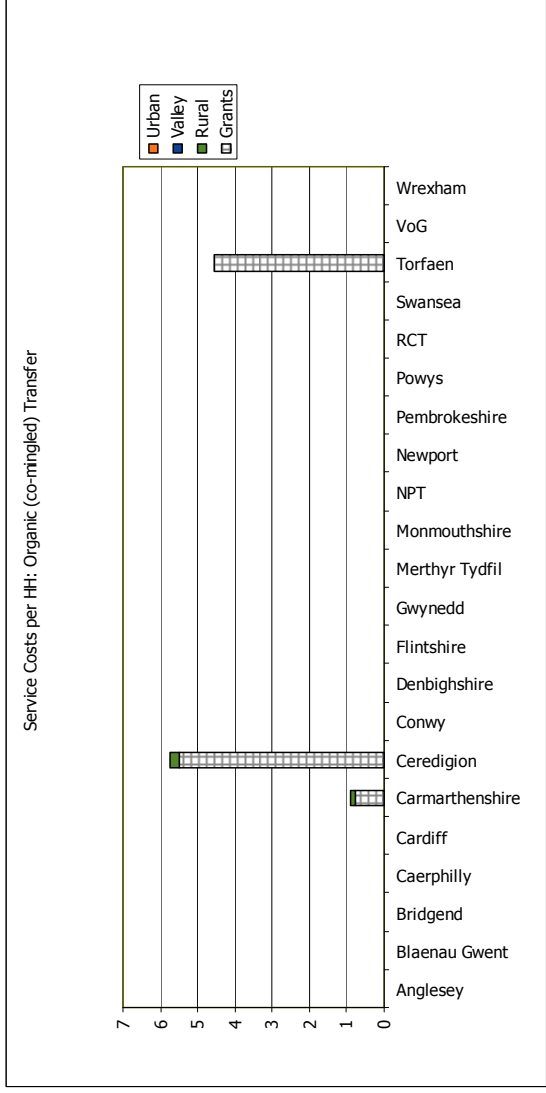
Organic (Green) income per household



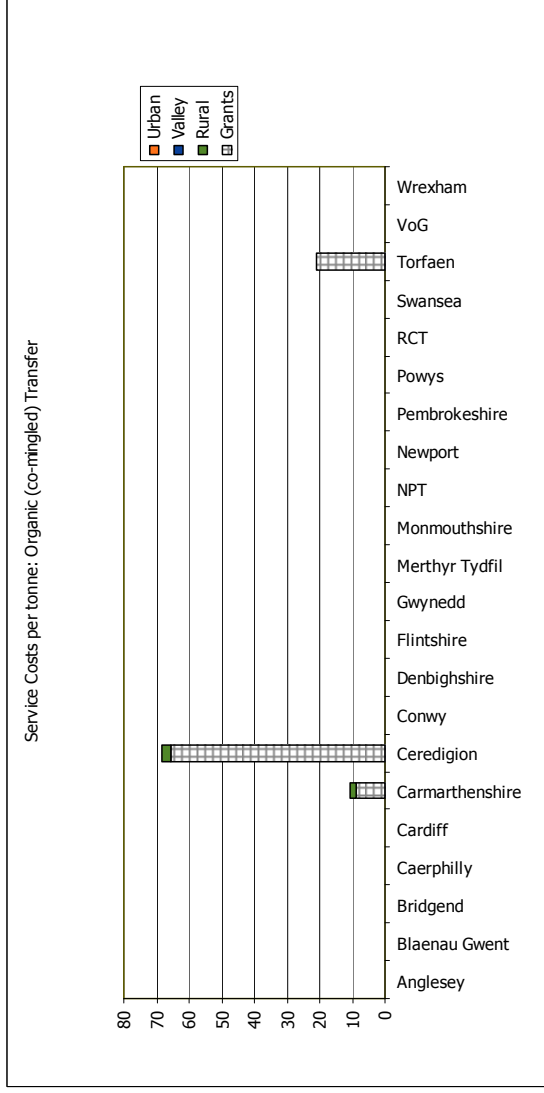
Organic (Green) income per tonne



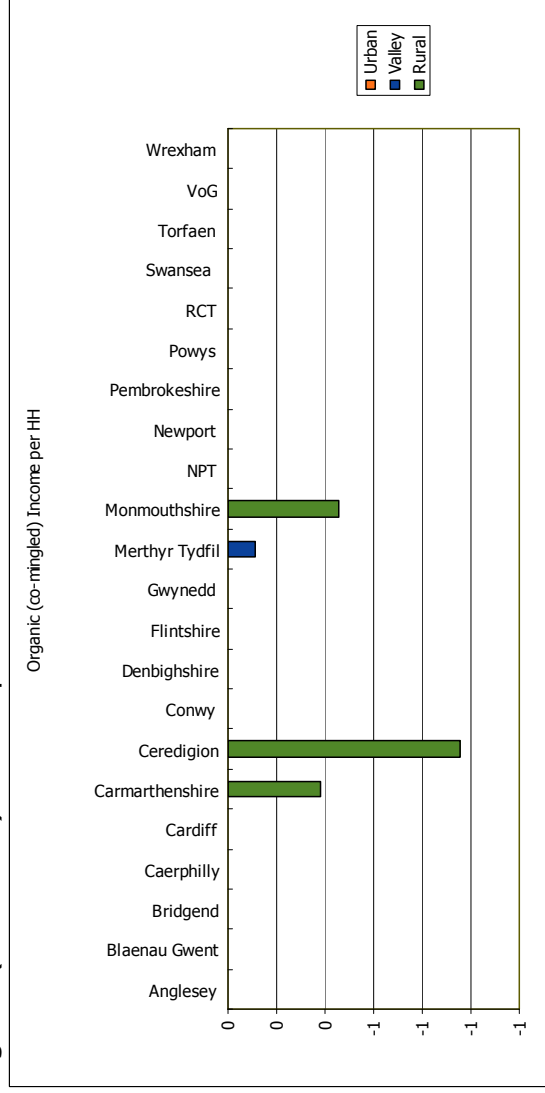
Organic (Combined) transfer per household



Organic (Combined) transfer per tonne



Organic (Combined) income per household



Organic (Combined) Income per tonne

