

Survey of Funding of Municipal Waste Management Kerbside Collection in Wales Summary Report

Russell Owens, Welsh Assembly Government

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1 Introduction

Background

- 1.1 Kerbside collection of materials has always been and will remain the principal method of municipal waste management. These kerbside services have achieved a high level of investment over many years, for the collection of refuse, recyclables and compostables.
- 1.2 Significant financial support has been provided by the Assembly to local authorities through the Sustainable Waste Management Grant (£35 million per annum in 2007-08 and 2008-09), and further funding is anticipated via the Regional Capital Access Fund (£7m in 2007-08, £9m in 2008-09). This assistance has enabled authorities to make progress in achieving waste management targets, though critically only a small number have procured waste treatment capacity to divert sufficient residual biodegradable municipal waste (BMW). As the majority of authorities have not yet begun the procurement process, the level of finances required overall to meet longer-term diversion targets has not yet been established.

Objectives

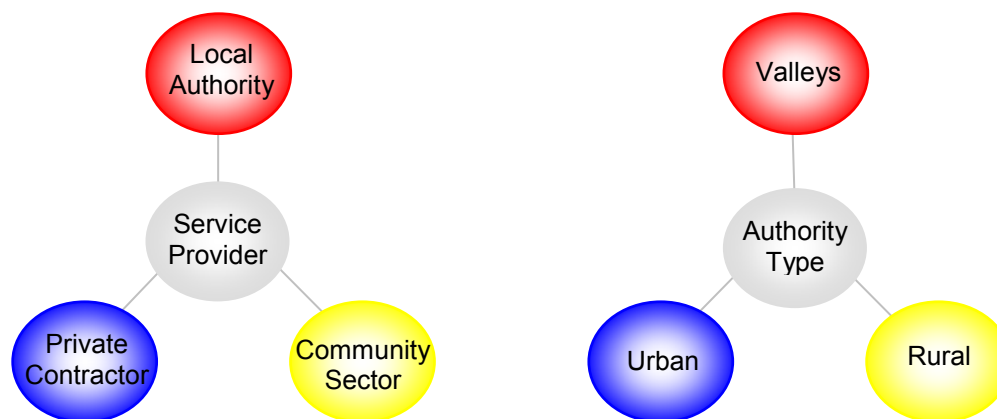
- 1.3 Identifying a need to consider the performance of Welsh Local authorities in the context of expenditure, income and future targets, the Welsh Assembly Government commissioned RPS to undertake a study of these issues. The overall aim was to *assess the current funding and future needs for waste management operations in Wales, in order to meet recycling, composting and landfill diversion targets in the manner laid out in Wise About Waste and Making the Connections*.
- 1.4 This study has been undertaken in cooperation with the Welsh Local Government Association and the 22 local authorities in Wales. The authors of this report would like to express thanks to all local authority officers who have cooperated with both the data collection and interview processes. Without their time and effort this study would not have been possible.

Approach

- 1.5 A spreadsheet survey was designed by RPS to capture information on performance, income and expenditure related to local authority waste management operations in Wales. The survey was sent to waste managers at each council and followed up with telephone conversations to capture some qualitative data and provide clarifications. Local authorities completed the survey with 2005/06 data and returned to RPS via email. The collected data was then organised in a large data model and analysed to establish the relative collection costs of refuse, recycling and compostables. The full reports and data model

have been presented to the Welsh Assembly, and have been presented in an anonymous form for the purpose of this Summary Report.

- 1.6 The data presented within this document has been provided directly by the local authorities in Wales. Service costs have been presented according to the type of service provider and authority type (see below).



STATISTICAL NOTE

The figures presented in the report are mean and median unit costs. The median values are the midpoint of the ranked series and remove skewing caused by extreme values. Mean values were calculated by taking the total cost of each authority's collection service and dividing it by the total number of collections (or tonnes collected) within that authority area in a year. It is important to note that these figures do not represent average costs of collection for Wales as a whole, nor for groups of authorities.

Data Limitations

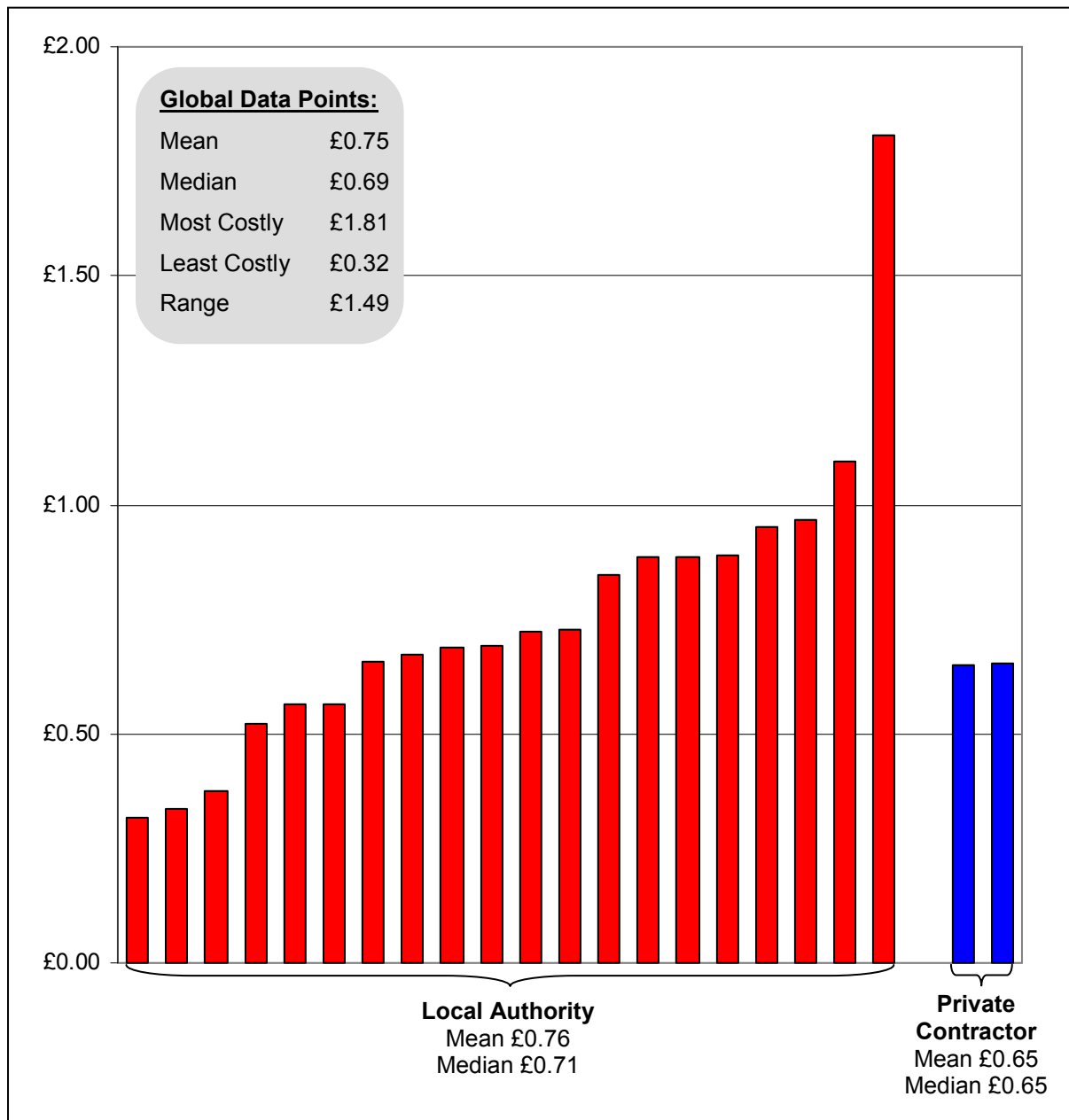
- 1.7 It should be noted here that the data used in this study provides a picture of the performance of local authorities from April 2005 to March 2006. In addition, this is the first occasion that local authorities in Wales have been requested to provide their income and expenditure figures for kerbside collection services to the Welsh Assembly Government. As a result, some authorities encountered difficulties in separating out certain costs, for example the labour costs of garden waste and recycling collections and disposal of residual waste from materials sorting facilities. In some cases these inaccuracies have had a skewing effect on the data and RPS has therefore presented the mean, median and range for each set of costs.
- 1.8 All of the data used in this survey has been provided directly from the 22 local authorities in Wales. Should the Welsh Assembly Government consider repeating this survey and analysis, it is recommended that the data collection process be formalised in agreement with the local authorities to ensure that the data collected is consistent and accurate.

2 Refuse Collections

Costs per Collection

2.1 In 2005/06, 74 million refuse collections were undertaken in Wales at a total cost of £53 million. Every local authority in Wales collected refuse on a weekly basis in 2005/06. Figure 1 shows the range of costs per refuse collection, according to whether the service was operated by the local authority itself (i.e. an in-house service) or by a private contractor.

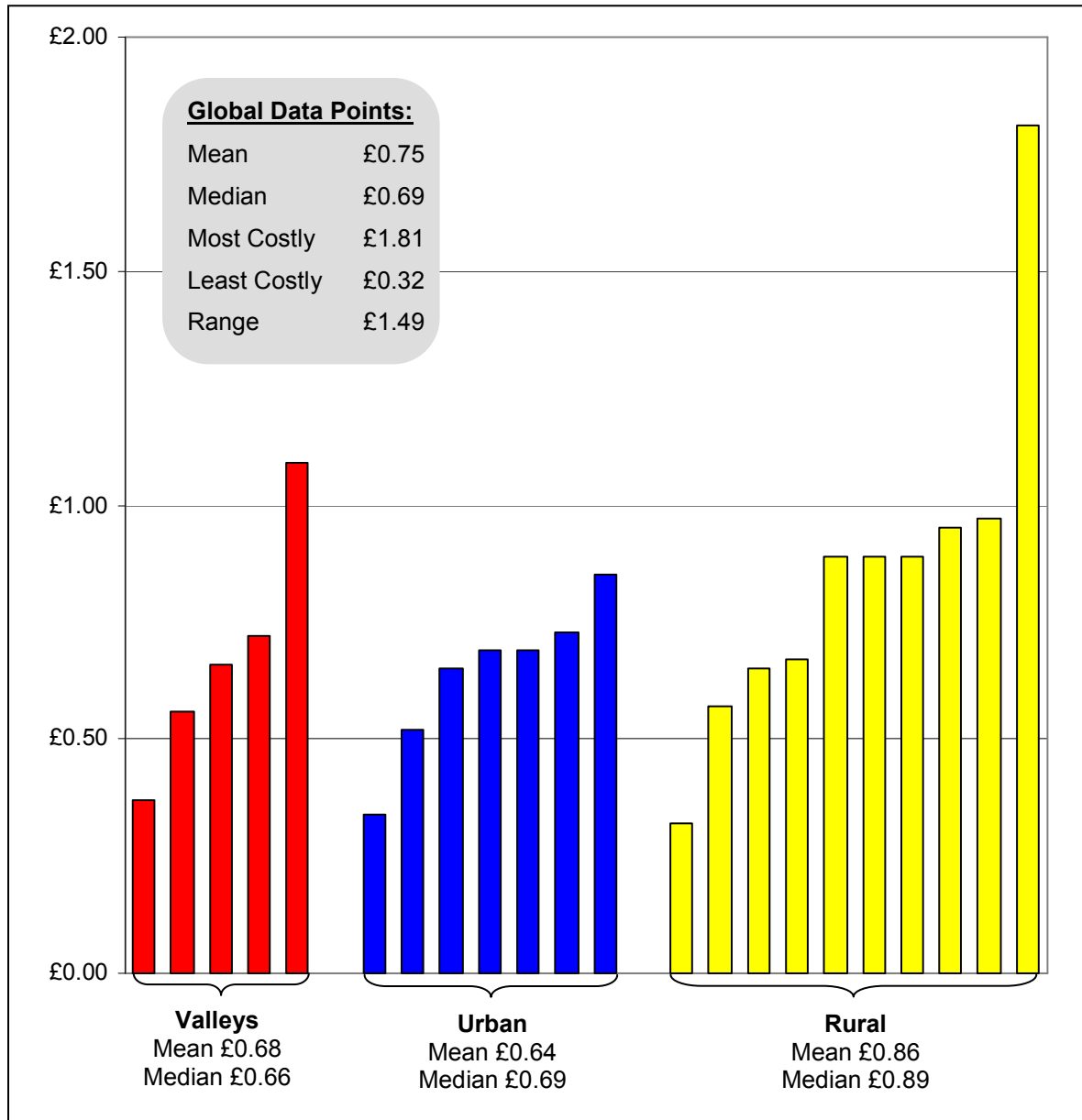
Figure 1 Refuse: Cost per Collection (by Service Provider)



2.2 If all refuse collections were undertaken at the most expensive rate, the annual national cost would be £134 million. Applying the cheapest rate derives a national cost of £24 million per annum.

2.3 Figure 2 illustrates the collection costs in the three types of local authority in Wales: Valleys, Urban and Rural.

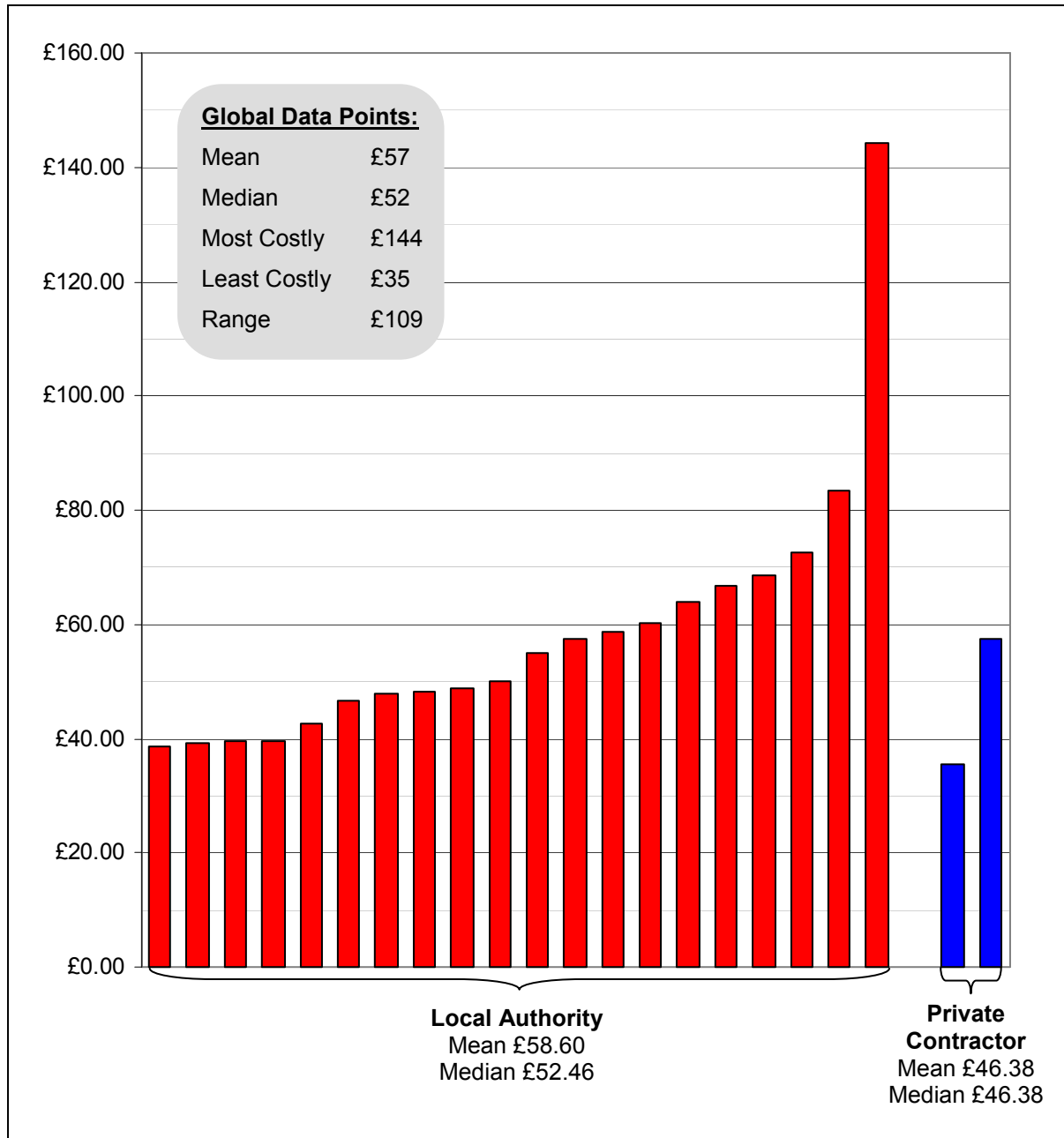
Figure 2 Refuse: Cost per Collection (by Authority Type)



Costs per Tonne

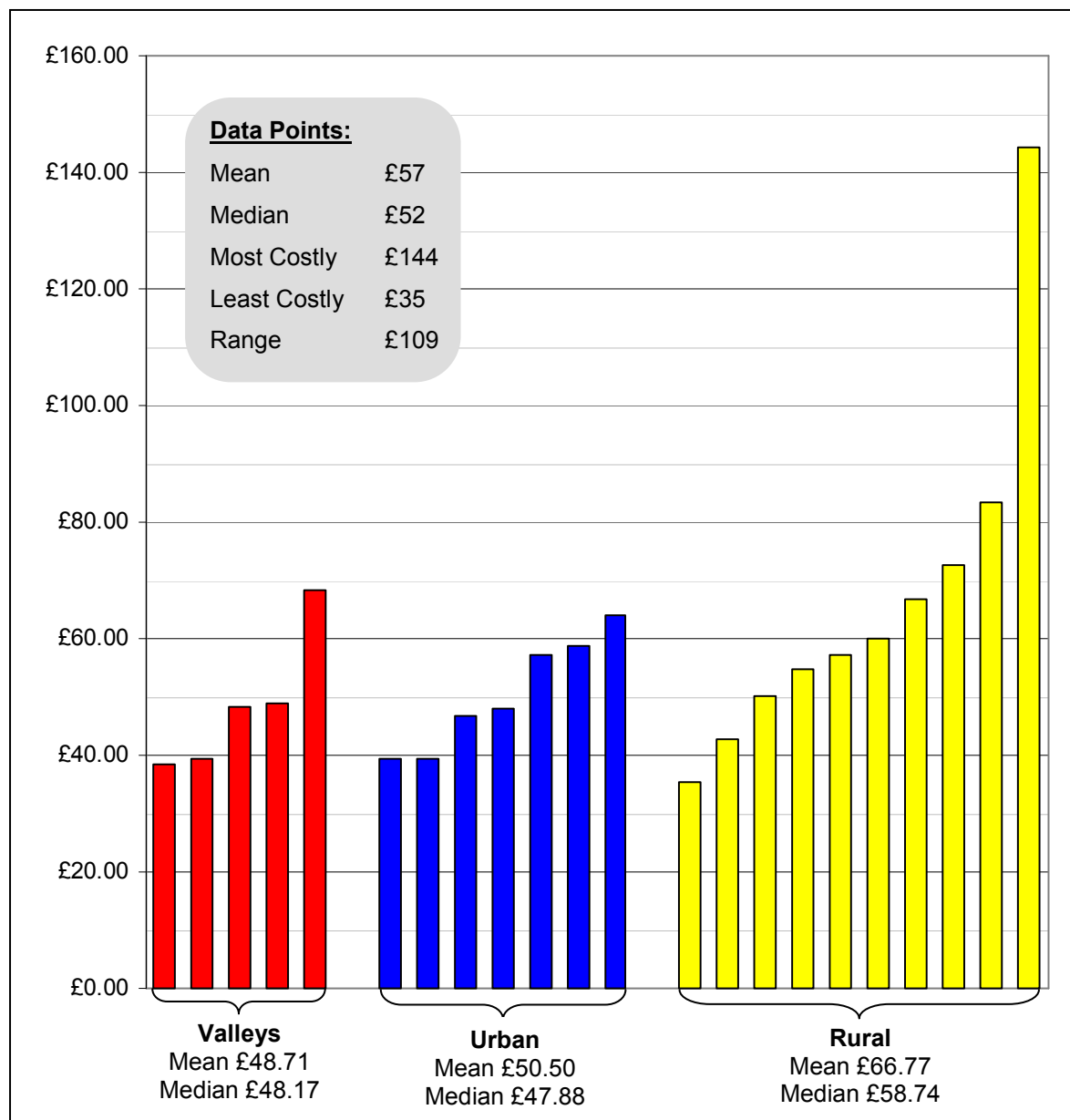
2.4 In 2005/06, 933,035 tonnes refuse was collected from households in Wales. If each tonne was collected at the most expensive rate, the annual national cost would be £135 million. If all refuse was collected at the cheapest rate, the annual national cost would be £33 million. Figure 3 illustrates the tonnage costs of refuse collection by local authorities and private contractors.

Figure 3 Refuse: Cost per Tonne (by Service Provider)



2.5 Figure 4 shows the tonnage costs broken down according to the type of local authority.

Figure 4 Refuse: Cost per Tonne (by Authority Type)

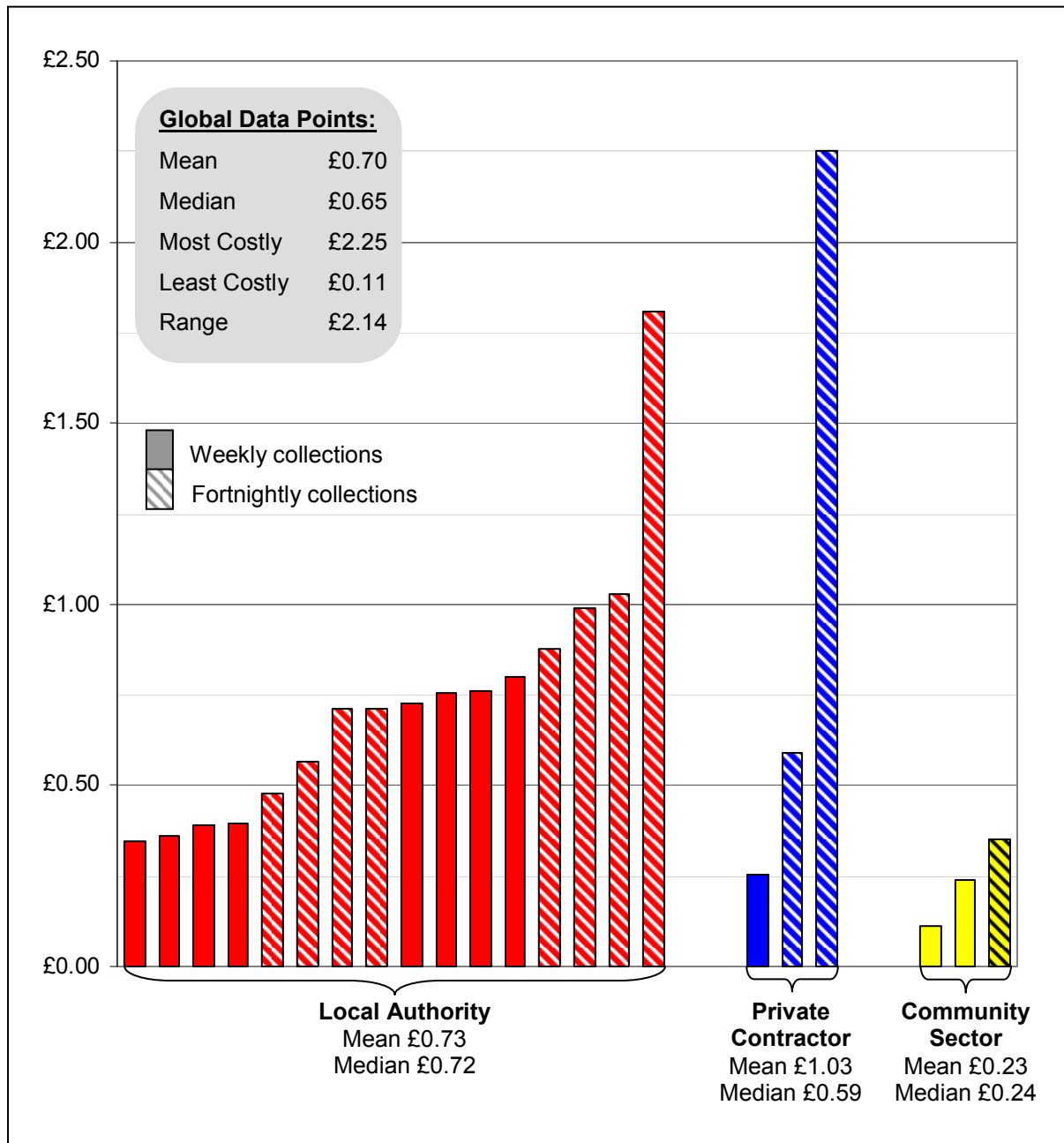


3 Recycling Collections

Costs per Collection

3.1 In 2005/06, 39 million recycling collections were undertaken in Wales at a total cost of £25.5 million. Figure 5 illustrates the individual collection costs according to the service provider (i.e. local authority, private contractor or community sector partner). The solid bars indicate weekly collections whereas the striped bars indicate fortnightly collections.

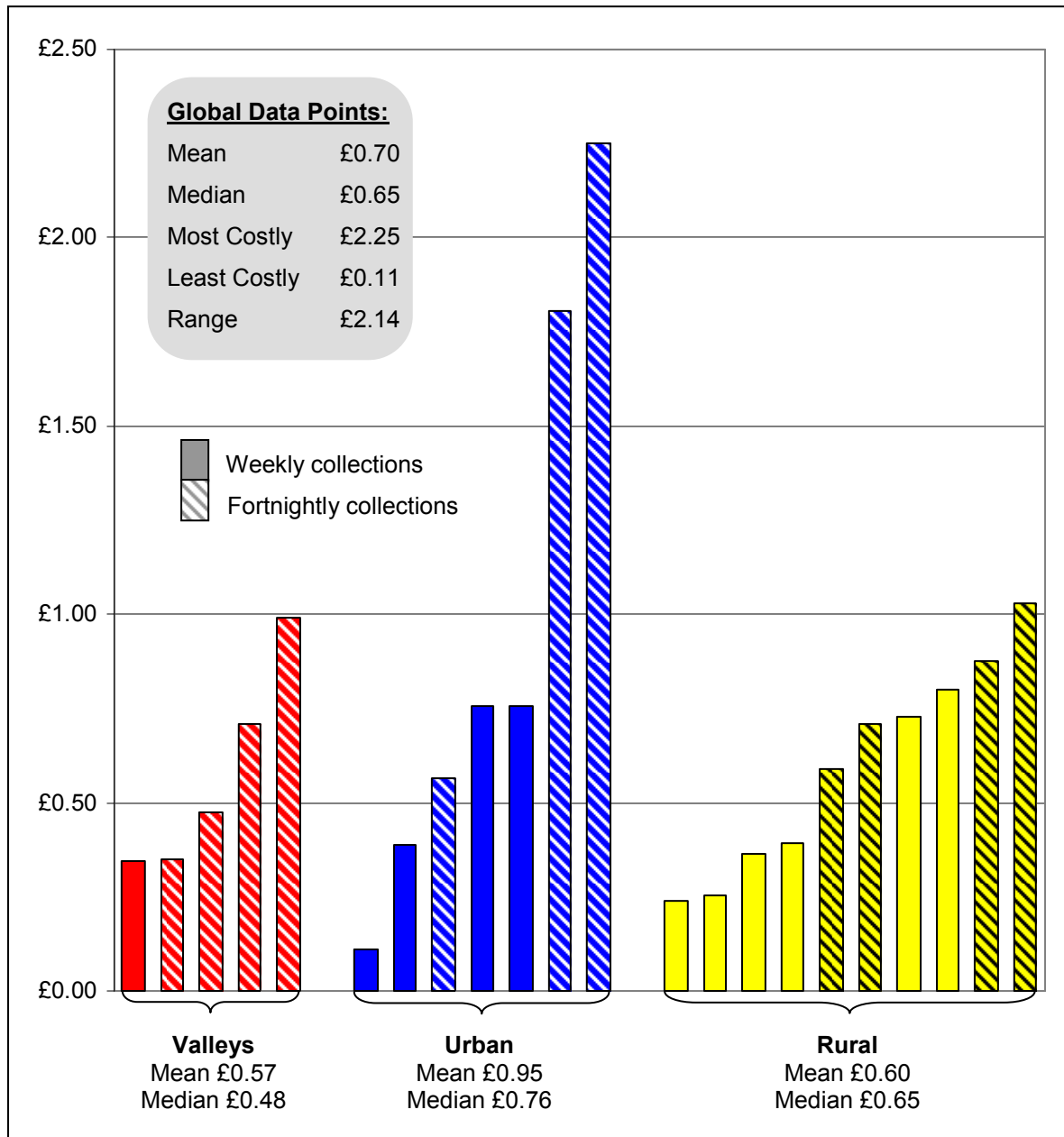
Figure 5 Recycling: Cost per Collection (by Service Provider)



3.2 Applying the most expensive rate derives a national cost of £88 million per annum. If all recycling collections were undertaken at the cheapest rate, the annual national cost would be £4.5 million.

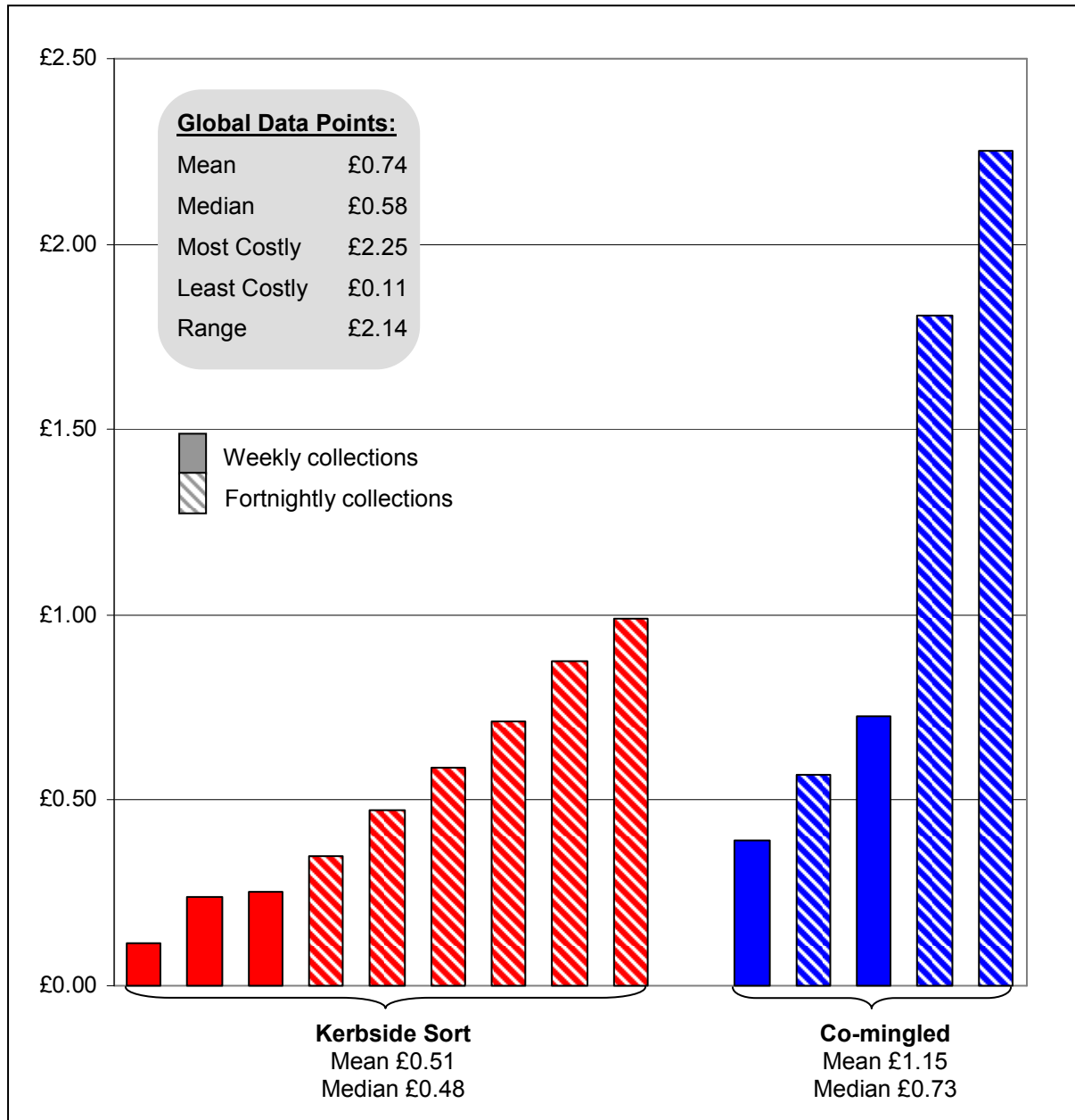
3.3 Figure 6 shows the collection cost data in terms of the authority type, with the solid bars indicating weekly collections and the striped bars fortnightly collections.

Figure 6 Recycling: Cost per Collection (by Authority Type)



3.4 Figure 7 illustrates the collection costs that authorities incurred in 2005/06 broken down according to the manner in which the materials are collected from kerbside. “Kerbside Sort” refers to those collection schemes that provide householders with a box; as the materials are collected they are sorted into compartments on the vehicle. “Co-mingled” describes schemes where householders present their recyclables in plastic sacks, which are then loaded onto a vehicle and the materials sorted at a Materials Recovery Facility.

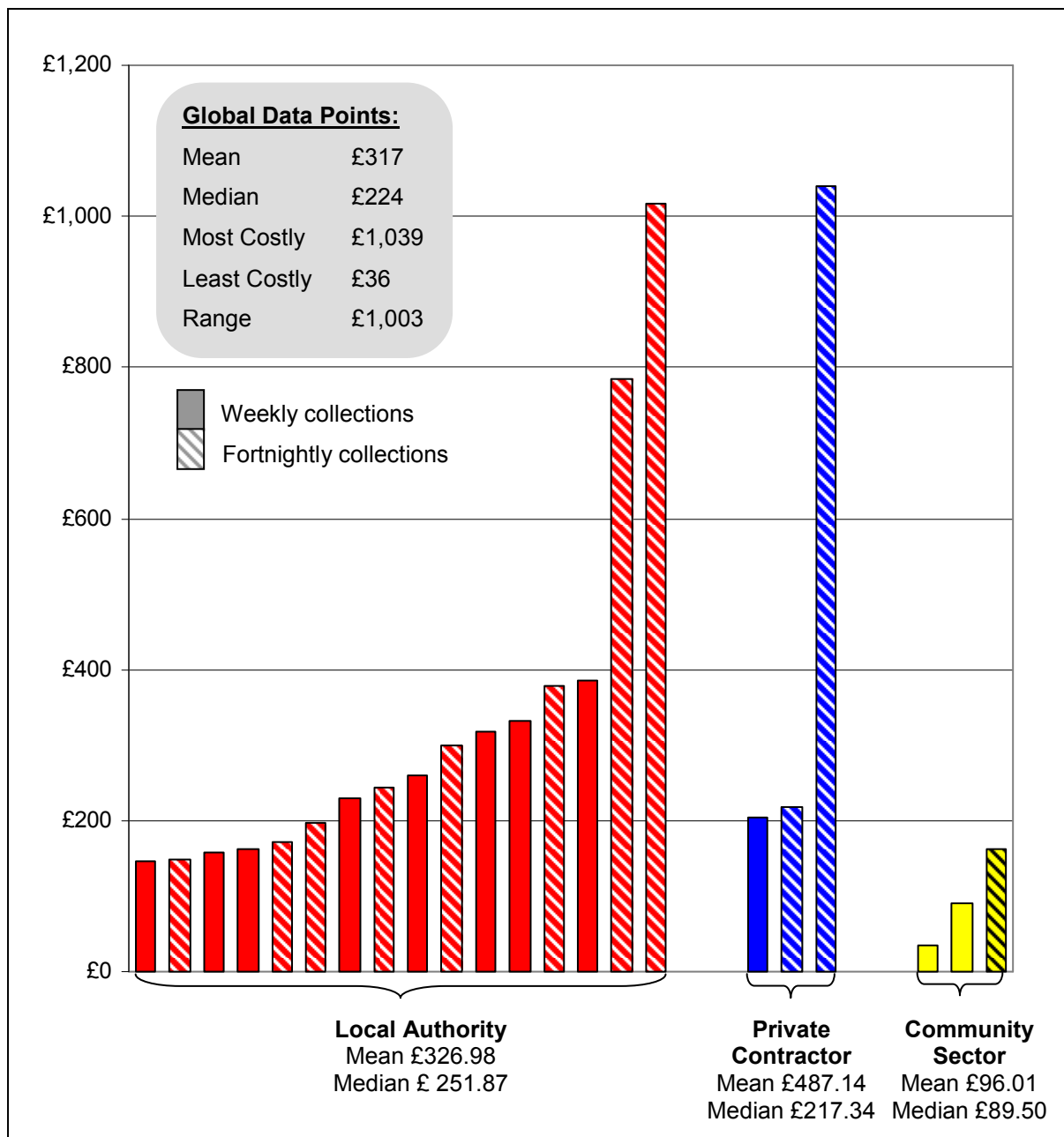
Figure 7 Recycling: Cost per Collection (by Collection Method)



Costs per Tonne

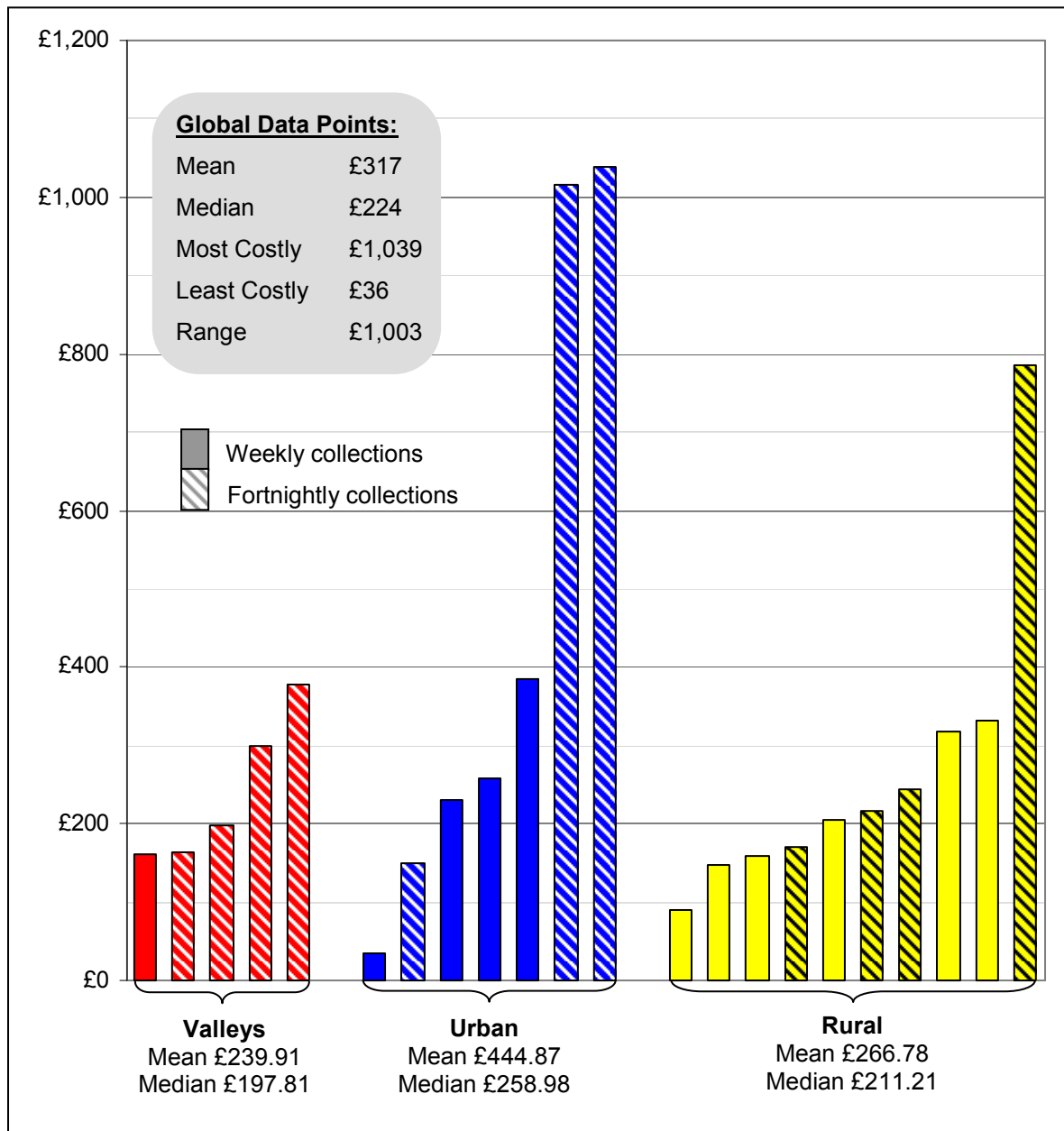
3.5 In 2005/06, 97,750 tonnes recyclables were collected from households in Wales. If every tonne of recyclables was collected at the most expensive rate, the annual national cost of the service would be £102 million. Applying the cheapest rate derives a national cost of £3.5 million per annum. Figure 8 presents the costs per tonne of recyclable materials collected by different service providers. Solid bars represent weekly collections and striped bars represent fortnightly collections.

Figure 8 Recycling: Cost per Tonne (by Service Provider)



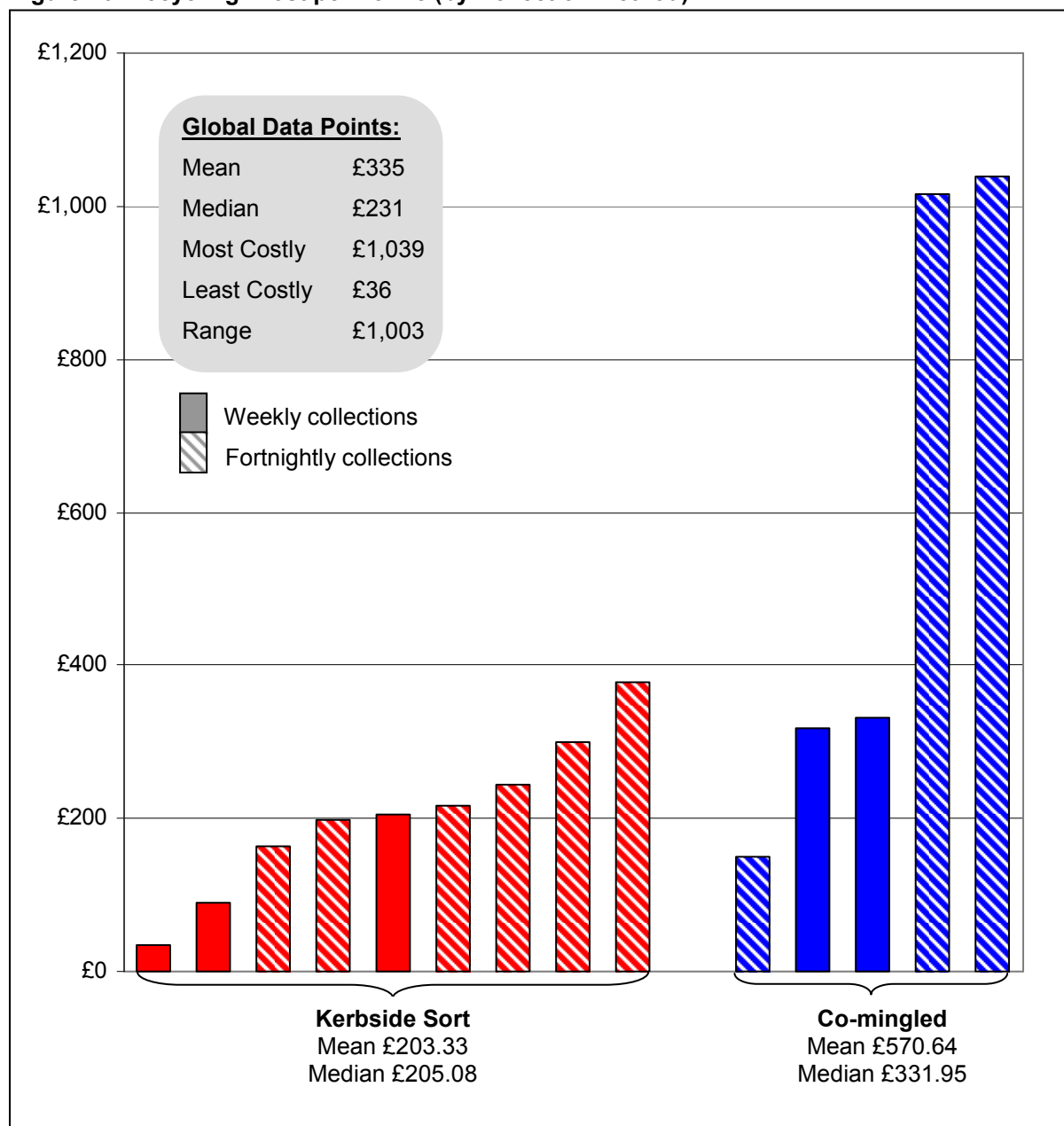
3.6 Figure 9 illustrates the cost per tonne of recyclables collected in the three types of authority in Wales: Valleys, Urban and Rural.

Figure 9 Recycling: Cost per Tonne (by Authority Type)



3.7 Figure 10 shows the tonnage costs of recycling collection schemes according to the method by which materials are collected (as in Figure 7). Materials can either be sorted at the kerbside by operatives or, in the case of co-mingled collections, at a Materials Recovery Facility.

Figure 10 Recycling: Cost per Tonne (by Collection Method)

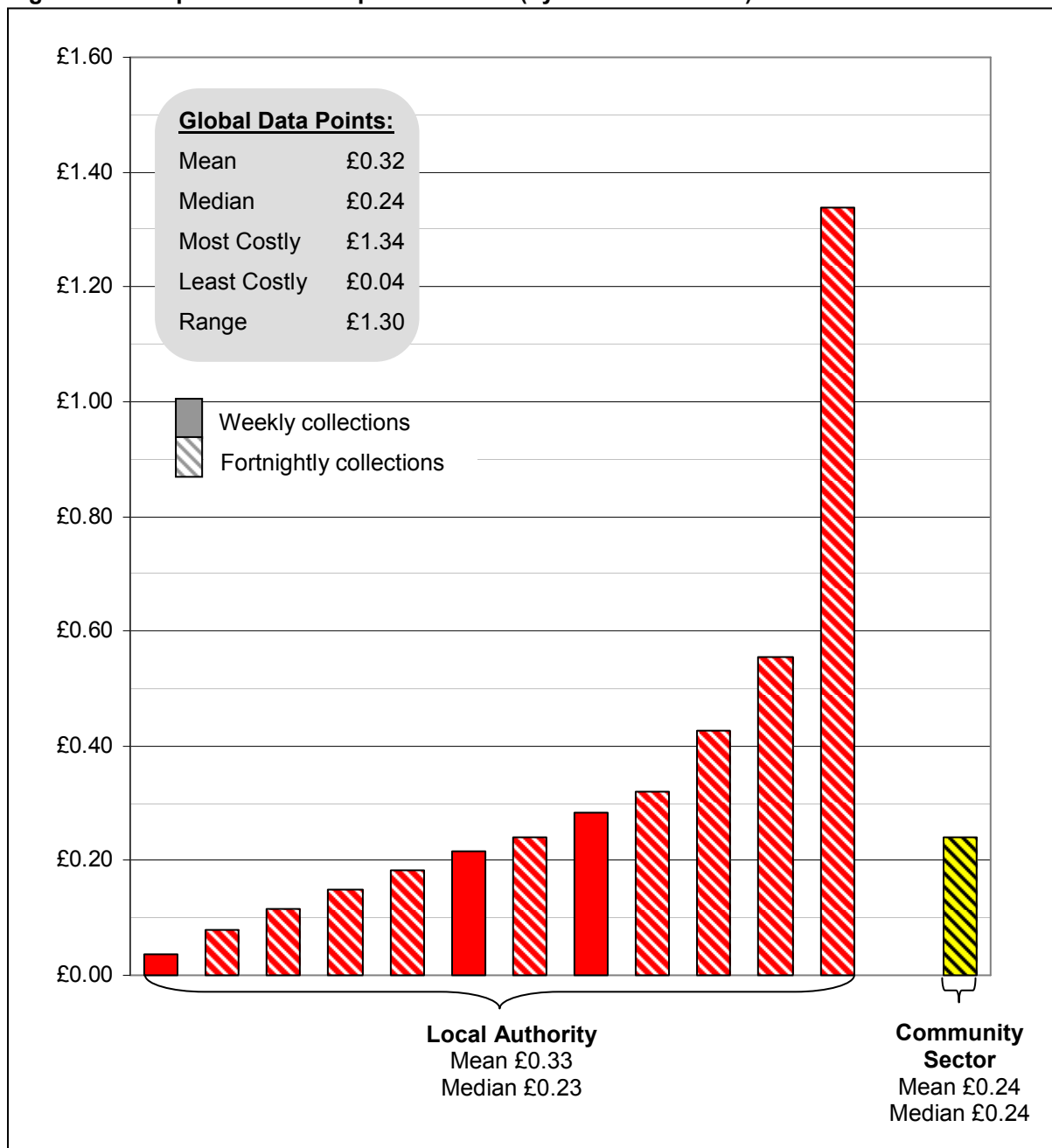


4 Compostables Collections

Costs per Collection

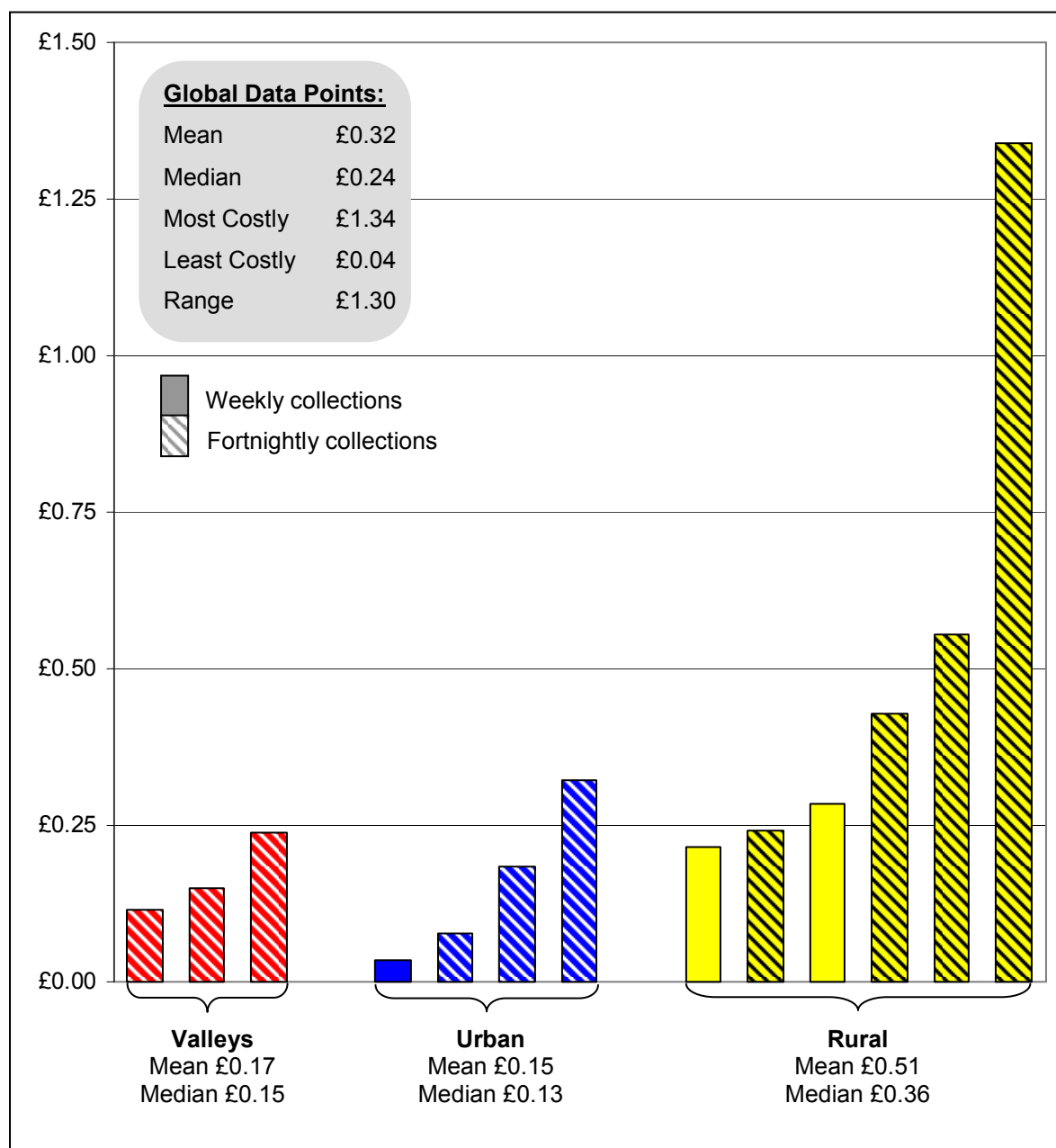
4.1 In 2005/06, 22 million household collections of compostables were undertaken in Wales at a total cost of £3 million. If all compostable material was collected at the most expensive rate, the national cost would be £29.5 million per annum; at the cheapest cost this would be £800,000. Figure 10 shows the cost per collection of composting schemes for which distinct expenditure data was available.

Figure 11 Compostables: Cost per Collection (by Service Provider)



4.2 The costs per collection of composting schemes are illustrated in Figure 12, broken down according to the type of authority. Striped bars indicate fortnightly collections whereas solid bars indicate collections on a weekly basis.

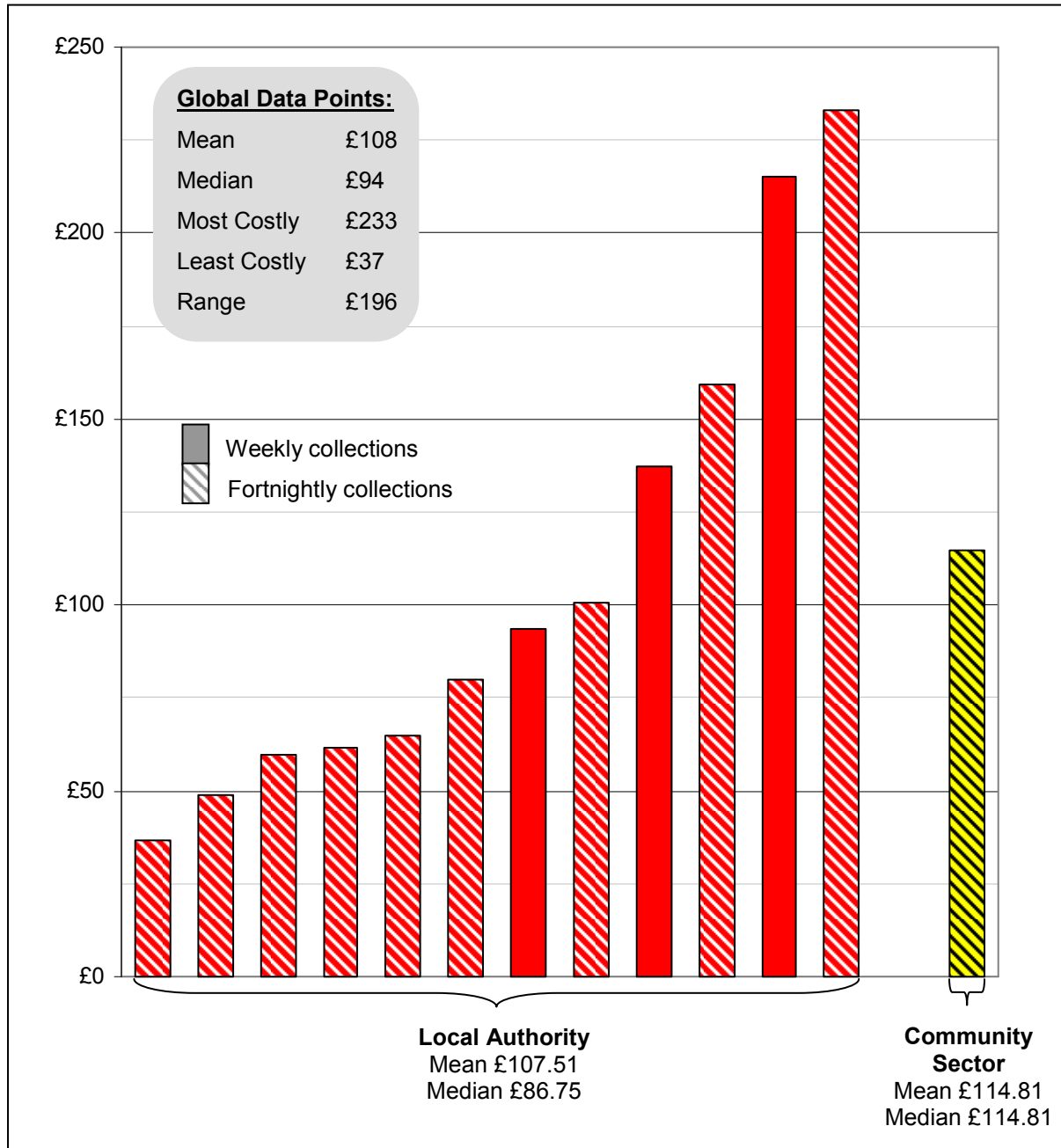
Figure 12 Compostables: Cost per Collection (by Authority Type)



Costs per Tonne

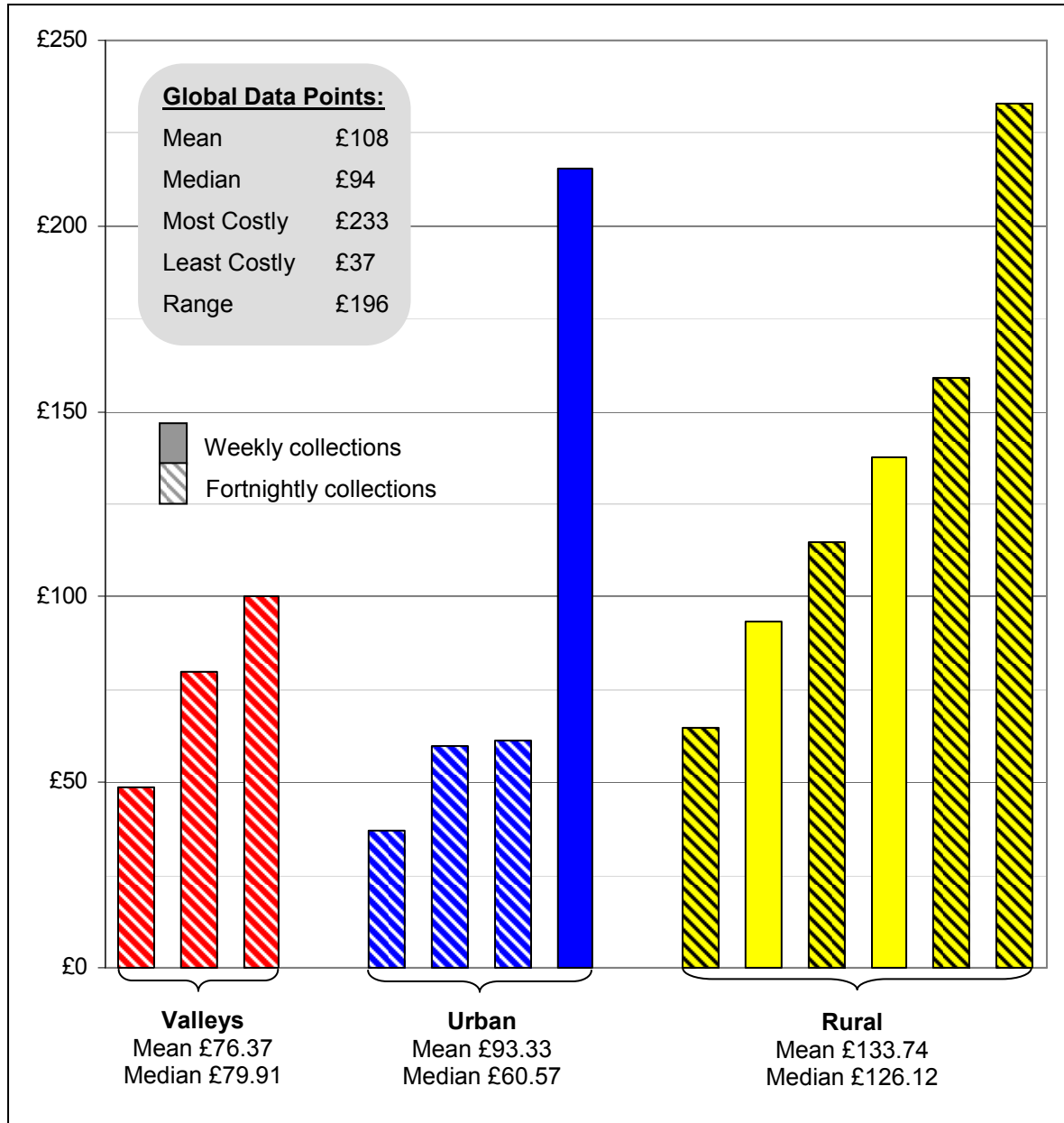
4.3 In 2005/06, 44,050 tonnes compostables were collected from households in Wales. If every tonne of compostables was collected at the most expensive rate, the service would cost £10.3 million per annum; at the cheapest rate, this would be £1.6 million. The costs per tonne of collected compost are illustrated below in Figure 13.

Figure 13 Compostables: Cost per Tonne (by Service Provider)



4.4 Figure 14 shows the costs per tonne of compostable material collected in 2005/06 in Valleys, Urban and Rural authorities. The majority of these collection schemes were undertaken on a fortnightly basis, indicated by striped bars.

Figure 14 Compostables: Cost per Tonne (by Authority Type)



5 Summary

5.1 The table below summarises the headline figures of the costs of kerbside collection services in Wales in 2005/06. The data in Figure 15 has been presented in terms of costs **per collection**. The first column of data has been calculated by multiplying the cost of the cheapest collection schemes by the total number of collections undertaken in Wales in 2005/06.

Figure 15 Summary of Cost Data (per collection)

| Classification | Annual national cost if undertaken at least costly rate | Actual cost 2005/06 | Difference |
|-----------------------|--|----------------------------|-------------------|
| Refuse | £23.5 M | £52.6 M | £29.1 M |
| Recycling | £4.4 M | £25.5 M | £21.1 M |
| Compostables | £0.8 M | £2.9 M | £2.1 M |
| TOTAL | | | £52.3 M |

5.2 Figure 16 presents the expenditure **per tonne** of all collection services in Wales, with the cheapest potential national cost calculated from the expenditure of the least costly services.

Figure 16 Summary of Cost Data (per tonne)

| Classification | Annual national cost if undertaken at least costly rate | Actual cost 2005/06 | Difference |
|-----------------------|--|----------------------------|-------------------|
| Refuse | £33 M | £52.5 M | £19.5 M |
| Recycling | £3.5 M | £25.5 M | £22 M |
| Compostables | £1.6 M | £2.9 M | £1.3 M |
| TOTAL | | | £42.8 M |