

## REPORT OF DIRECTOR OF ENVIRONMENT

Executive Board  
17 October 2016

### Kerbside Green Waste Collection Service

<b>HEAD OF SERVICE &amp; DESIGNATION.</b>  Ainsley Williams Head of Waste and Environmental Services	<b>DIRECTORATE</b> Environment	<b>TELEPHONE NO.</b>
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### 1. Background

1.1 The Authority will replace its current waste collection vehicles with a fleet of new vehicles in autumn 2016. The existing collection rounds have been re-designed to provide more efficient routes and hence fewer collection vehicles are required in the new fleet. The new vehicles will also address some current operational difficulties as set out in the following paragraphs.

1.2 Food waste and green (garden) waste are currently co-collected in the same compartment at the rear of the refuse collection vehicle. The combined waste is currently processed via an in-vessel composting facility at CWM Environmental's facility at Nantycaws, Carmarthen.

1.3 In practical terms, difficulties with the current form of combined food and green waste collection relating to the open split back design of our current collection fleet have been experienced. Incidents of food waste being squirted out at high pressure through seals at the back end of the vehicle during compaction have been observed. There are also difficulties associated with cleaning the vehicles due to the build up of food deposits.

1.4 In addition, we may in future need in to consider a new form of food waste treatment by means of anaerobic digestion (AD) - Welsh Government's preferred treatment method. The AD form of treatment does not readily lend itself to receiving a mixture of food and green waste. Separating the two waste types at this stage provides the Authority with flexibility in future to choose the most appropriate form of treatment. In effect, we are future proofing our ability to consider different options.

1.5 In considering the factors outlined in the preceding paragraphs, the new vehicles, which are due in October 2016, will have a different configuration to the current split back twin compartment vehicles. Food waste will be contained in a separate enclosed pod unit located directly behind the cab of the vehicle. Crucially, food waste will no longer be compacted. However, this configuration does not allow green (garden) waste to be collected in the same way as the current method.

1.6 The Authority will therefore need to review its kerbside green waste collection service before new refuse collection vehicles are rolled out in October 2016. The current form of collection will no longer be appropriate.

1.7 Currently, householders can purchase bio-degradable bags and place garden green waste in the bags that are collected weekly at the same time as the food waste. Current costs are £3.50 per roll of 20 bags.

1.8 As already stated, the food pod units on the new vehicles does not allow green waste to continue to be collected in this way and hence we will need to consider alternatives; there are three options open to us with respect to the kerbside green collection:

- Cease the collection service and rely on our household waste recycling centres for disposal directly by the public.
- Continue to collect green waste utilising biodegradable bags, but on separate bespoke rounds, utilising dedicated vehicles; this will require customers to formally set up an agreement/contract with us.
- Provide a bespoke collection service on a chargeable basis utilising wheeled plastic bins.

1.9 There would be some difficulty with continuing to use biodegradable bags due to the potential for degradation when in use over a period of a fortnight, resulting in split bags. There would also be less scope to ensure that the service is only provided to those that have subscribed.

1.10 Given the difficulties that terminating the green waste collection service may pose, together with the potential small reduction in recycling (circa 1%), this report sets out the potential option for operating a chargeable separate service for the collection of green waste and sets out the assumptions and costs relating to setting up such a service. Legislation allows local authorities to charge for the collection of green waste, but not for its disposal or treatment. Hence we are unable to recover the full cost of the service, but this is currently the case with the existing service.

1.11 Disposal arrangement will remain as per the current form of treatment in the short term (composting process), but may be subject to review as part of the wider waste treatment and disposal considerations in future.

## **2. Proposal**

**2.1 Basis of service** - chargeable kerbside collection service provided fortnightly, operating from the beginning of March/April to the end of October each year and will include the Easter holiday period.

**2.2 Crew and Vehicles** – two dedicated 15t open back refuse collection vehicles fitted with cone type bin lifts, crewed by 1 driver and 1 loader. The vehicles will need to be equipped with on-board weighing capability and will be hired for 8-9 months of the year. During the period that the service is not operational, the vehicles will be off-hired and the crews will be deployed elsewhere within the service (refuse and cleansing). It is estimated that a maximum of 300 properties per day can be serviced, taking into account dispersal throughout the County. In theory, two vehicles should provide capacity for about 6,000 properties, but this largely depends on the dispersal and configuration of the collection rounds.

**2.3 Receptacles** –it is proposed that we use wheeled plastic bins of 240 litres capacity (green in colour with the Carmarthenshire logo applied together with the bilingual wording “Green Garden Waste” or similar), with the option of a 140 litres capacity bin for those who find the smaller bins easier to manage. The subscription charge per bin will remain the same for the two bin sizes. At the end of each season, the bins will remain with the customer on the basis that they will continue to subscribe to the service in the following year. Bins will only be recovered upon notification by the customer that they no longer require the service, or in the event of non-payment. The only exception to bin provision is where access difficulties exclude the use of the wheeled bins, in which case, sacks could be used. These will only be issued if an assessment by the collection crew concludes that sacks are the best option, so that their use is kept to an absolute minimum. The customer will have no choice in this respect.

**2.4 Take up** – experience in other authorities suggests that about 8.5% of all households have taken up the service, each one, on average, yielding about 187kg of green waste per year. If this was applied to Carmarthenshire, it would equate to about 7,400 properties and a total of 1,420 tonnes per year. Currently, we estimate about 700 tonnes of green waste being captured at the kerbside, which would be around 3,740 properties.

**2.5 Service viability** – the provision of two vehicles and four crew members will be sufficient to serve up to about 6000 customers. Any take up above 6000 subscriptions will mean an additional vehicle and crew being introduced. For the purpose of the costing exercise, we have conservatively estimated participation levels at the lower end of the current estimated participation rate.

**2.6 Subscription Charge** – three levels of charges have been assumed for modelling purposes as set out in the tables in this report. The subscription rates modelled are £45, £48 and £50 per annum. Households will be allowed more than one bin (subscription), provided they pay e.g. 2 bins/subscriptions would cost the householder double the single rate. No concessionary rates are proposed. The charge per bin will be a flat annual fee, irrespective of when within the year customer join the scheme.

2.7 Carmarthenshire’s scheme, based on the modelled rates will be the most expensive in Wales, with the second most expensive being Pembrokeshire at £41.50. However, if we look at Authorities in England, charges vary significantly from £20-£120 per annum. The scheme will not pay for itself in the first five years at a subscription rate of £45. Comparable schemes in other authorities include:

- Pembrokeshire, £41.50 per annum
- Bridgend, £ 27per annum.
- Monmouthshire, £14 per annum.

**2.8 Charging mechanism and associated subscription** – it is proposed that the standard charge of £48 per annum made on the basis of a direct debit payment option spread over a period of 6 months (April to September). For those customers paying as a single payment, a 15% discount will be offered, reducing the charge from the standard charge of £48 to £40.80 for 2017/18.

**2.9 Administrative costs** – the cost of administrating the scheme, managing the customer base, associated subscriber accounts and the arranging of new customer schedules and delivery/removal bins has been taken into account in calculating the cost of the service and

setting the proposed charge. The labour element associated with the annual delivery and removal of bins is accounted for by the fact that the cost of labour being included for 12 months of the year with the service operating for 8-9 months. The initial roll out of bins at the commencement of the scheme is included in the first year costs. A dedicated scheme administrator has been factored into the costing calculations.

**2.10 Summary** - Table 1, shows the total cost of the scheme, assuming 3000 bins are purchased. Tables 2, 3 and 4 summarise the net cost of the scheme for three potential take up rates of 3000, 4000 and 4500 subscribers, with three alternative Year 1 subscription rates. Current participation is estimated to be between 3000 and 4000 customers. The subscription rates applied in the modelling are £45, £48 and £50 per annum.

**Table 1 – summary of cost for a collection service, assuming no income and 3000 bins purchased:**

Scenario	Assumed Subscriptions	Cost £ Yr1	Cost £ Yr 2	Cost £ Yr 3	Cost £ Yr 4	Cost £ Yr 5
1. Full cost - with bins bought from revenue budget.	Yr1-5 @ zero subscriptions	<b>280,564</b>				

Note – this information signifies the level of financial risk that the Authority is exposed to. Disposal costs are excluded as we are unable to charge for disposal costs. Initial cost of purchasing bins is circa £60k.

**Table 2 – summary of net costs of collection (subscription rate of £45 in Year 1)**

Scenario	Assumed Subscriptions	Cost £ Yr1	Cost £ Yr 2	Cost £ Yr 3	Cost £ Yr 4	Cost £ Yr 5
1. Full cost - with bins bought from existing revenue budget.	Yr1-5 @ 3000 subscriptions	<b>145,564</b>	91,685	93,519	95,389	97,297
	Yr2-5 @ 4000 subscriptions		<b>53,601</b>	35,464	36,173	36,897
	Yr3-5 @ 4500 subscriptions			<b>22,899</b>	<b>12,607</b>	<b>12,028</b>

Notes:

- The above assumes a subscription rate of £45 for Year 1, with inflation applied annually.
- The service would be in deficit throughout the five year period, assuming inflation is applied to the annual subscription charge and 4,500 subscriptions are secured.
- Disposal costs are excluded.
- Initial cost of purchasing bins is circa £60k.

**Table 3 – summary of net costs of collection (subscription rate of £48 in Year 1)**

Scenario	Assumed Subscriptions	Cost £ Yr1	Cost £ Yr 2	Cost £ Yr 3	Cost £ Yr 4	Cost £ Yr 5
1. Full cost - with bins bought from existing revenue budget.	Yr1-5 @ 3000 subscriptions	<b>136,564</b>	82,523	84,173	85,857	87,574
	Yr2-5 @ 4000 subscriptions		<b>41,385</b>	23,003	23,464	23,933
	Yr3-5 @ 4500 subscriptions			<b>8,881</b>	<b>-1,691</b>	<b>-2,556</b>

Notes:

- The above assumes a subscription rate of £48 for Year 1, with inflation applied annually.
- The service would be self-funding from Year 4 onwards, assuming 4,500 subscriptions are secured.

- Disposal costs are excluded.
- Initial cost of purchasing bins is circa £60k.

**Table 4 – summary of net costs of collection (subscription rate of £50 in Year 1)**

Scenario	Assumed Subscriptions	Cost £ Yr 1	Cost £ Yr 2	Cost £ Yr 3	Cost £ Yr 4	Cost £ Yr 5
1. Full cost - with bins bought from existing revenue budget.	Yr1-5 @ 3000 subscriptions	<b>115,803</b>	61,388	62,616	63,868	65,145
	Yr2-5 @ 4000 subscriptions		<b>32,696</b>	14,140	14,423	14,712
	Yr3-5 @ 4500 subscriptions			<b>-1,010</b>	<b>-11,223</b>	<b>-12,279</b>

Notes:

- The above assumes a subscription rate of £50 for Year 1, with inflation applied annually.
- The service would be self-funding from Year 3 onwards, assuming 4,500 subscriptions are secured.
- Disposal costs are excluded.
- Initial cost of purchasing bins is circa £60k.

2.11 The figures in the tables do not take into account the proposed 15% concession for the single payment option. If the 15% concession is offered, then the net cost of the scheme would increase by circa £22k based on 3000 customers and £32k for 4500 customers.

### 3. Recommendation

3.1 Accepting that Years 1 and 2 of the scheme will be provided at a cost to the Authority in all scenarios the best balance of reducing the Authority's exposure in terms of additional cost would be to levy a charge of £50 per annum for the service.

3.2 However, we also have to be mindful of how the new charge will be perceived and how it may adversely affect take up rates for the service, particularly as the success of the scheme is predicated on securing 4500 subscribers in the long term. Even at the lowest modelled annual subscription rate of £45 per year, Carmarthenshire's scheme will be the most expensive in Wales, with the second most expensive being Pembrokeshire at £41.50. However, if we look at Authorities in England, charges vary significantly from £20-£120 per annum. The scheme will not pay for itself in the first five years at a subscription rate of £45.

**3.3 It is therefore recommended that as an alternative to simply terminating the current service, a fortnightly kerbside green collection scheme utilising wheeled bin receptacles be introduced at a standard subscription rate of £48 per annum for Year 1. The annual rates for the following years will be reviewed and validated for inflation.** The proposed charge in Year 1 equates to just 92 pence per week or £4 per calendar month over the year. The scheme should be viewed as a long term trial to establish its appeal and level of subscription. In general, authorities that have introduced such charges have experienced a reduction in take up in Year 1 with subsequent recovery in following years.

**3.4 It is further recommended that the scheme is offered on a direct debit basis over a 6 month period (April to September), in which case the standard subscription charge of £48 per annum will apply. For those choosing to pay the full amount as a single payment, a reduction of 15% will apply.**

3.5 The cost/income model based on a charge of £48 per annum is summarised below, with Year 1 costs in the region of £140k, assuming 3000 subscribers.

3.6 This cost of £140k is additional to the current budget provision, which based on current assumptions, may be in deficit by up to £270k for 2017/18 and does not include the cost of the proposed new grass collection service. The budget prediction for 2017/18 has many variables and this predicted budget deficit could be yet be significantly reduced.

3.7 If the customer base remained at 3000, the ongoing additional cost to the Authority will be in the region of £80-90k per annum. The Year 2 subscription charges will need to be reviewed to reflect the level of take up and cost.

**Table 5 - summary of net costs (recommended subscription rate of £48 in Year 1)**

Scenario	Assumed Subscriptions	Cost £ Yr1	Cost £ Yr 2	Cost £ Yr 3	Cost £ Yr 4	Cost £ Yr 5
1. Full cost - with bins bought from revenue funding	Yr1-5 @ 3000 subscriptions	<b>136,564</b>	82,523	84,173	85,857	87,574
	Yr2-5 @ 4000 subscriptions		<b>41,385</b>	23,003	23,464	23,933
	Yr3-5 @ 4500 subscriptions			<b>8,881</b>	<b>-1,691</b>	<b>-2,556</b>

Notes:

- The above assumes a subscription rate of £48 for Year 1, with inflation applied annually.
- The service would be self-funding from Year 4 onwards, assuming 4,500 subscriptions were secured.
- If customer base does not expand beyond 3000 customers, ongoing cost to Authority circa £80-£90k per annum.
- If customer base does not expand beyond 4000 customers, ongoing cost to Authority circa £24k per annum.
- The figures in the table do not include the 15% concession for the single payment option.

3.8 If the 15% concession is offered, then the net cost of the scheme as identified in the table above would increase by circa £22k based on 3000 customers and £32k for 4500 customers.

3.9 The recommended scheme will need to be implemented from April 2017 (Year 1 will be 2017/18). However, we will need to advertise the fact that the current system of collection will cease and compostable bags will be withdrawn from sale. In the meantime customers will be advised of the proposed termination of the existing scheme and reminded not to purchase too many bags in the lead up to termination of the current scheme. No refunds will be available for biodegradable bags already purchased.

3.10 A three month lead in period will need to be factored in to purchase and deliver bins by the 1<sup>st</sup> April 2017, assuming that we have successfully advertised the new scheme.

## Appendix 1 – Equalities Impact Assessment

# Initial Equalities Impact Assessment Template

## Appendix 1

<b>Department:</b> Environment	<b>Completed by (lead):</b> Ainsley Williams	<b>Date of initial assessment:</b> 3 May 2016 <b>Revision Dates:</b>
<b>Area to be assessed: (i.e. name of policy, function, procedure, practice or a financial decision)</b>	Waste Collection Service - Kerbside Grass Collection Service (chargeable).	
<b>Is this existing or new function/policy, procedure, practice or decision?</b>	It is proposed to change the collection method and payment structure for the kerbside grass collection service, however, the collection service will continue to be provided. The change involves replacing the existing bag system with a bin system.	
<b>What evidence has been used to inform the assessment and policy? (please list only)</b>		
It is estimated from typical annual household yields (from other comparable authorities) that between 3000 and 4000 households (out of 87,000 households in the County) use the paid grass collection service i.e. around 4% of all households. It is assumed that the impact would be minimal and would not adversely affect those currently using the service, as the service will continue, albeit collected in a different way.		

<b>1. Describe the aims, objectives or purpose of the proposed function/policy, practice, procedure or decision and who is intended to benefit.</b>	<p>A grass collection service is currently offered on a paid basis by means of customers purchasing bio-degradable bags. It is estimated that about 600-700 tonnes of garden waste is collected from the kerbside annually, which for ease of collection is currently mixed in with our food waste. Using typical household yields from other similar authorities, it is estimated that about 4% of Carmarthenshire households currently take up the service.</p> <p>Looking at future treatment options for food waste, both central and Welsh Government's preferred treatment is via anaerobic digestion technology. This appears to be the most cost effective and hence most prevalent technology available and relies on a food based feedstock, devoid of garden waste. Accordingly, by separating our green and food waste at this time provides us with options for future treatment. In addition, the configuration of our new waste collection vehicles does not allow continuation of the current collection system.</p> <p>The proposed collection system will rely on the use of bins instead of bags and the collection frequency will change from weekly to fortnightly. The public will continue to be able to use our household waste recycling centres and composting bins are also available for purchase.</p>			
<b>The Public Sector Equality Duty requires the Council to have "due regard" to the need to:-</b> (1) eliminate unlawful discrimination, harassment and victimisation; (2) advance equality of opportunity between different groups; and (3) foster good relations between different groups (see guidance notes)	<b>2. What is the level of impact on each group/ protected characteristics in terms of the three aims of the duty?</b> Please indicate high (H) medium (M), low (L), no effect (N) for each.	<b>3. Identify the risk or positive effect that could result for each of the group/protected characteristics?</b>		<b>4. If there is a disproportionately negative impact what mitigating factors have you considered?</b>
		<b>Risks</b>	<b>Positive effects</b>	
<b>Age</b>	L	Less convenient	System will be easier to	Alternative means of disposal –

			storage and collection will increase from weekly to fortnightly.	use, provided access to collect bin is adequate. Potential increase in home composting, hence reduction in the municipal waste totals.	home composting or taking the waste to the nearest household waste recycling centre. Where we assess that access may prove difficult for a wheeled bin, large bags may be provided.
	<b>Disability</b>	L	As above	As above	As above
	<b>Gender reassignment</b>	N			
	<b>Race</b>	N			
	<b>Religion/Belief</b>	N			
	<b>Pregnancy and maternity</b>	N			
	<b>Sexual Orientation</b>	N			
	<b>Sex</b>	N			
	<b>Welsh language</b>	N			
	<b>Any other area</b>	N			

**5. Has there been any consultation/engagement with the appropriate protected characteristics?** YES  NO

**6. What action(s) will you take to reduce any disproportionately negative impact, if any?**

- A kerbside collection service continues to be offered.
- Alternative form of treatment encouraged – home composting (preferred method) with composting bins available for purchase.
- Alternative means of disposal is available via our household waste recycling centres.

**7. Procurement - Following collation of evidence for this assessment, are there any procurement implications to the activity, proposal, service. NONE**  
Please take the findings of this assessment into your procurement plan. Contact the corporate procurement unit for further advice.

**8. Human resources - Following collation of evidence for this assessment, are there any Human resource implications to the activity, proposal or service? NONE**

**9. Based on the information in sections 2 and 6, should this function/policy/procedure/practice or a decision proceed to Detailed Impact Assessment? (recommended if one or more H under section 2)** YES  NO

**Approved by:** Director/Head of Service | **R Mullen** Director of Environment | **Date:** 3 May 2016