Appendix 2

Business Case for
Redditch Garden Waste Service
July 2017

Contents

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1 Strategic Case

1.1 The proposal is to make changes to the household waste collection service to ensure Redditch Borough Council (RBC) residents can choose to dispose of green garden waste in a way that is both environmentally sustainable and convenient.

1.2 There are considerable opportunities for RBC to increase customer satisfaction, raise the recycling rate, expand the range of services on offer to residents, relieve pressure on existing services by reducing volumes on grey bin collections and generate revenue in providing a household garden waste collection.

1.3 In anticipation of introducing a garden waste service budgeted revenue has been included from 2018/19 in the MTFS. The following strategic purposes will be fulfilled by implementing such a proposal.

i. Keep my place safe and looking good
Garden waste is often fly- tipped in greater amounts during the growing season despite the current disposal routes available to residents. The absence of a dedicated green garden waste collection can be cited as a barrier to residents disposing of garden waste in a lawful manner.

ii. Help me live my life independently
Creating a collection specifically for garden waste would create a more convenient disposal option specifically for less able-bodied residents or those without the means to access to the Household Recycling Centre (HRC or Tip).

1.4 Two of the three themes within the Council Plans strategic purpose 'Keep my place safe and look good' are positively supported by the implementation of a garden waste service.

i. Participate in the creation of safe and well maintained places
Providing a garden waste service for residents to responsibly deal with their garden waste echoes the standards being set for Place Teams in Environmental Services to keep the area well maintained. It is hoped residents are encouraged to participate in the service as opposed to disposing of garden waste in the grey bin or fly-tipping this waste.

ii. Demonstrate care for the environment
In providing a green garden waste collection, the Council can divert material otherwise viewed as waste into creating a valuable resource.

1.5 Garden waste collections can cater for a wide range of biodegradable green garden waste including:

- Grass Cuttings
- Branches (up to 4 inches in diameter)
- Clippings and leaves
- Weeds, plants and flowers

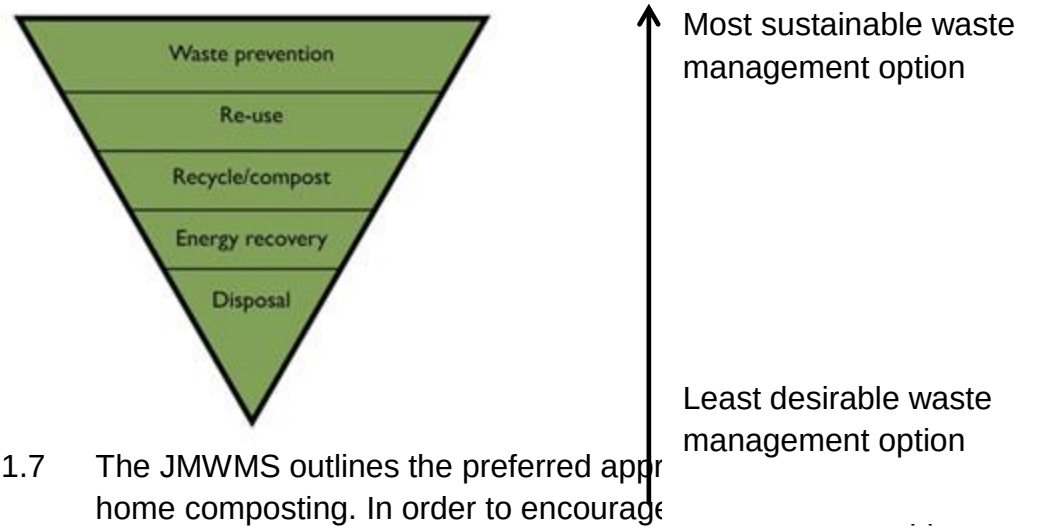
For clarification, the following materials are not accepted in garden waste collections due to the natural aerobic composting methods available to Herefordshire and Worcestershire authorities:

- Kitchen and fruit and vegetable waste
- Turf, soil and rubble
- Animal waste and bedding
- Bin liners

1.6 RBC signed up to the Herefordshire and Worcestershire Joint Municipal Management Waste Management Strategy (JMWMS)[1] in 2004. At the heart of the JMWMS is the Waste Hierarchy which focuses on moving waste up through the pyramid to prevent final disposal.

Since September 2016 EnviRecover[2], receives all household residual waste from RBC. However, despite being preferable to landfill, energy recovery is still low down the waste hierarchy (see Figure 1). To avoid considerable negative impacts on the environmental and economic performance of our waste service in respect of collection and disposal, there is a need to move it further up the hierarchy.

Figure 1: The Waste Hierarchy



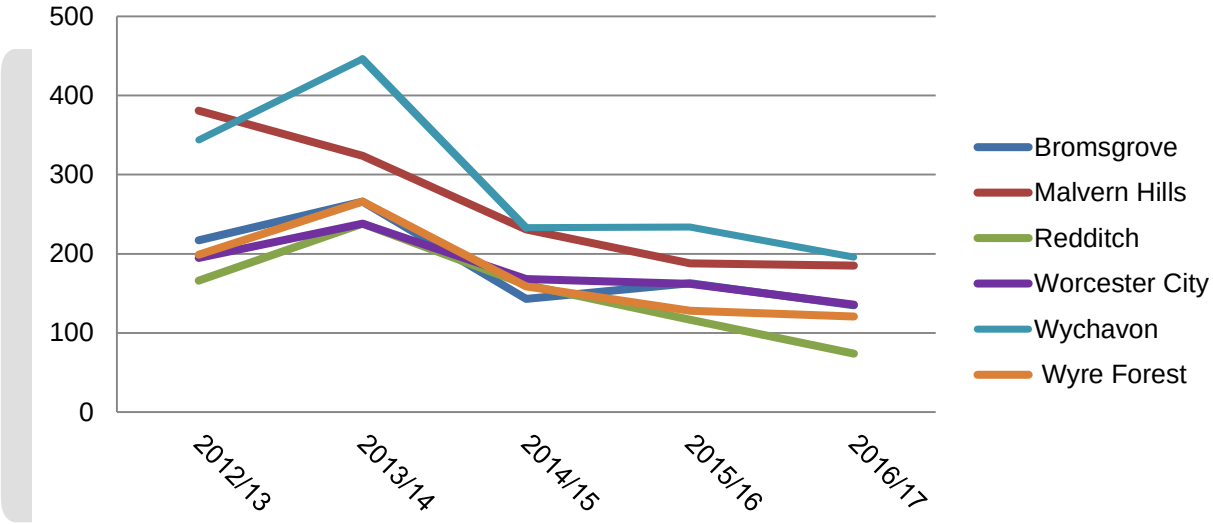
1.7 The JMWMS outlines the preferred appr ste as home composting. In order to encourage Planning Guidelines (shortly out for consultation), request that all developers

[1] First Review 2011
[2] EnviRecover is a 200,000 tonne per year Energy for Waste facility at the Hartlebury Trading Estate near Kidderminster

supply a home compost bin at each appropriate dwelling to encourage homeowners to reduce their waste by home composting. In removing the first barrier for home owners and supplying the bin at point of sale with the property, it is hoped residents will adopt this method of waste management more readily.

1.8 Worcestershire County Council (WCC) has promoted a discounted home compost bin scheme for over 20 years. Sales for RBC have declined steadily over recent years and in 2016/17 only 74 bins were purchased through this scheme, see Figure 2. This does follow the trend within the county however Redditch does show significantly fewer sales in comparison.

Figure 2: Compost bin sales 2012 to 2017 In Worcestershire



1.9 Redditch Borough Council (RBC) is the only waste collection authority within Herefordshire and Worcestershire that does not offer a garden waste collection service.

Nationally around 50% of collection authorities offer a chargeable service specifically for garden waste[3]. It is predicted that by 2022 that all local authorities in England will be charging for garden waste.[4]

Consequentially RBC consistently has the lowest overall recycling rate within Herefordshire and Worcestershire (Table 1). Where garden waste is collected separately and sent for composting, tonnage contributes towards the overall recycling rate. RBC currently relies on residents to home compost or visiting the HRC to dispose of garden waste. However, there is evidence that green

[3] 2014/15 Data taken from Waste Data Flow
[4] Bird, A, 2017 Energy for Waste Conference, Local Authority Recycling Advisory Committee

garden waste is being placed in grey bins which are essentially supplied for residual waste[5].

The composted material from RBC results from the clearance of fly tipped waste and compostable street sweepings (Table 1).

Table 1: Recycling Rates for H & W Collection Authorities 2016/17[6]

Waste Collection Authority	Total Dry Recycling	Total Composting (inc garden waste)	Total Recycling Rate
Bromsgrove District Council	24.71%	19.50%	44.21%
Wychavon District Council	29.34%	14.78%	44.13%
Herefordshire	29.91%	12.61%	42.53%
Malvern Hills District Council	28.18%	10.27%	38.46%
Worcester City Council	30.09%	6.42%	36.51%
Wyre Forest District Council	25.49%	7.29%	32.78%
Redditch Borough Council	28.59%	2.18%	30.77%

1.10 The JMWMS recognises the need to respond to customer demand and to increase the amount of waste recycled and composted. Authorities may therefore choose to operate paid for collections of garden waste where both additional collection and disposal costs are considered. This option moves the waste higher up the waste hierarchy demonstrating a more sustainable form of waste management.

1.11 A waste composition analysis in 2010 identified that that between 2% - 6% of a residual waste bin was in fact garden waste[7]. RBC generally shows an increase in residual waste during the main growing season. When compared with BDC and Worcester City who both operate a seasonal garden waste collection, there is a clear increase in residual waste for RBC. (figure 3-5, growing season indicated by orange box)

[5] Waste not able to be recycled, reused or composted
[6] Figures taken from Waste Data Flow 2016/17
[7] MEL, 2010. Redditch Compositional Kerbside Waste Analysis

It is reasonable to assume that the resulting increase is due to garden waste. The experience of collection crews also supports this assumption as during the growing season, there is a notable increase in garden waste in domestic bins.

Figure 3: RBC 3 Year Residual Waste Profile

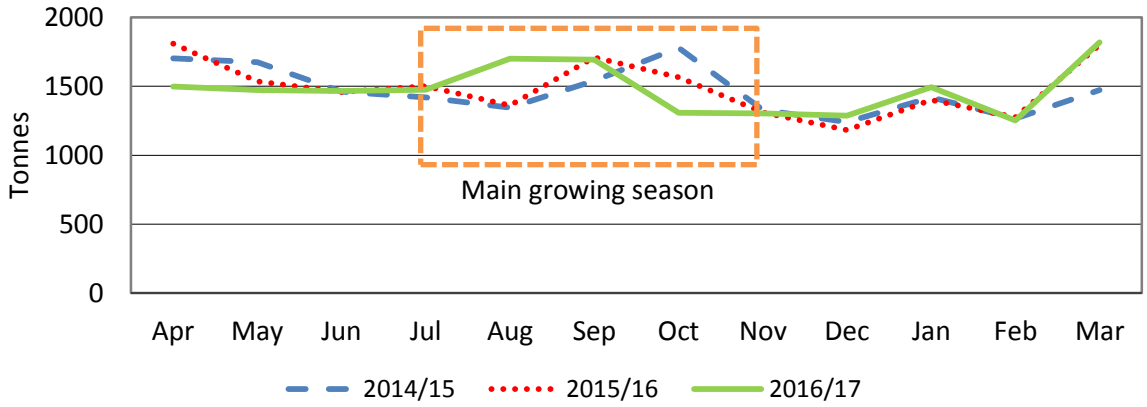


Figure 4: BDC 3 Year Resiual Waste Profile

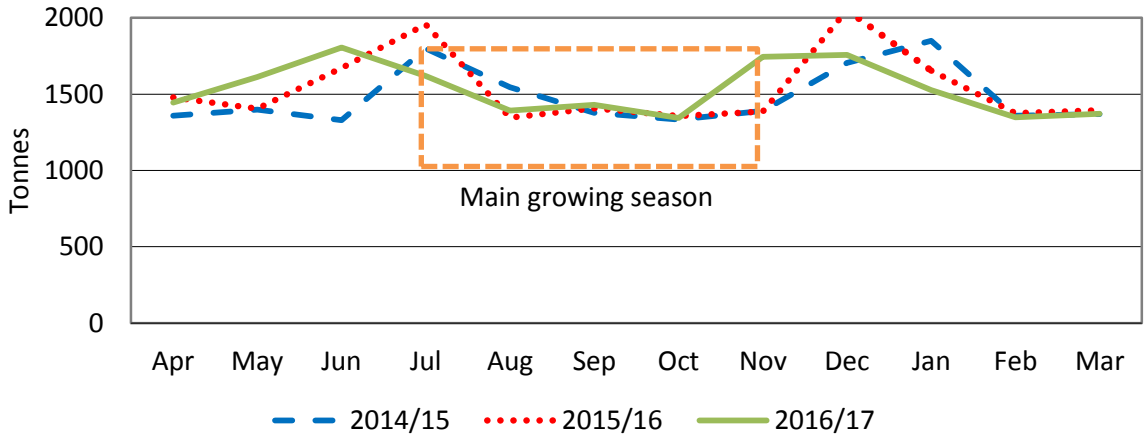
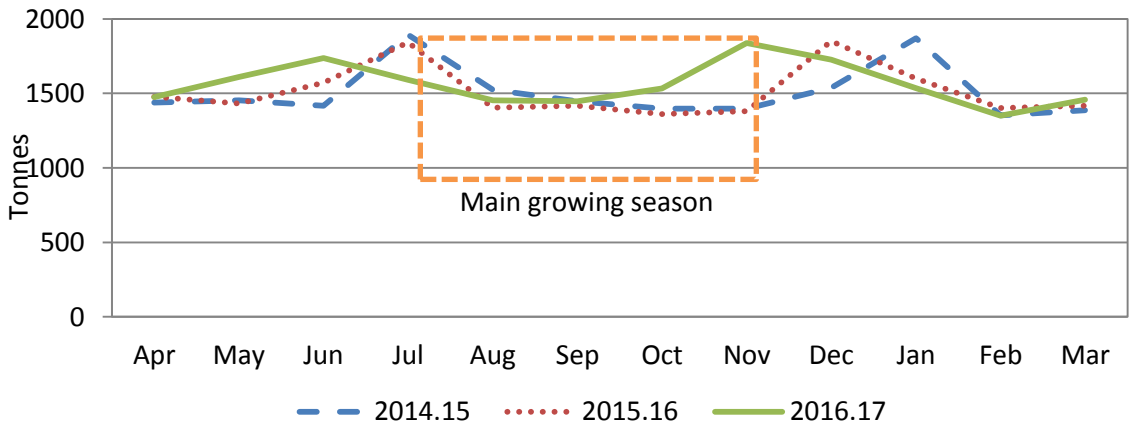


Figure 5: Worcester City 3 Year Resiual Waste Profile



1.12 A garden waste collection trial ran previously in RBC during 2010 and was offered to approximately 12% of the population of which there was a 6.7% take up rate. The service cost £35 and ran from March to November inclusive. At the end of the trial Executive Council recommended:

"If take up was likely to be less than 10%, the service would not be sustainable, but if more than 10% could be achieved, options should be considered for a wider rollout of the service. The possibility of sharing such a service with Bromsgrove DC would now also be considered as part of a further report"[8].

1.13 Carbon emissions have reduced significantly with the latest European Standard 6 compliant vehicles. Previous calculations used pre- European efficiency standards where diesel engines were emitting upwards of 958 g/km[9]. The Council fleet now use the latest Euro 6 engines which are capable of 672 g/km emissions. This reduction of around 30% reduces the environmental impact significantly, not only of any new service but of the entire current fleet.

Table: 2 CO2 Emission Comparisons[10]

Journey Type	Miles	Tonnes of CO2 produced		
		Pre Euro Standards	Euro 6 Standard	Annual Equivalent
Recycling Alternate Weekly Service	1,950	2.80	2.11	12.65
Residual Alternate Weekly Service	1,950	2.80	2.11	12.65
Garden Waste Service	1,500	2.16	1.62	6.49
			Total	31.8
Car journeys[11]	110,000	158.09	118.96	475.85

1.14 Based on an average of 2,200 tonnes[12] of garden waste is taken to the HRC per year resulting in an estimated 22,000 individual car journeys[13] the

[8] Redditch Borough Council, 2010. Garden Waste Collection Service
[9] Carbon emissions for engines are measured in grams of Carbon Dioxide per Kilometre (CO2/km)
[10] Based on average 75 miles a day using Transport Research Laboratory 2009 data assuming speed of 40-50mph
[11] Based on data from 1.14
[12] Average data from 2012-2015
[13] This assumes 100kg load per visit

equivalent annual CO^2 is considerably more than that produced by the fleet see table 2.

2. Economic Case

Drivers for change

2.1 Generating Revenue
An additional revenue stream would be generated as a result of providing a chargeable garden waste service. This would assist RBC with reducing the operating support for other service functions, which in stressed economic times is a significant factor for consideration.

2.2 Increasing Recycling Rates
Recycling rates are made up of a number of tonnages, dry recycling (the green bin waste), reused tonnages (household goods donated to reuse centres who in turn claim reuse credits), and garden waste.

Currently, RBC contributes a very small proportion of garden waste (see table 1). This is generated from clearing the biodegradable element of fly tips and street sweepings.

2.3 Reduction of Residual Waste Tonnage
Green garden waste has a high weight to volume ratio and as such is easily detectable by collection crews in the height of the growing season. Where residents present garden waste in grey bins, collection crews are emptying bins which are overloaded and cause strain and stress on crews and vehicles alike.

Additional weight increases the need and frequency to tip and thus reduces the actual time available to the crew for collection. The overall efficiency of the round is then reduced as vehicles filling up quicker, crews make more frequent journeys to tip, garden waste is sent to energy from waste and the collection round becomes longer.

2.4 Increase Capacity on Residual Rounds
Linked in to 2.3, it is particularly important to maximise our current rounds with the increase in new build areas currently under construction. The additional garden waste being collected essentially occupies space on collection vehicles that is intended and calculated for residual waste.

The impact of garden waste on a residual waste round therefore prevents the service reaching its full collection potential and increases the need to procure additional vehicles and staff ahead of projected dates.

2.5 Consistency Across Herefordshire & Worcestershire
One of the intentions of the JMWMS is to introduce consistency across all of the waste collection areas. Residents of Redditch Borough are the only residents that cannot pay for a garden waste collection service. During a recent customer consultation this was widely recognised amongst residents

as they were not complimentary towards RBC about this, recognising the lack of equality and choice for the consumer in this decision.

2.6 Increase Customer Satisfaction

72% of customers in a recent customer consultation identified a willingness to pay for a garden waste service. This overwhelming positive response signifies a large proportion of households in the Borough would prefer to be offered kerbside garden waste collection as opposed to home composting or taking the waste to the HRC (or tip).

Many of the comments made during the consultation also expressed dissatisfaction at the lack of a garden waste service.

2.7 Reduce Demand for Additional Grey Bins

Residents request additional bins or larger bins at the point where they cannot store their household residual waste in a 240litre bin. 240 litres is the standard size bin that has been accepted as suitable for a family of up to 5 when used as part of an alternate weekly collection service.

During 2016/17 there were 331 requests for larger of additional bins, which is typical of the number received each year. This in turn costs the authority £19,860 per annum.

Not all bin requests are sanctioned; however, this level signifies the number of residents that do struggle to cope with a 240litre bin for their household waste.

Introducing a garden waste service would allow residents the option to move upwards of 6%[14] of their overall waste into a garden waste bin thus freeing up waste in grey bins.

[14] Studying other scheme it is reasonable to assume that additional garden waste will be diverted into a garden waste service in addition to the quantity currently found within grey bins.

Evaluation and Appraisal

2.8 Seven options were evaluated for dealing with green garden waste in the Borough. Table 3 identifies these options and assesses them against 7 defined evaluation criteria.

The following assumptions have been made in order to compare and evaluate each option for both qualitative and quantitative outcomes.

i. The costs have been calculated on a basis of £45 for one season to reflect the neighbouring service in BDC which allows the two districts to offer a consistent pricing structure.

ii. A £20.00 set-up fee in the first year of subscription has been included as an option for first year subscription costs as a one off charge. This fee is intended to recoup some of the initial set up (taking customer details and administering Direct Debit), bin procurement (at £15.50 per bin) and bin delivery costs associated with each new subscription in the initial year of service.

iii. Those options excluding the administration charge will inevitably result in a reduced income. Increasing the fee will increase overall revenue whilst decreasing the fee will decrease revenue.

iv. Subscription rates have been assumed for year 1 at 1,000.

v. Growth of the service has been predicted at 1,000 subscriptions per year until the saturation point of 4,000 subscriptions. At this point spare capacity within the BDC service will be fully utilised by RBC.

Table 3: Evaluation Criteria for Appraisal and Analysis for Long List Options

Evaluation Criteria	Option 1 Do Nothing	Option 2 BDC Restricted Area Service no set-up free	Option 3 BDC Restricted Area Service + set-up fee	Option 4 RBC operate borough wide set-up fee	Option 5 RBC operate borough wide + set-up fee	Option 6 BDC operate borough wide no set-up	Option 7 BDC operate borough wide + set-up
a) Meets budgeted revenue of £23,725	No **(£0 NPV[15])**	No, based on 500 subscriptions **(£-3,540 NPV)**	No, based 500 subscriptions **(£6,460 NPV)**	No **(£-14,446 NPV)**	No **(£5,554 NPV)**	No **(£14,445 NPV)**	Yes **(£33,445 NPV)**
b) Increase recycling rates	No	Partially, full potential will not be achieved.	Partially, full potential will not be achieved.	Yes	Yes	Yes	Yes
c) Reduce weight of Residual Waste bins	No	Partially, full potential will not be achieved.	Partially, full potential will not be achieved.	Yes	Yes	Yes	Yes
d) Increase capacity on domestic rounds for new build residual waste*	No	Partially	Partially	Yes	Yes	Yes	Yes
e) Consistency in H&W	No	Partially	Partially	Yes	Yes	Yes	Yes
f) Increase customer satisfaction	No	Partially	Partially	Yes	Yes	Yes	Yes
g) Reduce demand for larger or additional residual bins	No	Partially, full potential will not be achieved.	Partially, full potential will not be achieved.	Yes	Yes	Yes	Yes

[15] NPV- Net Present Value equals sum of future income minus spend

2.9 Following the Evaluation and Appraisal process, Options 7 presents as the best service solution and the only one to meet all of the evaluation criteria. This option is for BDC to operate a garden waste service on behalf on RBC with the inclusion of a £20 administration charge for all subscribers in the first year[16].

2.10 A full cost benefit analysis identifying relevant benefits and costs for each solution can been seen in table 4. For ease of identification and to summarise, table 4i identifies total benefit, cost and resulting Net Present Value (NPV) which is the forecasted income minus the spend.

2.11 Where enabling costs are listed this includes all support functions including HR, Legal, Income & Administrative Support.

[16] Administration charge is per subscription and not per bin

Table 4: Cost Benefit Analysis for Long List Options

Cost	Do Nothing	BDC operate restricted Area	RBC operate Borough wide	BDC operate Borough wide
No. of customers	0	500	1,000	1,000
No. of collection days / week	0	0.5	1	1
Income				
Set Up Fee (1st year only) - £20.00	£0	£10,000	£20,000	£20,000
Service Charge - £45.00	£0	£22,500	£45,000	£45,000
Total Income	**£0**	**£32,500**	**£65,000**	**£65,000**
Running Costs				
BDC operating and contribution to overhead costs	£0	£24,524	£27,524	£27,524
Interest & repayment of capital borrowing -bins[17]	£0	£1,298	£2,597	£2,597
Interest & repayment of capital borrowing -vehicle[18]	£0	£0	£28,891	£0
Bin replacement [19]	£0	£217	£434	£434
Total Running costs	£0	£26,040	£59,446	£30,555
Surplus with set up charge	£0	£6,460	£5,554	£34,445
Surplus no set up charge	£0	-£3,540	-£14,446	£14,445
Capital spend				
Vehicle purchase	£0	£0	£180,000	£0
Bin Purchase	£0	£7,750	£15,500	£15,500
Total Capital	£0	£7,750	£195,500	£15,500

[17] Repayments continue for 11 years year 1: £2,596 year 2: £5,193 year 3-11: £7,790
[18] Repayments continue for 7 years at £28,891.14
[19] Calculated at 2.8% of estate per year

Table 4i: Summary Cost Benefit Analysis

Option	Description	Initial Capital Outlay[20]	Benefit	Running Costs	Capital Repayment (and bin replacement)	Surplus
1	Do Nothing	£0	£0	£0	£0	£0
2	BDC operate restricted Area Service no administration fee	£7,750	£22,500	£24,524	£1,515	-£3,540
3	BDC operate restricted Area Service with administration fee	£7,750	£32,500	£24,524	£1,515	£6,460
4	RBC operate Borough Wide service no administration fee	£195,500	£45,000	£27,524	£31,922	-£14,446
5	RBC operate Borough Wide service with administration fee	£195,500	£65,000	£27,524	£31,922	£5,554
6	BDC operate Borough wide service no administration fee	£15,500	£45,000	£27,524	£3,031	£14,445
7	BDC operate Borough Wide service with administration fee	£15,500	£65,000	£27,524	£3,031	£34,445

[20] Capital outlay is displayed for information purposes only and does not feature in the annual NPV

Table 5: Risk Analysis for Long List Options

Option	Environmental impact	Revenue risk	Financial risk	Failing to meet Customer needs	Low customer sign up	Service provider failure	Failure to meet evaluation criteria	Score
Do Nothing	4	4	4	4	4	1	4	25 HIGH
BDC operate restricted Area Service no administration fee	2	2	4	3	2	1	4	18 MEDIUM LOW
BDC operate restricted Area Service (including administration fee)	2	3	4	3	3	1	4	20 MEDIUM HIGH
RBC operate Borough wide service no administration fee	1	2	4	1	2	3	4	17 MEDIUM LOW
RBC operate Borough-Wide (including administration fee)Service	1	3	4	2	3	3	4	20 MEDIUM HIGH
BDC operate the service no administration fee	1	2	4	1	2	1	4	15 LOW
BDC operate the service (including administration fee)	1	3	2	2	3	1	1	13 LOW

Key: 1 =Low, 4 =High Scoring: 13-15=LOW 16-18= MEDIUM LOW 19 MEDIUM 20-22= MEDIUM HIGH 22-25= HIGH

The Recommended Option

2.12 Table 5 assesses the level of proposed risk for RBC for each option

2.13 After assessing all 7 options for both quantitative and qualitative costs and benefits, Option 7 has been assessed to be the recommended option. This relates to BDC operating a Borough Wide Service on behalf of RBC with the inclusion of an administration fee for first year subscriptions and an annual service charge of £45.

2.14 The viability and risks of each option were weighed against each other to result in the recommended outcome:

i. Option 1: Not viable

This is high risk and achieves no positive outcomes.

ii. Option 2: Not Viable

This is medium low risk but only partially meets evaluation criteria

iii. Option 3: Not Viable

This medium high risk and only partially meets evaluation criteria

iv. Option 4: Not Viable

This is medium low risk and meets all evaluation criteria apart from budgeted revenue

v. Option 5: Not Viable

This is medium high risk and meets all evaluation criteria apart from budgeted revenue

vi. Option 6: Viable

This low risk but only partially meets evaluation criteria as it does not meet budgeted income requirements (£9,280 shortfall)

vii. Option 7: Viable

This is low risk and fully meets evaluation criteria

2.15 Should RBC wish to run the service in-house (Options 4 and 5); there would be significant upfront capital investment for procurement of a refuse collection vehicle (currently £180,000).

Procurement required for the collection vehicle will add in the region of 20 weeks to the project plan and therefore will negatively affect the delivery of the service. Hire costs for a standard refuse collection vehicles are currently at £850 per week.

3. Commercial Case

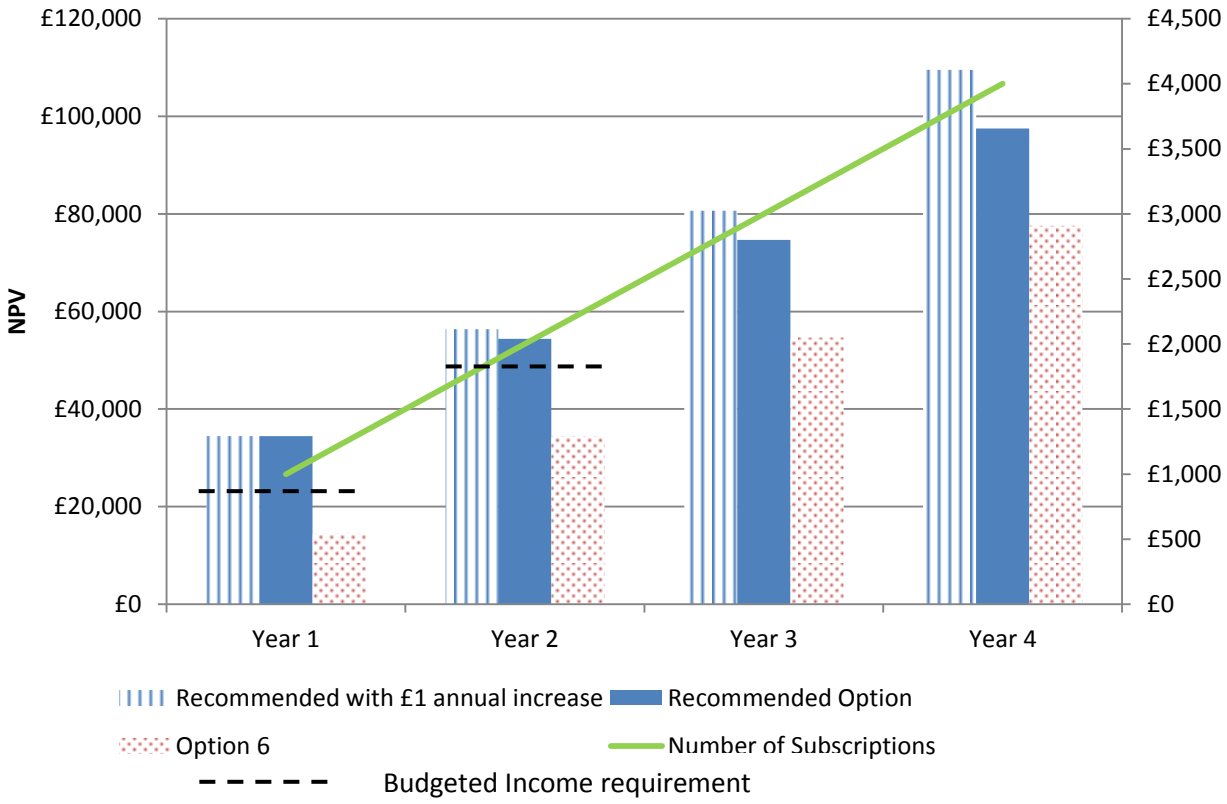
Viability of Recommended Option

3.1 The relationship between number of subscribers, and Net Present Value or NPV (the forecasted income minus outgoings) are intrinsically linked for the forecasted 4 year period, see Figure 6. Benefit will continue to increase over a four year period after which time the spare capacity within the BDC service will be fully utilised by RBC's garden waste service and therefore there will need to be a decision whether to continue expanding or limit service capacity to 4,000 subscriptions.

For comparison, Option 6 has been included to show that budgeted income is not achieved by this option falling £9,280 short in year one and £13,067 in year two. Budgeted income Year one £23,725 and year two is £47,450. Income for option 6 is £14,445 and year two is £34,383.

The striped bars also identify potential NPV if the annual charge increased by £1 each year.

Figure 5: Four year Forecasted NPV and Customer Growth (with Option 6 for comparions)



3.2 To ensure ongoing costs and benefits are viable past the first start-up year of Option 7, a summary for a four year forecasted cost benefit analysis can be viewed in table 6 along with a full breakdown in table 6i below.

Please note that these figures account for an annual 3% increase in running costs such as salaries and fuel. 2017/18 costs have been used throughout the calculations for the purpose of comparisons with annual running costs.

3.3 Capital spend and repayments will be direct from RBC budgets in addition to BDC service charges.

Table 6: Four Year Forecast Summary Cost Benefit Analysis for Recommended Option (option 6 included for comparison)

	Year 1	Year 2	Year 3	Year 4
Income	£65,000	£110,000	£155,000	£200,000
Running Cost & repayments	£27,524	£55,617	£80,338	£92,936
Net Present Value (NPV) Recommended Option	£34,445	£54,383	£74,662	£97,538
Net Present Value (NPV) Option 6	£14,445	£34,383	£54,662	£77,538

Table 6i: Four Year Forecasted Cost Benefit Analysis for Recommended Option

Cost	Year 1	Year 2	Year 3	Year 4
No. of customers	£1,000	£2,000	£3,000	£4,000
No. of collection days / week	£1	£2	£3	£4
Income				
Set Up Fee (1st year only) - £20.00	£20,000	£20,000	£20,000	£20,000
Service Charge - £45.00	£45,000	£90,000	£135,000	£180,000
Total Income	**£65,000**	**£110,000**	**£155,000**	**£200,000**
Running Costs				
BDC operating and contribution to overheads costs	£27,524	£49,555	£71,246	£92,936
Interest & repayment of capital borrowing -bins[21]	£2,597	£5,194	*£7,790*	*£7,790*
Bin replacement [22]	£434	£868	*£1,302*	*£1,736*
Total Running Costs	**£30,555**	**£55,617**	**£80,338**	**£102,462**
Surplus with set up charge	**£34,445**	**£54,383**	**£74,662**	**£97,538**
Surplus no set up charge	**£14,445**	**£34,383**	**£54,662**	**£77,538**
Capital Spend				
Vehicle Purchase	£0	£0	£0	£0
Bin Purchase	£15,500	£15,500	£15,500	£15,500
Total Capital	£15,500	£15,500	£15,500	£15,500

[21] Repayments continue for 11 years year 1: £2,596 year 2: £5,193 year 3-11: £7,790
[22] Calculated at 2.8% of estate per year

3.4 BDC has operated a garden waste service within Bromsgrove District since 2003. From 2009, the service has been an opt-in chargeable collection which started with 39.9% participation; participation now stands at 45.68%[23].

3.5 This well established service continually performs well and consistently serves in excess of 18,500 customers per year, mostly with 1 single bin and 3% of customers with 2 or more bins.

3.6 BDC has an overall combined recycling rate of 44.21%[24] of which 9,649 tonnes is attributable to dry recycling and 7,613 tonnes comes from the garden waste service (see table 7).

3.7 The operational workforce engaged in the service is well established and have many years' experience in this role. They are managed by the Environmental Service shared service management team which covers both RBC and BDC operational services. There is thus a vested interest for the success of the RBC service for all parties involved.

[23] 2016/17 data
[24] 2016/17 data

Table 7: Performance Data for BDC Garden Waste Service 2013 to 2016

Performance Indicator	2013-14	2014-15	2015-16	2016-17
Green Garden Waste Tonnage	6,260.06	6,648.22	6,745.00	7,613.82
Dry Recycling Tonnage	8,633.19	9,887.76	9,672.30	9,649.17
Residual Waste Tonnage	22,390.97	21,401.02	21,468.93	19,912.00
Total Household Waste Tonnage	37,284.22	37,937.00	37,886.23	39,049.07
Number of Households	39,824.00	40,166.00	40,497.00	40,802
Residual waste Kilograms per household (NI191)	562.25	532.81	530.14	488.02
Percentage Recycled & Composted (NI192)	39.95%	43.59%	43.33%	44.21%
Garden Waste Kilograms per Subscription per year	338.38	340.93	337.25	408.47
Number of subscriptions	18,500.00	19,500.00	20,000.00	18,640
Percentage participation	46.45%	48.55%	49.39%	45.68%
Charge	£35.00	£38.00	£40.00	£40.00

Performance of Recommended Option

3.8 The importance of other key performance indicators is not to be overshadowed by the financial forecast and as such a four year forecast of how the service is expected to perform given the set parameters is shown in table 8. The calculations have been made conservatively so as not to set unrealistic expectations.

3.9 It should be noted at this point that it is not realistic to compare outputs here with BDC performance (table 7) as the BDC service was originally a free service and as such has a privileged subscription rate of over 45%. Comparisons are more realistic to draw between RBC and another similar service such as Wyre Forest District Council (WFDC).

3.10 In comparison and to validate the forecasted performance, table 9 and 10 shows WFDC and Worcester City performance data for garden waste services. Both these services were introduced as chargeable opt-in from the start with no previous history of a free garden waste collection. They are therefore more comparable to RBC.

Table 9 and 10 also identify increasing charges relating to each year of operation.

3.11 Residual tonnage has been predicted in this model to increase at 3% a year which is due in the main to an increasing number of dwellings in the Borough. The exact number of dwellings to come online each year at this point is not clear.

Between July 2017 and March 2018 there are around 600 properties due to come online from developments opposite the Abbey Stadium, rear of the Hospital and Church Road, Webheath. This highlights the rapid growth of housing within the Borough at present.

As such a conservative 3% a year increase is therefore applied to dwelling figures.

3.12 The yield of waste per year is taken from an average of the first 4 year's performance from WFDC; this has been used to calculate the overall annual tonnage.

3.13 The predicted increase recycling rates indicates a steady increase over a four year period taking the authority from a current 30.77% to 38.74% in 2021/22.[25] This recycling rate would move RBC from bottom of the County league table to 4th place, similar to the performance of Malvern Hills District Council (see table 1).

[25] The predications are taking into account the current tonnage and building on a predicted forecast based on WFDC

Table 7: RBC Forecasted Four Year Performance Data for Recommended Option

Performance Indicator	2016-17 actual	Year 1	Year 2	Year 3	Year 4
Green Garden Waste Tonnage	0	546	1,092	1,647	2,196
Dry Recycling Tonnage	8,775	8,775	8,775	8,775	8,775
Residual Waste Tonnage	19,542	18,996	19,565	20,152	20,757
Total Household Waste Tonnage	28,317	28,317	28,317	28,317	28,317
Number of Households	36,228	36,228	37,315	38,434	39,587
Residual waste Kilograms per household (NI191)	539	524	524	524	524
Percentage Recycled & Composted (NI192)	30.77%	32.92%	34.85%	36.81%	38.74%
Garden Waste Kilograms per Subscription per year	0.00	546.00	546.00	549.00	549.00
Number of Subscriptions	0	1,000	2,000	3,000	4,000
Percentage participation	0.00%	2.76%	5.36%	7.81%	10.10%

Table 9: Performance Data for Wyre Forest District Council Garden Waste Service 2013 to 2016

Performance Indicator	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7[26]
Green Garden Waste Tonnage	522	764	1,156	1,156	1,655	1608	1790
Dry Recycling Tonnage	9,623	10,224	10,320	10,325	10,061	10048	9246
Residual Waste Tonnage	25,199	24,087	24,375	25,046	25,555	25988	23205
Total Household Waste Tonnage	36,022	34,324	25,062	35,762	36,686	38267	33571
Number of Households	44,616	44,616	45,249	45,249	45,640	45640	45640
Residual waste Kilograms per household (NI191)	565	540	539	554	560	569	508
Percentage Recycled & Composted (NI192)	28.16%	32.01%	45.79%	32.10%	31.94%	30.46%	32.87%
Garden Waste Kilograms per Subscription per year	421.78	442.39	525.71	400.55	441.69	358.77	354.32
Number of Subscriptions	1,237	1,727	2,198	2,886	3,747	4,482	5,052
Percentage participation	2.77%	3.87%	4.86%	6.38%	8.21%	9.82%	11.07%
Charge	£30.00 +£20 admin	£31.00 +£20 admin	£32.50 +£20 admin	£34.50 +£20 admin	£40.00 +£20 admin	£43.00 +£20 admin	£46.50 +£20 admin

[26] Data is missing March 2017 as this has not been validated with Waste Data Flow at the time of writing

Table 10: Performance Data for Worcester City Council Garden Waste Service 2011 to 2016

Performance Indicator	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Green Garden Waste Tonnage	1095	1309	1,359	1,611	1,650	1707
Dry Recycling Tonnage	9,993	9,875	9,727	10,035	10,198	10100
Residual Waste Tonnage	19,504	18,962	19,587	19,331	19,866	20381
Total Household Waste Tonnage	30,592	30,146	30,673	30,977	31,714	32,188
Number of Households	43,560	43,863	44,121	44,428	45,006	45613
Residual waste Kilograms per household (NI191)	448	432	444	435	441	447
Percentage Recycled & Composted (NI192)	36.24%	37.10%	36.14%	37.60%	37.36%	36.68%
Garden Waste Kilograms per Subscription per year	276.45	296.15	281.66	318.19	317.06	304.66
Number of Subscriptions	3,961	4,420	4,825	5,063	5,204	5,603
Percentage participation	9.09%	10.08%	10.94%	11.40%	11.56%	12.28%
Charge	£35.00	£37.00	£37.00	£47.00	£52.00	£54.00

Contractual Arrangements

3.14 The service will form part of the shared service arrangement currently in place between RBC and BDC.As such there will be an amendment to the current financial charging arrangements between RBC and BDC.

3.15 Mirroring the BDC service, allows RBC to take opportunity of the spare capacity in the BDC service which has been created via optimisation of the routes.

BDC now have the ability within their current service to accommodate up to 1,000 customers per day (4,000 in total), Tuesday to Friday on alternate weekly basis.

3.16 BDC will administer and operate the garden waste collections to RBC residents as an extension of the current garden waste service already provided in Bromsgrove.

Charging Mechanism

3.17 An agreed amount will be paid to BDC per subscription to cover operational activities undertaken on behalf of RBC. This will be calculated on the direct cost of running the service identified in Table 6i divided by the total number of subscriptions, see table 11.

Table 11: Cost of Service per Subscription to RBC

Item	Charging Band			
Number of Subscriptions	<1,000	1,001-2,000	2,001-3,000	3,001-4,000
Charge per subscription	£27.52	£24.78	£23.75	£23.23

Due to economies of scale the higher the number of subscriptions the lower the cost per subscription.

RBC would be charged per subscription up to the level of each charging band identified in table 11 for clarification 800 subscribers would be charged at £27.52 x 800 giving a total of £22,016 and 2,500 subscribers would be charged at £23.75 giving a total of £59,375.

3.18 Subscriptions will be on a Direct Debit (DD) only basis as this method of payment has invaluable benefits over other payment methods and is the chosen method of payment for all new subscriptions in BDC.[27]

Benefits for DD payments are:

i. Convenience for customers thus improving customer satisfaction
ii. Reduction in administrative burden associated with chasing payments
iii. Better management of bins not paid for in a timely manner
iv. Reduction in payment processing costs
v. Encourages customer retention

Table 12: Herefordshire and Worcestershire Garden Waste Service Charges

Waste Collection Authority	2017 Service Charge	Admin charge	Payment methods
Bromsgrove District Council	£42**	no	DD only for new customers
Herefordshire	5 sacks £3.70	no	Any
Malvern Hills District Council	£65 (£55 for additional bins)	no	Any
Worcester City Council	£56	£10	Online Card and DD is encouraged
Wychavon District Council	£46	No **	DD only
Wyre Forest District Council	£46.50	£20	DD only

* BDC have agreed £45 for 2018 service charge.

**Wychavon District Council hold contract charges with their service provider of £20 which covers the cost of the above although this is not as yet passed onto the customer.

3.19 The administration charge of £20.00 for each customer has been calculated into the first year subscription cost as a one off charge. There is a risk that if customers perceive the administration charge is too high it will limit the overall take up of customers.

[27] Where a potential customer is not able to pay vis DD a mutually agreeable payment method may be proposed by a manager.

3.20 In table 12 only 2 of the 6 authorities apply an administration charge.

3.21 Bins will be procured under an approved Yorkshire Purchasing Organisation (YPO) contract. This is a leading public sector procurement organisation with over 40 years' experience.

YPO have supplied the most preferable unit cost of £15.50 for a standard 240 litre bin which matches the specification required of the service.

Market Research

3.18 During May 2017, 978 residents responded to a consultation commissioned by Environmental Services. Residents were asked if they were willing to pay £45 for a fortnightly seasonal (March to November inclusive) garden waste collection.

72% of responding residents identified that they would be willing to pay for the service. The £45 charge was used as this was directly comparable with the proposed Bromsgrove District Council Service (BDC) charge for 2017/18. Table 13 has a breakdown of yes and no responses and the source they were derived from.

Table 13: Consultation Responses indicating the number of residents that would pay £45 for a seasonal garden waste service

Response Given	Postal	Online	Overall
Yes	33 (45%)	675 (74%)	708 (72%)
No	37(52%)	233 (26%)	270 (26%)
Total	70	908	978

3.2 In figure 6 'yes' and 'no' responses have been plotted on a map of the Borough. This even spread of yes responses supports the need to introduce a service Borough wide rather than restricting the service to specific locations.

3.3 The overwhelming positive response from residents was also supported by numerous comments indicating there was a level of need for the service. Below are a range of quotes showing level of support for the proposed service:

"*Been a long time coming as all the other boroughs have them and we do not"*

"Great idea saving trips to the tip and messing the car up"

“A great idea and one I've been looking forward to. The cost is reasonable too. Fingers crossed that enough people respond and this goes ahead.”

“Wish this was already up and running. Needed now please.”

“We have wanted a service like this since moving to Redditch having used the same one where we used to live. Really useful to help us keep the garden tidy.”
“I would be VERY interested in a garden waste collection service as taking waste to the tip is difficult and messy for me now I am getting older”

3.4 Postal consultation

Residents in the west of the Borough were targeted through a postal consultation to seek their feedback on the proposal. This area was selected due to the makeup of housing, the prevalence of gardens and the experience of Officers during the former garden waste trial where this area showed a higher take up.

Over 7,000 postcards were distributed to this selected area and asked to complete the consultation and return via freepost. A disappointing 1% return rate was achieved through this exercise.

3.5 Online consultation

Residents were also targeted Borough wide using an online survey promoted through a social media post. This survey replicated the postal one but was intended to gauge response over a wider area.

23,725 residents were reached by the post of which 907 residents responded.

3.6 The 26% in table 13 that did not express the need for a garden waste service generally gave feedback that fell into 3 categories

a. No need for the service

“We only have a small low maintenance garden. Any grass cuttings can easily be taken to the rubbish tip"

b. £45 is too expensive

“£45 is too expensive. This service would be useful but this is too expensive when you can simply compost for free.”

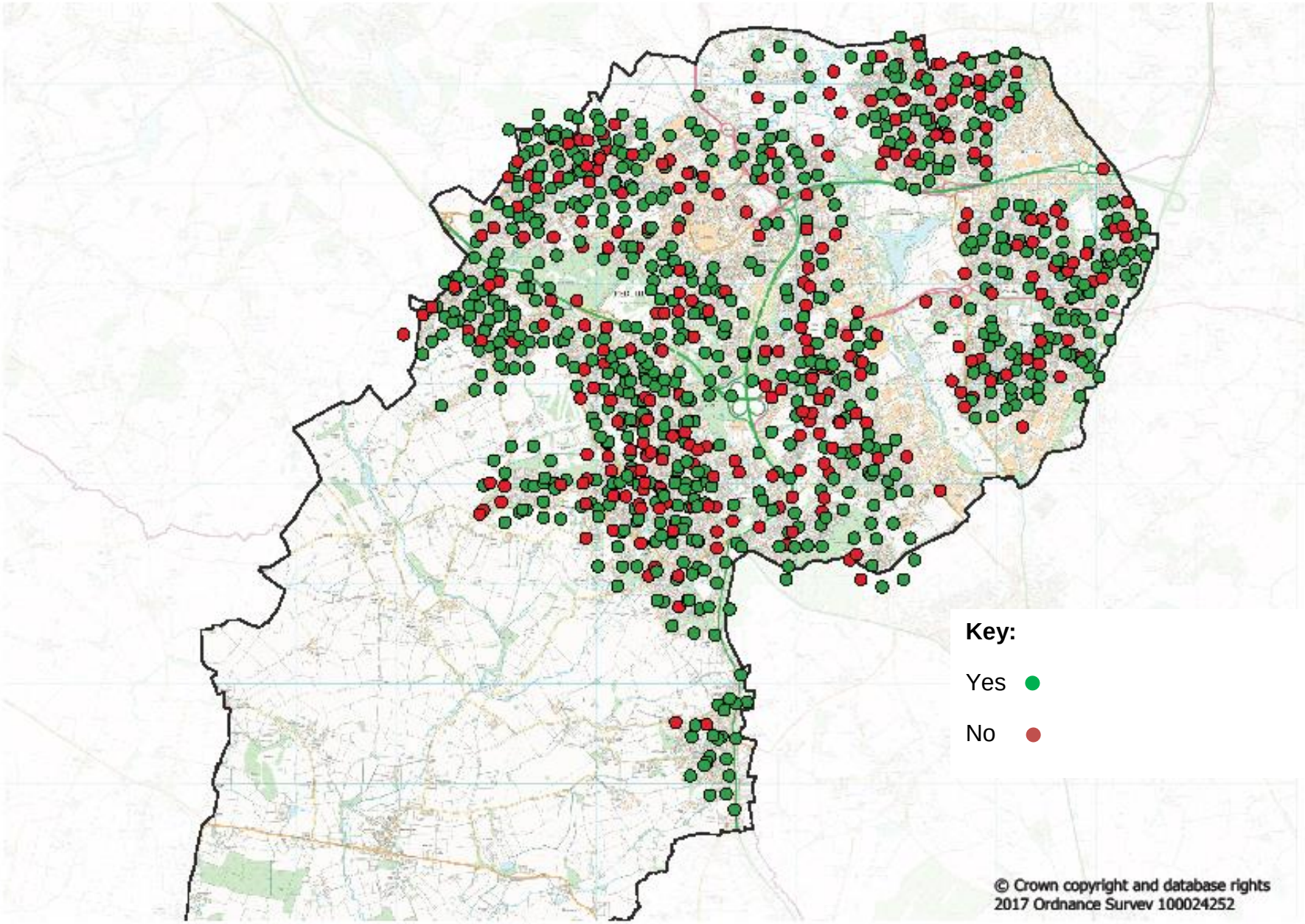
c. Belief the Current council tax should cover the service

“I pay my council tax for this service I would rather find a hedge thank you.”

3.7 The comments submitted by residents in the consultation gives a useful insight into customer perception of the proposal, waste collection in general and how the Council is regarded. This in turn will help formulate the approach taken to market the service to residents.

3.8 The consultation did not account for the inclusion of an initial administration charge in year one of the service.

Figure 6: Map of consultation responses



4. Financial Case

Affordability

4.1 The proposed option demonstrates an affordable service solution which is capable of improving the overall service on offer to residents and at the same time generating additional benefits which can be utilised by RBC to support essential statutory and non-statutory services.

4.2 The proposal represents good value to the customer at £45 per season, this equates to 20 collections at £2.25 which is extremely favourable when compared to other H&W authorities (table 12).

4.3 Forecasted NPV identifies that after operating costs year 1 will generate a surplus of £33,444, year 2 £54,383, year 3 £74,662 and year 4 £97,537.

4.4 Budgeted income in the MTFS for 2018/19 in RBC stands at £43,165 and for 2019/20 £87,450. The Recommended Option allows for this income to be realised. The Medium Term Financial strategy includes £20,000 for 2018/19 and 40,000 2019/20 which takes account of operating costs.

4.5 Members are recommended to ensure provision of a capital commitment for the next 4 years should the Recommended Option be pursued. Capital spend is £31,000 in the initial year and £15,500 years 2 - 4 for the procurement of bins.

Interest and repayment of capital borrowing is as follows:

- Year 1 - £2,597
- Year 2 - £5,193
- Year 3 - £7,790(and each year thereafter up to year 11)

4.6 Service running costs will be met through the receipts taken for subscriptions. Market research suggests the level of subscriptions will be around 1,000 in year one. Evidence from other schemes show once a service is active, the visible presence of garden waste bins on the kerbside in itself starts to generate additional subscriptions.

4.7 There will be a level of service promotion primarily based on social media due to the excellent audience response to the social media consultation. If further awareness raising is required bin stickers on grey bins will be used to target uptake as required.

4.8 Should additional vehicles or staff be required due to breakdown or staff shortages, the hire and agency costs will be covered by BDC through the agreed subscription costs.

5. Management Case

Project plan, deliverability and Implementation

5.1 An established interdepartmental project management team meet regularly to plan and manage the service updating and changing operational practices where required for continued service improvements.

It is envisaged an RBC service which mirrors the existing BDC service would have little impact on the project team and the current way of working. All timescales will be shared and will fall into the current working practice.

5.2 An annual project plan is created identifying timelines, responsibilities and actions and the RBC service would share the same project plan. The use of a simple Gantt chart is used to identify the processes, overlap of processes and the status of actions as well as being able to visualise the development of the project.

Initially the project team meet monthly and around key times (such as start of service and bin retrieval) this may be increased to weekly meetings.

5.3 During the initial implementation stage the team will work closely with Officers in the Corporate Communications team as additional work around promotion and awareness raising of the service will be required for RBC

5.4 Due to an overwhelming positive reaction to the use of social media during market research, this will be the main method of awareness raising and communicating with our potential customers. Use of bin stickers is also planned to target particular areas where required.

Once customers are signed up to the service, they will receive an annual calendar and service information about collection days just prior to the start of the collection period. Collection days will also be available on the Council website.

5.5 The service will be operated using the latest Euro 6 Dennis Eagle refuse collection vehicles ensuring the carbon footprint of the service is kept to a minimum along with reduced Carbon Dioxide, Nitrogen Oxide and particulate emissions to air.

5.6 All collection rounds are optimised using route planning software to minimise journey length and travelling repeat roads; this will become even more important the more subscribers take up the service.

5.7 The service will consist of 20 collections on alternate weeks throughout March to November. Where a bin is not at the kerbside (or designated collection point in case of assisted collection) the bin will not be emptied

5.8 Post collection, by agreement with the County Council, garden waste will be taken to the WCC transfer station in Aston Road Bromsgrove; this is due to permit restrictions at the RBC transfer site. From here Severn Waste Services (SWS) will bulk and transport the resulting garden waste to Hill and Moor open windrow composting facility located near Pershore. SWS market the resulting material as Greengrow™ and this is sold for a variety of agricultural applications.

Monitoring and Evaluation

5.9 The evaluation criteria selected for appraising the Recommended Option will be used to monitor the performance of the service. The key evaluation criteria and performance indicators are listed below

Table 14: Key evaluation Criteria for Recommended Option

Evaluation Criteria	Measure	Frequency
Meeting budged revenue	Number of new subscriptions	Monthly
	Total number of subscriptions	Monthly
Increase recycling rates	Recycling rate	Monthly
Reduce weight of Residual Tonnage	Residual Tonnage	Monthly
Increase capacity on domestic rounds for new build residual waste*	Residual Tonnage	Monthly
Consistency in H&W	Successful implementation of new garden waste service	Annual
Increase customer satisfaction	Customer satisfaction survey	Monthly
Reduce demand for or additional residual waste	Number of additional grey bin requests	Monthly

Table 15: Key Performance Measures for Recommended Option

Key Performance Measures	Frequency
Green Garden Waste Tonnage	Monthly
Dry Recycling Tonnage	Monthly
Residual Waste Tonnage	Monthly
Total Household Waste Tonnage	Monthly
Number of Households	Monthly
Residual waste Kilograms per household (NI191)	Monthly
Percentage Recycled & Composted (NI192)	Monthly
Garden Waste Kilograms per Subscription per year	Monthly
Number of Subscriptions	Monthly
Percentage participation	Monthly

Risk Management

Table 16: Risk Assessment for Recommended Option

Risk	Likelihood	Mitigation Actions	Contingency Actions
Initial low take up of service	Medium	Advertise service through social media • Press • Website • Vehicle banners	If initial take up is slow and indicates less than1, 000 in the first year, additional promotional awareness using targeted bin stickers on grey bins supported by social media.
Initial high take up of service	Low	Communicate to residents about service capacity Develop plans for upwards of >4,000 subscribers. Arrange capital funds for 2,000 bins in first year and call off as necessary from supplier	. Employ use of waiting lists for subscriptions over 4,000 Seek additional capital to fund extra vehicle (BDC or RBC) Put forward a report to call capital forward from year 2 to year 1 delegated to S151 Officer and HoS
Vehicle failure	Low	Ensure service and maintenance schedules are carried out on vehicles	There is often the ability to utilise another vehicle from the BDC fleet depending on the day and time of day. If the utilising another vehicle in the fleet is not an option, a hire vehicle will be used. This will cost around £850 per day
Crew Sickness / Leave	Low	Encourage staff to take leave in a manner that does not adversely	Managers will seek to utilise staff from within the existing pool of operational staff where possible.

		affect the service. Ensure staff welfare is a priority making use of HR, Occupational health and other supporting service as appropriate.	Should there be no pool staff available, appropriately trained Place Team staff may be called on to assist. Where neither of these two options are available additional agency crews will be employed on a day by day basis.
Residents unhappy about charge	Low	Communicate what the charge covers and why Select a value that is realistic and which benefits both RBC and Customer. Ensure all Members and Senior Officers are supportive of the chosen charging mechanism.	Raise awareness of charge and what it is in press and social media