

Report Title:	<b>'Big Belly' Bins – Borough Wide 'Pilot'</b>
Contains Confidential or Exempt Information?	NO - Part I
Member reporting:	Cllr Phillip Bicknell, Deputy Leader of the Council and Lead Member for Highways and Transport
Meeting and Date:	Cabinet – 22 November 2018
Responsible Officer(s):	Hilary Hall, Director of Strategy and Commissioning
Wards affected:	All

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## REPORT SUMMARY

1. There are approximately 650 bins on the highway within the Royal Borough, (excluding parks and non-highway areas). Bin collections are undertaken by Urbaser (as part of the broader VolkerHighways contract) who empty bins around 112,000 times each year.
2. The contract with VolkerHighways includes a requirement for innovation and constant improvement. New ideas are encouraged from both parties including an annual innovation workshop. Smart bins ('Big Belly' bins) is one initiative that has been identified and explored.
3. 'Big Belly' bins offer connected, solar powered waste bins with sensors that communicate real-time status enabling emptying schedules to be timed to occur when the bin is nearing capacity. In addition the bins include solar-powered compacting technology which effectively increases the capacity of the bin.
4. Following the original trial period and review of operational details it is recommended that 5 'Big Belly' bins be leased and implemented across the Royal Borough as a more extensive 'pilot' scheme.

## 1 DETAILS OF RECOMMENDATION(S)

**RECOMMENDATION: That Cabinet:**

- i) Approves the leasing of 5 'Big Belly' bins which will be installed at locations across the Royal Borough.**
- ii) Approves the allocation of £5,000 in the 2019-20 capital programme and for four subsequent years to implement this initiative.**

## 2 REASONS FOR RECOMMENDATION AND OPTIONS CONSIDERED

- 2.1 There are approximately 650 bins on the highway within the Royal Borough, (excluding parks and non-highway areas). Bin collections are undertaken by Urbaser (as part of the broader Volker Highways contract) who empty bins around 112,000 times each year.
- 2.2 The contract with Volker Highways includes a requirement for innovation and constant improvement. New ideas are encouraged from both parties including an annual innovation workshop. Smart bins ('Big Belly' bins) is one initiative that has been identified and explored.

- 2.3 'Big Belly Bins' offer connected, solar powered waste bins with sensors that communicate real-time status enabling emptying schedules to be timed to occur when the bin is nearing capacity rather than deploying a standard cycle of emptying regardless of the bins' status.
- 2.4 In order to test the concept an initial ten-week trial was conducted in central Windsor which delivered an efficiency saving over the trial period of 76% with 493 fewer collections, see Appendix A for details of the trial.
- 2.5 Efficiency levels of this magnitude are significant. However, to monetise these efficiencies it is necessary to reduce the number of visits to the location. With respect to the emptying of litter bins the operatives who empty the bins also undertake other duties concurrently (for example: litter picking in the area and provide a presence to inspect and report other issues). Therefore, it is essential to identify locations where there are benefits without detriment to overall service levels.
- 2.6 The trial results indicate clear operational efficiencies and an opportunity for revenue savings. Officers have worked with the delivery partner (Volker Highways / Urbaser) to identify further locations where bins could be replaced without risk to overall service levels for a broader Borough Wide 'pilot'.
- 2.7 A mix of rural and town centre locations have been identified:
- Town Hall, Maidenhead.
  - Peascod Street, Windsor (lower end).
  - Dedworth Road (shopping area).
  - Ascot High Street.
  - Charters Road, Sunningdale (by Charters school).
- 2.8 The proposed locations offer a mix of high-frequency locations to enable a comprehensive evaluation of the effectiveness of the approach. The proposed locations will reduce the number of bins and reduce collections at these locations from 780 to approximately 250 annually.
- 2.9 'Big Belly' bins are typically provided to the customer on a five-year lease for approximately £4,600. To deliver this initiative it is recommended that an allocation of £5,000 be included in the capital programme for 2019/20 and for four subsequent years to enable 5 bins to be deployed.
- 2.10 The reduced emptying levels will enable resources will be freed up to undertake additional tasks and enhance service levels (for example: increased frequency of litter picking).

**Table 1: Options**

<b>Option</b>	<b>Comments</b>
Do nothing  Not recommended	If no changes are made opportunities for operational and financial efficiencies will be limited. Innovative and alternative solutions are encouraged to constantly improve performance. Doing nothing is not

Option	Comments
	supportive of this progressive approach.
Adopt the concept and identify an alternative supplier  Not recommended	Similar opportunities could be delivered. However, 'Big Belly' bins are the market leader at this stage and have reference sites available.
Approve the capital investment and introduce 'Big Belly' bins at 5 sites across the Royal Borough  <b>The recommended option</b>	This option will deliver operational and financial efficiencies and support the progressive approach to identifying and introducing innovative solutions.

### 3 KEY IMPLICATIONS

3.1 Key Implications of the recommendations are set out in Table 2.

**Table 2: Key implications**

Outcome	Unmet	Met	Exceeded	Significantly Exceeded	Date of delivery
To deliver operational and financial efficiencies without detriment to service levels	Operational benefits not realised.	Operational efficiencies delivered and resources available for redeployment	Significant operational efficiencies delivered	Significant operational efficiencies delivered	1st April 2019
	Increased complaints	No increase in complaints	No increase in complaints	Complaints reduced	

### 4 FINANCIAL DETAILS / VALUE FOR MONEY

4.1 Annual capital investment to deliver this initiative is £5,000 in 2019/20 and for a further four-year period.

4.2 The Chancellor announced in the October 2018 budget '*...£10 million to pioneer innovative approaches to boosting recycling and reducing litter, such as smart bins...*' The Royal Borough will work with government departments to understand the detail behind this announcement and seek to secure funding.

**Table 3: Financial impact of report's recommendations**

REVENUE (£000)	2018/19	2019/20	2020/21
Addition	£0	£0	£0
Reduction	£0	£0	£0
Net impact	£0	£0	£0

<b>CAPITAL (£000)</b>	2018/19	2019/20	2020/21
Addition	£0	£5	£5
Reduction	£0	£0	£0
Net impact	£0	£5	£5

## 5 LEGAL IMPLICATIONS

- 5.1 The Environmental Protection Act 1990 imposes a duty on local authorities to keep clean public highways for which they are responsible. The DEFRA published 'Code of Practice on Litter and Refuse' provides a practical guide to discharging these duties.

## 6 RISK MANAGEMENT

- 6.1 Key risks associated with the recommendation are shown in Table 4 below:

**Table 4: Impact of risk and mitigation**

<b>Risks Uncontrolled</b>	<b>Risk</b>	<b>Controls</b>	<b>Controlled Risk</b>
Service levels deteriorate as the attendance at locations reduces	Medium	Locations have been recommended which minimise this risk	Low
Efficiency savings cannot be monetised to deliver revenue savings	Medium	Sites have been recommended in conjunction with our delivery partner to capture revenue opportunities	Low

## 7 CONSULTATION

- 7.1 The Highways, Transport and Environment Overview & Scrutiny Panel considered this report at the meeting on 19<sup>th</sup> November 2018.

The Panel resolved '.....(to be added following the meeting).....'

## 8 TIMETABLE FOR IMPLEMENTATION

<b>Activity</b>	<b>Timescale</b>
Implementation	March 2019

## 9 APPENDICES

Appendix 1 – Trial Scheme: Results Analysis

## 10 CONSULTATION (MANDATORY)

<b>Name of consultee</b>	<b>Post held</b>	<b>Date issued for comment</b>	<b>Date returned with comments</b>
Cllr Bicknell	Deputy Leader and Lead Member for Highways and Transport	01/11/18	09/11/18
Russell O'Keefe	Interim Managing Director	01/11/18	01/11/18
Andy Jeffs	Executive Director	01/11/18	
Rob Stubbs	Section 151 Officer	01/11/18	
Stuart Taylor	Finance Partner	15/10/18	01/11/18
Hilary Hall	Deputy Director Strategy and Commissioning	15/10/18	16/10/18 and 01/11/18
Nikki Craig	Head of HR and Corporate Projects	01/11/18	
Louisa Dean	Communications	01/11/18	1/11/18

### REPORT HISTORY

<b>Decision type:</b> Non-key decision	<b>Urgency item?</b> No	<b>To Follow item?</b> No
Report Author: Ben Smith, Head of Commissioning (Communities)		

## Appendix A – Trial Scheme: Results Analysis

1. 'Big Belly Bins' are typically provided to the customer on a five-year lease for approximately £921.20 per annum, per bin total cost £4606 each. The total cost of bin emptying over an equivalent five year period at £76,000 per annum, equate to £380,000.
2. There are approximately 112,000 bin collections each year from 650 bins - each collection costs £0.67. The industry average collection cost per bin for 2017 was £3.29 based on figures from the Association for Public Service Excellence. It should be noted that the cost of bin emptying forms part of the broader managed service and it is, therefore, difficult to extract a true cost.
3. A 10-week trial was conducted in Lower Peascod Street, Windsor where four traditional bins were replaced with three 'Big Belly Bins'. The outcome of the trial is set out in table 1.

**Table 1: Trial outcomes**

<b>Current contract arrangements</b>	<b>'Big Belly Bin' collections</b>
4 x 112L bins, emptied twice per day Collections per day = 8 Collections per week = 56 Collections over the trial period = 568 (71 days)	3 x 'Big Belly 5' compactors Average collections per day = 1.05 Average collections per week = 7.35 Collections over the trial period = 75.

4. Of the 75 Big Belly collections, 18 were undertaken when not required as there was capacity in the bin but the crew emptied in error. Therefore, an efficiency saving over the trial period of 76% was achieved with 493 fewer collections.
5. The results of the trial have been extrapolated to provide an indicative annual figure based on providing 15 bins at the recommended locations.

**Table 2: Indicative annual collections**

<b>Number of Big Belly bins</b>	<b>Current collections(per year)</b>	<b>Big Belly collections (per year)</b>	<b>Difference</b>
15	2340	884	1,456

6. The capital investment, based on the modelled example of 5 bins would be £23,030 over five years (£4606 per bin and £921.20 per bin per year).