Comhairle Cathrach Bhaile Átha Cliath
Dublin City Council

The Chairman and Members of
North West Area Committee.

Meeting: 18th July 2017

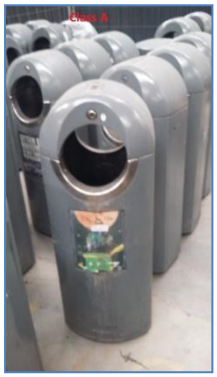
Item No: 10

Litter Bins, Technology and Policy - Waste Management Division

Introduction

There is currently a stock of approximately 3500 standard litter bins in place in the Dublin City Administrative area. These comprise of 3 styles of litter bin:

- A type predominately situated in the city centre area (600)
- B type located in the suburban areas (2450)
- Cast Iron located in historic city areas. (450)



In addition Dublin City Council has recently installed 110 dog fouling specific litter bins in locations throughout the city identified in conjunction with the Area Departments at entrances to parks, green areas and areas of high footfall dog walking.

Dublin City Council currently has 48 solar compactor (Big Belly) bins in situ on a trial basis in 3 locations:

- Baggot Street and surrounds
- Sandymount Promenade
- Kilmainham at the historic jail.

Dublin City Council has 9 Big Belly units located in Temple Bar that it owns.

Policy

It is the policy of Dublin City Council to maintain this stock of bins and to ensure that bins are located at the most effective locations to cater for the needs of the city population. The policy is to ensure that bins are located in close proximity to significant litter generators and in areas of high pedestrian footfall.

Significant litter generators and areas of high footfall include:

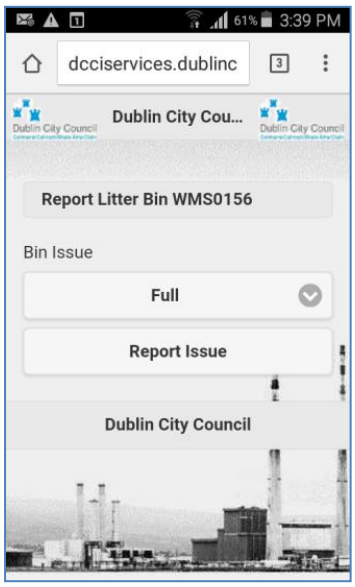
- Neighbourhood shops
- Schools / Educational Facilities
- Shopping centres
- Leisure areas
- Community centres / Facilities
- Major bus stops / Transport hubs
- Main thoroughfares / Arterial routes
- Car Parks

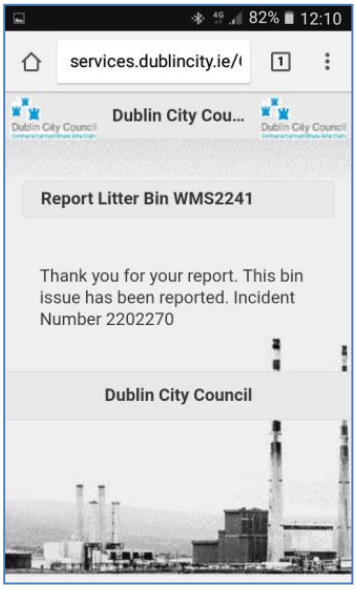
In order to ensure that bins are located in the most appropriate locations to cater for levels of demand and to ensure that bins are adequately serviced and maintained Dublin City Council is identifying ways of using technology to assist in managing this aspect of the service.

Bin Tagging

Dublin City Council is currently identifying each of its bins with a unique identifier number and QR code in order to map locations and maintain bin records. This system also allows for the public to scan the QR code and report via a 2 step process any issues that they might encounter.
This initiative allows DCC to better manage its stock of bins and coordinate maintenance and replacement of bin stock and identify through the mapping process areas where bins are not supplied in sufficient quantities or where there may be an oversupply of bins that could be relocated to areas of higher demand.

The QR code technology allows the public to report via a smart phone issues with bins. The report is directly relayed via the Customer Relations Management system to the operations teams allowing for a quick response to issues reported.





Bin Sensors

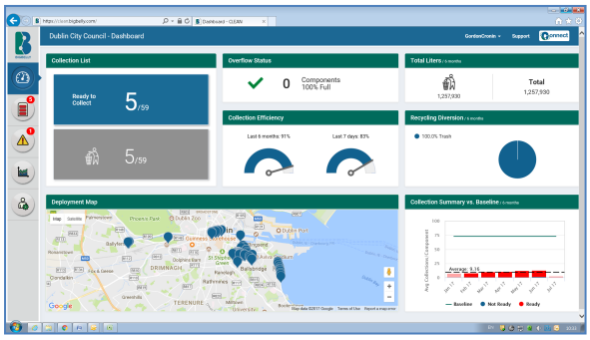
Complementary to the tagging and mapping process is the introduction of bin sensor technology. Currently in use on a trial basis, to assess the effectiveness of the technology, bin sensors that monitor the fill levels of bins and provide reports when bins require servicing is in place.

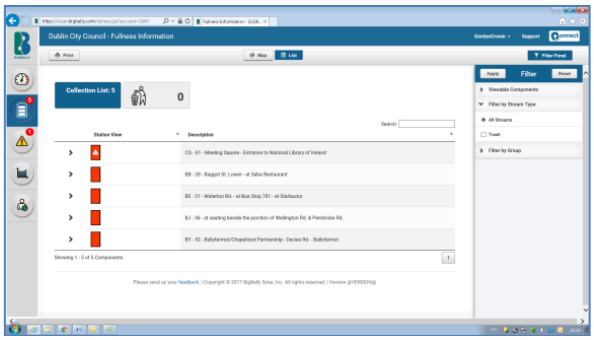
This technology allows DCC to identify high use locations and conversely locations that are low use or rarely used and may be potentially relocated to higher demand locations. It can also be used to map routes and assist in increasing street cleaning over bin emptying on traditional milk round style routes. The technology can be monitored via a web portal and alert systems set up at preset intervals to notify the relevant operations teams of bins that require servicing.

This technology has been used in 40 locations, 20 in Finglas Village and 20 in Drimnagh to date and results have included an overall increase in service efficiency by reducing the number of bin collections required over the period of the trial. The technology is relatively low cost and may be retro fitted to existing bins.

Solar Compactor Bins (Big Belly)

Dublin City Council has carried out a trial of Big Belly bins in a total of 48 locations and currently has 9 units installed in Temple Bar. These bins have the capacity to monitor fill levels and notify at set intervals and on an alert basis where bins require servicing. They also have the additional function of an on board compactor which gives the bin up to 6 times the capacity of a standard bin and consequently further reduces the frequency at which bins require servicing. The telemetry and compactor technology is solar powered. Similarly to the sensor technology alerts and route monitoring may be carried out via a web portal.





The trials have delivered impressive results and Dublin City Council has carried out a competitive tender process to procure this type of bin. It is expected that an initial purchase of this type of bin will be carried out in the near future.

This type of technology is costly and its use is considered to be most beneficial in areas of high demand such as neighbourhood shopping locations or amenity areas which may have seasonal peaks such as Sandymount and Clontarf promenade.

Simon Brock
Administrative Officer
Waste Management Division