

Classification: Public

Key Decision: No

Gravesham Borough Council

Report to: Operational Services Cabinet Committee

Date: Tuesday 8th February 2021

Reporting officer: Stuart Alford - Assistant Director (Environment)
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Subject: Street Cleansing Digitisation Update

Purpose and summary of report:

To provide Members with an update regarding digital improvements to the Street Cleansing Service.

Recommendations:

1. This report is for information only.

1. Context

- 1.1 The Bartec Collective system has been operational within the refuse & recycling, garden waste and trade waste collection services since April 2019.
- 1.2 The system has transformed the waste & recycling service and provided residents with more information.
- 1.3 Work is being undertaken to digitise the Street Cleansing operation. Two key projects are being undertaken to achieve this aim:
 - the implementation of the Bartec Street Cleansing Module, and;
 - the trial of Enevo litter bin fill-level sensors.

2. Bartec Street Cleansing Module

- 2.1 To modernise and develop the street cleansing service, the Bartec Street Cleansing module is currently being added to the existing waste & recycling Bartec system.
- 2.2 The Street Cleansing module will deliver the following improvements:

- Removal of paper schedules - Each cleansing role will have a digital work pack where work will be marked off once completed. This will allow the Managers to monitor work throughout the day and provide an audit trail of work completed. It will also allow for new service requests to be immediately allocated to the relevant crew rather than through a phone call or a paper job ticket that would normally be allocated the next working day.
- Real-time customer updates - Customers will be able to receive real-time updates when a job is completed by the crews.
- Litter bins - The system will map the locations of the litter bins, log when the bins have been emptied, the capacity when emptied and record defects such as graffiti and can include a picture. This will enable the emptying regimes to be revised dependant on the fill level over time and defects to be rectified.
- Fly-tipping - The system will facilitate dynamic routing of flytipping removals, photos before and after the job, instantaneous completion of the job on the system which will update the person who has reported the issue. This will replace the current manual system of the Waste Management Team updating the Dash system once the waste is removed.
- Improved Reporting - Street Cleansing staff will be able to immediately report any issues they witness on their rounds as a service request to be rectified, such as graffiti.
- Bulky Collections - The system will deliver dynamic routing of the bulky waste collections and will immediately update the customer once the job has been completed.
- Performance Monitoring - The system will facilitate better performance monitoring against service management performance targets. It will store the history to every job allowing the team to better understand where street cleansing resources need to be deployed.
- Assets will be mapped - The system will allow for assets such as litter bins to be mapped and assigned an asset number. This will allow the team to have a more consistent record of street cleansing assets and their history rather than the current excel spreadsheet which only lists the locations of all the bins.

2.3 The implementation of the system has reached the testing and data collection phase.

2.4 The specifications to enable the automation of the different work packs was submitted to Bartec in Summer 2021. Officers have since been provided with an initial version of the system on our test platform.

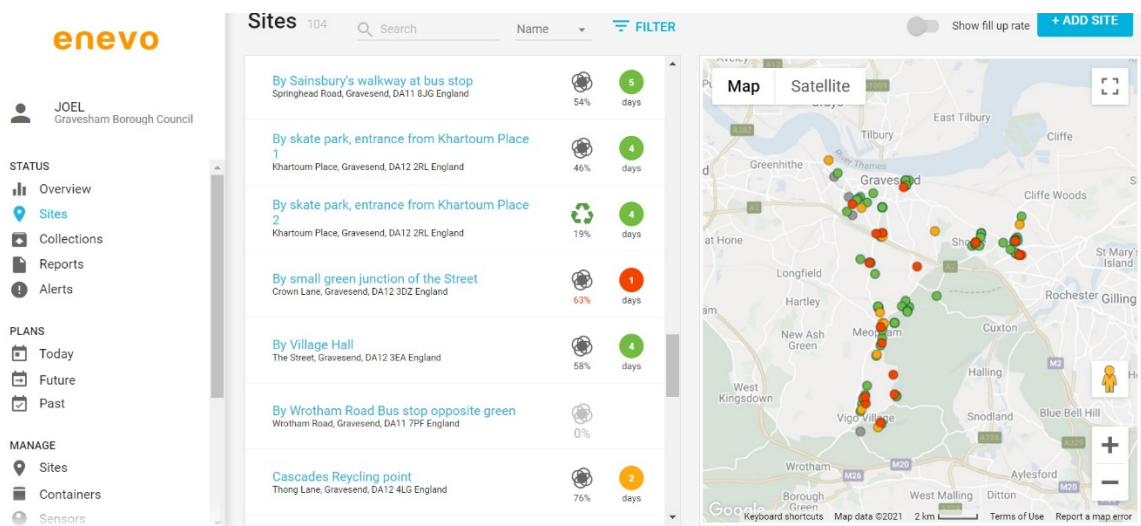
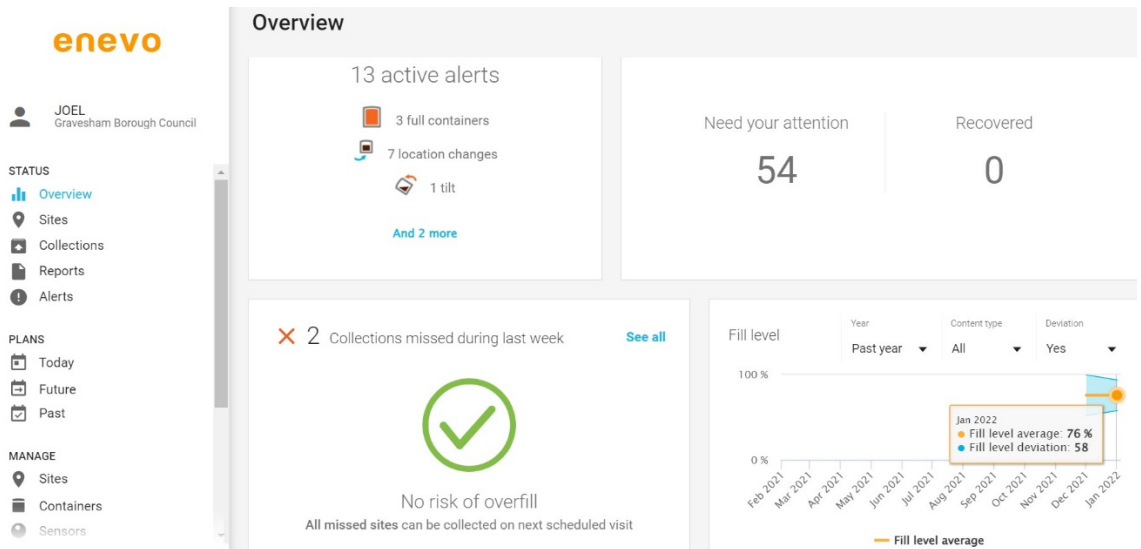
2.5 Officers have been rigorously testing the automation that has been created by Bartec and have sent back a number of required changes which are being dealt with. The changes will then be tested again, which may warrant further amendments to the platform by Bartec.

- 2.6 The Waste Management Team are yet to complete back-office training, but this will follow the final sign-off of the automation work.
- 2.7 The collation of asset data (waste & recycling bins etc.) is being carried out by the Street Cleansing Manager and Business Apprentice (Waste & Transport) and is about 80% completed.
- 2.8 Work schedules are also being compiled simultaneously so that when the automation is complete and is fully functional, the work packs for the Operatives can go live.
- 2.9 It is anticipated that the fly-tipping clearances and bulky waste collection element of the system will go live by February 2022 and the remainder of the functions will go live by April 2022.

3. Litter Bin Fill-Level Sensors

- 3.1 A 12-month trial of Enevo bin fill-level sensors will begin imminently.
- 3.2 The bin sensors and the accompanying 'predictive routing' technology will optimise staff productivity, prevent overflowing bins, minimise customer complaints and reduce the mileage travelled to empty bins that are not optimally full.
- 3.3 The dynamic routing system will prioritise emptying the fullest bins first to ensure that the bins do not overflow. This helps to ensure that bins are only emptied when necessary and helps to reduce fuel consumption and CO2 emissions.
- 3.4 The litter bin sensors will be trialled in a number of applications:
 - The Team 5 (rural) street cleansing round, covering approximately 70 bins will trial the majority of the sensors as this team's vehicle currently covers the largest distance to service the bins, which with the current emptying arrangement are not always full when the emptying round is made.
 - The large 1100L general waste and recycling housings installed in our parks and open spaces will trial ten of the sensors. This will mean that the Waste Management Team can monitor the use of the bins seasonally; the general waste fill-rate compared to the recycling fill-rate, and; will ensure the efficient deployment of refuse vehicles to service these bins in order to minimise fuel consumption and CO2 emissions.
 - The final twenty sensors will be deployed to litter bins in urban locations that have historically generated complaints. This will enable the Street Cleansing Manager to monitor the fill-rate of these bins so that the data can be analysed to assess the bin capacity and emptying frequency in these locations to ensure that in the future the bins do not get overfilled.
- 3.5 Officers have compiled the data required by Enevo to log and map the relevant assets for the purposes of the trial.
- 3.6 Enevo have built the 'HUB Platform' required to operate the back-office system.

- 3.7 The delivery of the sensors was delayed by the global shortage of the semi-conductors required. The litter bin sensors were installed in December 2021.
- 3.8 A training session and demonstration of Gravesham's HUB Platform took place in December 2021.
- 3.9 The trial has commenced with the sensors monitoring our current operational practices to discern baseline data in January 2022. Some screenshots of Gravesham's HUB Platform can be seen below.



3.10 In February 2022 Enevo will analyse the baseline data collected in order to suggest data-driven strategies to deliver operational efficiencies.

3.11 The Street Cleansing Manager will then use the predictive technology in the 'HUB Platform' to provide Operatives with routed daily emptying schedules to optimise efficiency.

4. BACKGROUND PAPERS

None.

IMPLICATIONS	APPENDIX 1
Legal	Under the Environment Protection Act, the Council has a duty to keep the streets clear of litter and remove fly-tipped waste on public land.
Finance and Value for Money	<p>The Bartec Street Cleansing Module has been funded as part of the 2021/22 Capital Programme and is due to be implemented in Q4.</p> <p>Once the trial of the Litter Bin Fill-Level Sensors has completed a business case will be prepared based on the results and success of this trial. Any requests for additional funding required will be made using the existing channels.</p>
Risk Assessment	The projects contained within this report are designed to improve service delivery and impact directly in the aims of the Corporate Plan.
Data Protection Impact Assessment	<p><i>A data protection impact assessment (DPIA) should be carried out at the start of any major project involving the use of personal data or if you are making a significant change to an existing process.</i></p> <p>a. Does the project/change being recommended through this paper involve the processing of personal data or special category data or criminal offence data? A definition of each type of data can be found on the Information Commissioner's Office website via the above links.</p> <p>b. If yes to question a, have you completed and attached a DPIA including Data Protection Officer advice? N/A.</p> <p>c. If no to question b, please seek advice from your nominated DPIA assessor or the Information Governance Team at gdpr@medway.gov.uk. N/A.</p>
Equality Impact Assessment	<p>a. Does the decision being made or recommended through this paper have potential to cause adverse impact or discriminate against different groups in the community? If yes, please explain answer. No.</p> <p>b. Does the decision being made or recommended through this paper make a positive contribution to promoting equality? If yes, please explain answer. N/A.</p> <p><i>In submitting this report, the Chief Officer doing so is confirming that they have given due regard to the equality impacts of the decision being considered, as noted in the table above</i></p>
Corporate Plan	#1 People: To create clean, welcoming neighbourhoods and parks.
Climate Change	Priority 1 (GBC - The Organisation): The implementation of dynamic routing to prioritise emptying the fullest bins will ensure that bins are only emptied when necessary in order to reduce fleet fuel consumption and CO2 emissions.
Crime and Disorder	Community safety - a clean environment helps to reduce the likelihood of littering and other anti-social behaviours.
Digital and website implications	Current there no implications, however, as the systems are embedded within the service, there may be opportunities to link some of these activities to the Council's website such as the mapping of the litter bins.

**Safeguarding
children and
vulnerable adults**

There are no implications.