



Recycling Centres for Household Waste

Vehicle Bookings Trial – Evaluation

Friday, 02 December 2022

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Background

In December 2021, it was agreed to trial a booking system for vehicles attending Recycling Centres. The objective of a booking system was to better align service access with infrastructure capacity by spreading usage across the operating day. In doing so, this can reduce vehicle queuing times at sites, improve service levels and increase the segregation of waste for recycling by improving operational efficiency.

This supports Essex County Council's (ECC) aims to minimise waste disposal, and in doing so also supports the Essex Climate Action Commission's Net Zero targets, as well as delivering on ECC's ambition to deliver a 'High Quality Environment' and 'Service Excellence' in line with the Everyone's Essex strategy.

The scope of the trial included:

- Large vehicles (vans, pick-ups and twin axle trailers) that access the nine recycling centres that accept this type of vehicle.
- All vehicles that access Rayleigh Recycling Centre.

The rationale for targeting vans and large trailers with an online vehicle booking system:

- they contribute disproportionately to congestion levels as they take up a large amount of space on site and spend longer periods of time on site unloading
- to enable the service to manage access better across the operating day
- to enable the service to manage access in a flexible manner to mitigate queuing by reducing the number of these vehicles accessing the sites at the busiest times
- to deter the use of recycling centres for trade (business) waste. Trade waste should not be part of the household waste system and the costs of this should not be borne by the residents of Essex.

The rationale for introducing a booking system for all vehicles accessing Rayleigh Recycling Centre was in response to customer feedback and operational challenges arising from congestion on-site and in the surrounding residential area (the site is in a residential area, has limited entrance driveway to contain any queuing vehicles and is close to the high street).

Implementation approach

Recognising the trial nature of this booking process, ECC has taken a proportionate approach to software selection and solution design.

Solution design principles:

- Based on impact on operational delivery.

- Linked to customer feedback.
- Online booking process:
 - with telephone booking available for customers unable to access online solution
 - available for access on-site and centrally
 - good reporting capability to help inform and modulate operational delivery
- Low-cost licensing, configuration, and maintenance.
- The number of booking slots defined in line with operating guidelines at individual sites and based on the current visit data.
- Booking slots released for booking up to 3 weeks in advance and can be booked up to the end of the prior working day.
- Customers asked to restrict bookings to one per week to prevent block bookings reducing availability for other customers and to ensure fair usage.

Implementation activities:

- Implementation approach includes proactive communication to customers a minimum of one month prior to start date (onsite banners and leaflets, website, social media, Your Essex newsletter).
- Customer demand is also managed through proactive communications and behaviour change campaigns focusing on waste reduction and alternatives to RCHWs.
- Proactive staff engagement in the purpose and operation of the scheme to help drive promotion to residents and to secure feedback on operational delivery and customer behaviour.

Implementation evaluation

Implementation Critical Success Factors:

- Booking solution deployed to live in advance of commencement of public communications (without links from Love Essex (LE) webpages).
- Communications launched minimum of 4 weeks prior to go-live.
- Process and system administration deployed 4 weeks prior to 'go live'.
- On-site and ECC staff briefed and provided with operational guidance 4 weeks prior to 'go live'.
- ECC support services (Contact Centre, corporate communications) briefed prior to commencement of public communications.
- Contact Centre 'on behalf of' process agreed prior to commencement of public communications.
- Cabinet Member Action (CMA) decision taken and published.

Implementation evaluation

The above critical success factors were met in January'22 with communications and implementation able to commence as planned in February'22.

Key lessons learned were:

- Keep system deployment simple – no advance booking ‘practice’ for customers – just create booking slots from the date at which they would be checked.
- Plan for additional resource on social media monitoring and response to comments.

Communications evaluation

Customer Journey:

- 70-80% of people visiting booking pages on Love Essex (LE) website are coming from mobile devices. This is common with the whole site.
- May/June data shows source for booking pages is still primarily Google. Secondary is "direct" which is unclear what the source is.
- 11-16% - coming from secure web/apps - this means that up to 16% of customers are navigating through the Love Essex (LE) search function rather than directly to the Vello system. As a result, improvements to the website user journey were implemented in September 2022 to provide residents with clearer signposting to the correct webpage and to remove the Love Essex (LE) search function from the booking pages to prevent confusion.

Customer experience:

- For results, please see [Resident Feedback](#)

Large Vehicle Communications at launch:

- 50,000 flyers provided to sites.
- Banners displayed at the 9 Large Recycling Centres (plus posters).
- Your Essex Newsletter articles – reach of 22,695 subscribers.
- Love Essex Newsletter articles – reach of 18,000 subscribers.
- Press coverage in Colchester Gazette, Essex County Standard – combined reach of circa 26,000.
- Social media posts (Facebook, Instagram, Twitter) – achieving circa 120,000 impressions and circa 9,000 engagements.
- Video animation produced by Deadline Communications to visually demonstrate how to book.
- Internal communications to ECC staff.

How did you find out about the booking system?

Communication

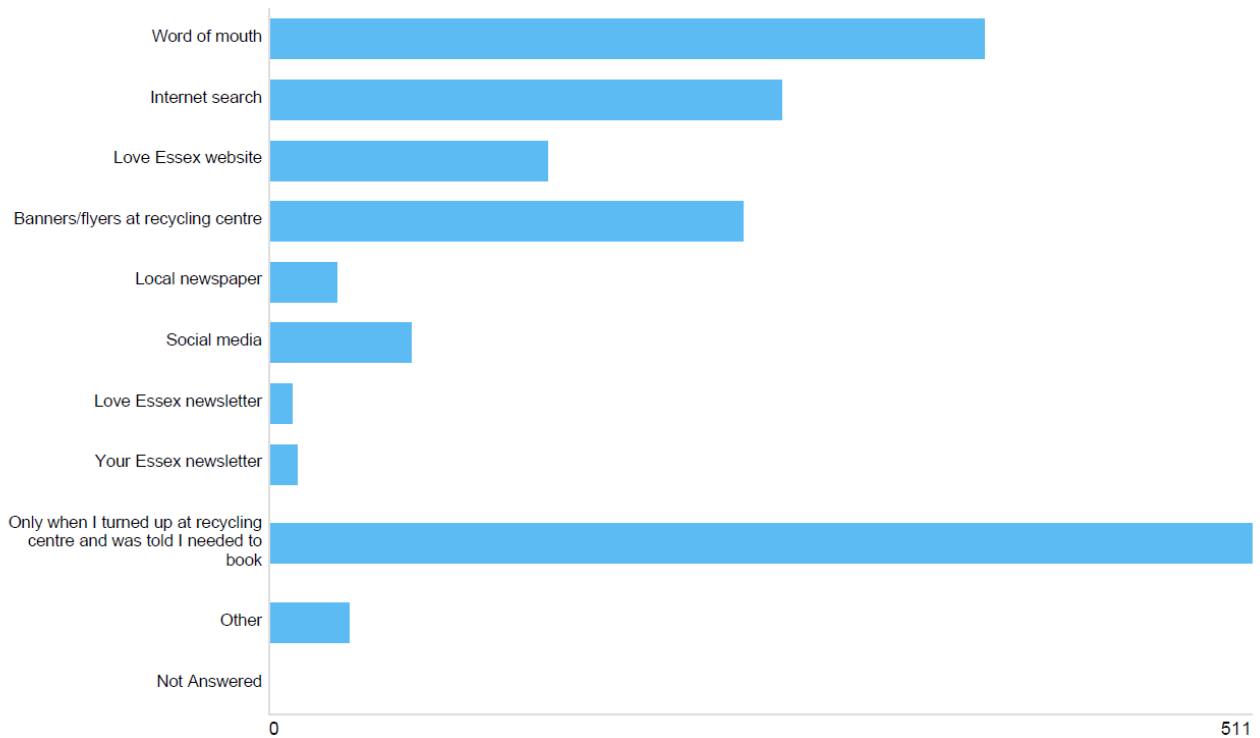


Figure 1: Large Vehicles - Resident Survey Results on communication channels.

All Vehicle Bookings (Rayleigh) Communications at launch:

- 1,000 flyers delivered to local residents.
- 20,000 flyers provided to Rayleigh Recycling Centre for distribution.
- 3 on-site banners plus posters.
- News articles distributed to town and parish councils.
- News articles distributed to District, Borough and City Councils in surrounding area.
- Social media posts (Facebook, Instagram, Twitter) – circa 83,000 impressions and circa 5,000 engagements.
- Love Essex Newsletter articles.
- Online press coverage in Basildon, Canvey, Southend echo and on Essex Live.
- Internal communications to ECC staff.

How did you find out about the booking system?

Communication

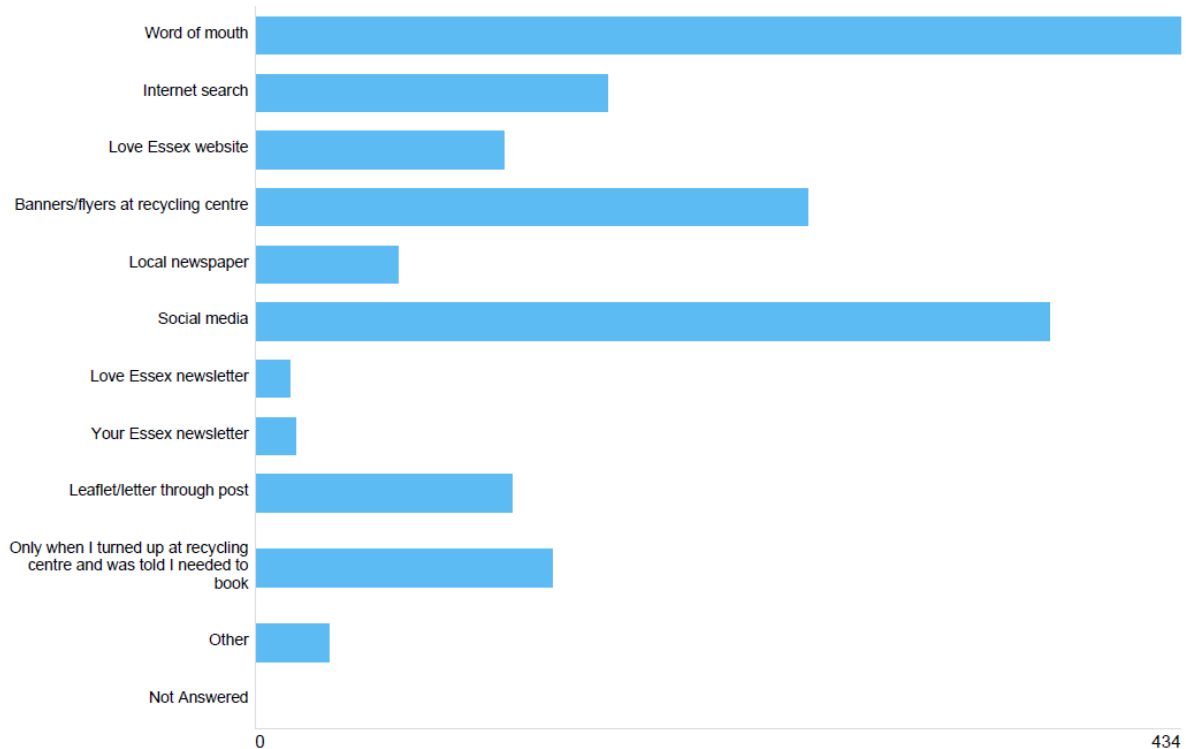


Figure 2: All Vehicle Bookings (Rayleigh) - Resident Survey Results on communication channels.

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Pilot evaluation

Pilot measures

The following pilot measures were agreed as part of the governance decision to proceed with a pilot booking process:

1. Reduction in the frequency of off-site congestion incidents caused by RCHW queuing (observed).
2. Reduced waiting times to access recycling centres (observed).
3. Booking system availability within expected parameters.
4. Number of attempts to access without booking.
5. No causation impact on local fly-tipping levels.
6. Reduced frequency of suspected business waste usage (observed).
7. Percentage of no shows (this will only work if site staff are recording those coming into the site which may not be possible in practice).
8. Site staff feedback that unloading times (20 mins) are broadly adopted in practice.
9. Number of public complaints does not exceed previous annual comparison data (internal project measure only).

In addition, the project team have reviewed whether there is any measurable, consistent impact on waste tonnages received at the Recycling Centres.

Pilot review points

- Site staff feedback is reviewed, and initial operational design reviewed by month three.
- Measures will be recorded monthly.
- First full evaluation Autumn'22.

All vehicle bookings (Rayleigh) performance evaluation

Booking data – weekly figures taken from July-Nov'22 (allowing for an initial one- month stabilisation period during June'22):

- Average 62% of booking capacity is booked (average of 1175 bookings per week). Note: booking capacity is adjusted for seasonal opening hours.
- Average 133 customers book more than once per week.
- Average 6% of bookings are proactively cancelled by customers.
- Average 98% of bookings are for a car. Hire vehicles and trailers account for the remainder.
- Average 994 individual customers are making bookings per week.
- Number of customers attempting to access without bookings has steadily declined from circa 300 per week to circa 130 per week.
- In the period 6 June – 27 Nov'22, there have been 31120 bookings made by circa 11,000 customers. 50,000 flyers provided to sites.

Other Pilot measures:

- Reduction in the frequency of off-site congestion incidents caused by RCHW queuing (observed) – Site observations confirm a reduction in congestion and queuing times. Resident survey results support this as satisfaction level with access to site and traffic flow is 95% satisfied or better.
- Reduced waiting times to access recycling centres (observed) – as above.
- Booking system availability within expected parameters – no reported issues.
- No causation impact on local fly-tipping levels – no reported increase to fly tipping reported by District, Borough and City councils through Essex Recycling Forum, Cleaner Essex Group, Fly Tipping Group or Waste Partnership Officer Group.
- Percentage of no shows (this will only work if site staff are recording those coming into the site which may not be possible in practice) – no data recorded.
- Number of public complaints does not exceed previous annual comparison data (internal project measure only) – no reported increase. 50,000 flyers provided to sites.

Tonnage data to follow.

Large Vehicle Bookings performance evaluation

Booking data - Weekly figures taken from May-Nov'22 (allowing for an initial two-month stabilisation Period March-April'22):

- Average 42% of booking capacity is booked (average of 2,000 bookings per week). Note: Booking capacity is adjusted for seasonal opening hours.
- Average 210 customers book more than once per week.
- Average 4.9% of bookings are proactively cancelled by customers.

- Average 91% of the bookings are for a van/pickup. Hire Vehicles and twin-axle trailers account for the remainder.
- Number of customers attempting to access without bookings has steadily declined from circa 700 per week to circa 140 per week.
- In the period 28 Feb-27 Nov'22 there have been 77,316 bookings made by circa 30,000 customers.

Other Pilot measures:

- Reduction in the frequency of off-site congestion incidents caused by RCHW queuing (observed) – Site observations confirm a reduction in congestion and queuing times. Resident survey results support this as satisfaction level with access to site and traffic flow is 86% satisfied or better.
- Reduced waiting times to access recycling centres (observed) – as above.
- Booking system availability within expected parameters – booking system availability has been almost 100%. Only two reported issues (email distribution and system down) were addressed within expected parameters.
- No causation impact on local fly-tipping levels – no reported increase to fly-tipping reported by District, Borough and City councils through Essex Recycling Forum, Cleaner Essex Group, Fly Tipping Group or Waste Partnership Officer Group.
- Reduced frequency of suspected business waste usage (observed) – confirmed by site staff observations and facilitated by checking booking and waste source during arrival greet process.
- Percentage of no shows (this will only work if site staff are recording those coming into the site which may not be possible in practice) – this data has been informally captured and indicates circa 18% of bookings are not fulfilled across the network as a whole. Further monitoring should take place during any pilot extension.
- Site staff feedback that unloading times (20 mins) are broadly adopted in practice – no reports of unloading times being consistently exceeded.
- Number of public complaints does not exceed previous annual comparison data (internal project measure only) – no reported increase.

Tonnage data: based on 2022 (March – July) there has been an average reduction in tonnage at large sites of 20%. Note: there was an average 15% reduction in tonnage at the small sites during the same period, so this tonnage reduction may need to be considered in a broader context.

Resident feedback

Between 31 October and 13 November, two separate surveys were issued to circa 36,000 customers who have used the booking process for either All Vehicles (Rayleigh) or Large Vehicles (nine large sites). The invitation was issued via email and included privacy statement and link to an online form.

The survey questions addressed:

- The customer's usage patterns.
- The customer's perception of the booking process and availability.
- The customer's perception of the on-site experience.

- Whether the customer has changed approach to managing waste and recycling in response to the introduction of a booking process.

Response rate was strong on both surveys with around 1,700 responses on each during the two-week survey period.

Summary of the All Vehicle Bookings survey responses (Rayleigh):

- As expected, satisfaction with availability of booking slots is lower for weekend users. Other measures are comparable.
- 504 comments were positive overall, compared to 100 that were negative overall. Generally the reduction in queuing and congestion, and positive feedback on the site/staff are the drivers of positive feedback. Only 13 references to suggesting approach is changed to peak time bookings only. 247 comments referencing improved queuing/traffic.
- 250 comments referencing desire for same day bookings.
- 131 references to finding it inconvenient needing to plan in advance, often linked to desire for same day bookings and perception that site is now underutilised by bookings not fulfilled. Idea of ‘no bookings required’ timeslots.

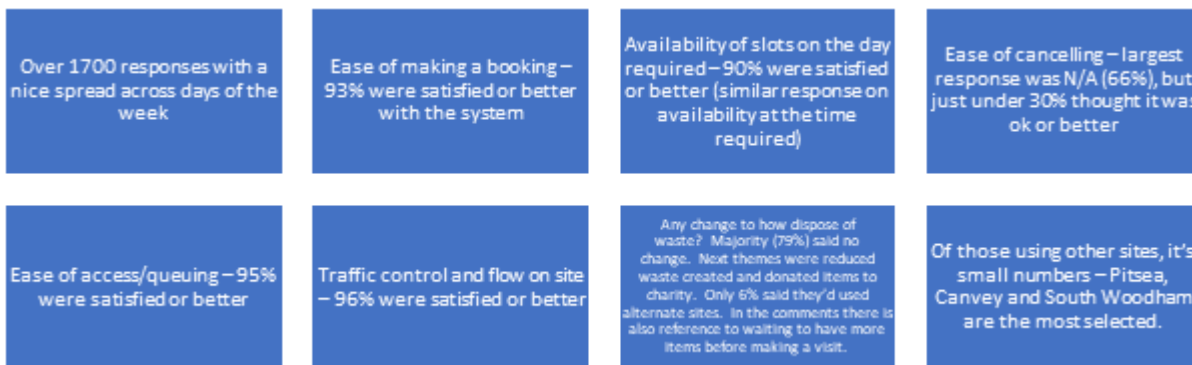


Figure 3: Summary of All Vehicle User Survey results (Rayleigh).

Summary of the Large Vehicle Bookings survey responses (Rayleigh):

- As expected, satisfaction with availability of booking slots is lower for weekend users, but at an acceptable level. There is also a small decline in satisfaction with the on-site experience (booking being checked, queuing and traffic flow) for weekend users.
- When comparing Large Recycling Location results, there are no sites on which there is a significant difference in the level of satisfaction with ease of making a booking. Pitsea, Maldon and Harlow have slightly higher rate of response showing poor or very poor on availability of slots (day and time). This response is stronger on weekday visitors than weekend visitors which is unexpected. Pitsea, Colchester and then Clacton have slightly higher rate of response showing poor or very poor on ease of access/queuing into the site. Pitsea and Colchester have slightly higher rate of response showing poor or very poor on traffic control and flow on-site.
- In the comments, the highest single theme was clarification on vehicle types (165 comments). Other themes were:

- 17 responses on slot length, mainly commenting that 20 mins is not long enough for a large vehicle to unload. Some users also find the recommended one visit per week too restrictive.
- 129 references to potential for increased fly tipping arising from requiring bookings.
- 120 references to finding it inconvenient to need to plan further in advance – in some cases linked with desire for same day booking (83 comments) and in some cases referring to treating large vehicle drivers differently and that the approach should be consistent.
- 126 comments suggesting the booking system should be discontinued as unnecessary.
- Asking for proof of address – quite a lot of comments on this and feeling frustrated as not everyone carries proof of address all the time.

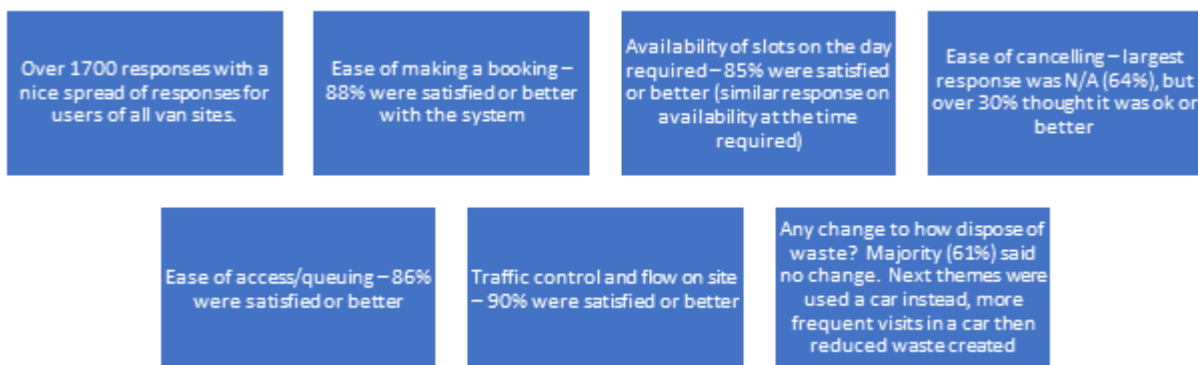


Figure 4: Summary of Large Vehicle User Survey results (Rayleigh).

General feedback:

- There were very few anecdotal concerns related to accessibility or internet access. Only four references to lack of internet access for large vehicles and 16 for all vehicle bookings.
- In the large vehicle survey, there were 73 feedback comments referencing a negative experience on the website – largely related to the customer journey. 46 positive references to the website. Some improvements were made in September 2022 and it would be beneficial to seek further feedback on this aspect of the process in the future.
- We have useful feedback on which comms channels were most impactful for the different audiences for all vehicle bookings and large vehicle bookings – we will build this into our comms for the next phase of rollout.
- Useful feedback on terms and conditions and vehicle type definitions that we can consider for future web content and communications.
- Some positive customer comments that can form testimonials for future communications work.
- Feedback on operational topics and specific locations shared with Waste Operations team for further consideration.

Next steps

- Explore extension and expansion of the booking pilot to further test the impact of bookings in more locations and across a wider range of user types.
- Publish more guidance on the cancellation process.
- Make it possible to cancel a booking at any time up to the time of the booking.
- Explore improvement to the cancellation process for future system development.
- Review published guidance suggesting a limit of one visit per week.
- Publish communications encouraging users to visit on weekdays where practicable.
- Explore potential for same day bookings.
- Review booking capacity at Colchester, Pitsea and Clacton where customer satisfaction with queuing, ease of access and traffic flow on-site is lower than other locations.
- Monitor the percentage of no shows if decision is taken to extend the pilot. This data has been informally captured and indicates circa 18% of bookings are not fulfilled across the network.
- For Large Vehicle Bookings specifically, consider:
 - Confirming the operational application of rules such as unloading time, proof of address and the format of confirming a booking.
 - Reviewing the 20-minute unloading guide to test if this is appropriate.
 - Reviewing published definitions of large vehicles.

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Published Friday 02 December, 2022.