Behaviour Change and the Circular Economy: Challenges Faced by Local Authorities

Project title: BLUEPRINT to a Circular Economy

Project acronym: BLUEPRINT

Starting date of project: April 2020
Duration: 38 Months
Funding scheme: European Regional Development Fund

Executive Summary

The BLUEPRINT to a Circular Economy Project is an Interreg-funded project with a total budget of €5.5M, of which €3.8M were contributed by the European Regional Development Fund. Led by Essex County Council, it will help local authorities in France and England to implement a circular economy. Working with local authorities, social enterprises, schools and households, the project will unlock circular economy growth opportunities within the France (Channel) England (FCE) region.

This report provides an overview of specific activities, taken from the full version available on request, carried out between November 2020 and June 2021 (the first year period), and focuses on the following activity:

- An assessment of the challenges faced by **residents** in relation to waste reuse and recycling practices. This offers a better understanding of local blockers to a circular economy, referred to in section 1.2 "purpose of the project."

This approach offers a comprehensive understanding of the challenges and potential solutions to help local authorities accelerate towards a circular economy. Specific findings from **resident challenges** are summarised below.

Resident challenges

A total of 2,544 residents completed the waste and recycling survey, and a further 39 individuals took part in focus groups. The results highlighted several barriers that residents face when it comes to waste and recycling.

Key challenges raised included:

- Perceived lack of information about local recycling;
- Lots of materials cannot yet be recycled;
- Uncertainty around how to reduce waste;
- Zero waste or packaging free items are expensive;
- Lack of skills or inability to repair items.

Every challenge presents an opportunity for local authorities to improve education and services around waste and recycling. In turn, these changes would ultimately help residents embed circular economy practices in their everyday lives. Based on the challenges raised above, the following recommendations are proposed:

Education

- Educate people on what items can be recycled in their local area, and provide clear information on items that can/cannot be recycled in each local authority to combat issues around contamination
- Use environmental messaging when encouraging people to recycle or cut down their waste
- Demonstrate 'easy switches' people can make to cut down on waste
- Provide clear and transparent communication about the recycling journey to increase trust and confidence among residents
- Engage with and encourage 'non-recyclers' to start separating their waste
- Upskill residents to repair a variety of items at home

Products

- Ensure all items and packaging can easily be recycled or reused
- Work to make zero waste items or items with less packaging more affordable
- Design products that can be repaired easily

Services

- Improve recycling facilities in blocks of flats
- Make repair services more affordable and accessible to residents

The BLUEPRINT Project will suggest solutions based on real-life challenges faced by local authorities and residents when trying to reduce waste and increase recycling rates. This will be done through a series of behaviour change campaigns.

Contents

1. Introduction

1.1. What is the BLUEPRINT Project?

The [BLUEPRINT to a Circular Economy Project](#) is an [Interreg-funded project with a total budget of €5.6M, of which the European Regional Development Fund contributed €3.8M.](#) Led by Essex County Council and working with local authorities, social enterprises, schools and households, the project will unlock circular economy growth opportunities within the France (Channel) England (FCE) region. The project will create a:

- new BLUEPRINT to a Circular Economy Model (BLUEPRINT Model) to enable local authorities to initiate policies, strategies and approaches to transition to a circular economy;
- local authority management, monitoring and evaluation framework to evaluate performance based around the BLUEPRINT Model;
- cross-border network of local authorities who complete the BLUEPRINT training programme;
- social enterprise training scheme to help individuals to secure jobs in the circular economy sector;
- online accelerator cluster for social innovation, helping to accelerate the rollout of the social enterprise training scheme; and
- series of behaviour change campaigns, which will encourage 78,000 individuals to increase their recycling rates and reduce waste.

1.2. What is a circular economy?

Since the 2000s, numerous initiatives have appeared to exploit waste streams leading to the implementation of the circular economy concept. This concept is illustrated under different names (industrial ecology, industrial symbiosis, circular economy, cradle to cradle, etc) and different approaches that aim to optimise the circulation of materials in the economy to minimise inputs and waste. A circular economy also focuses on material cycles and prioritises the end-of-life or disposal of durable products, as opposed to short-lived products. It decouples economic flows from physical flows and emphasises the concept of longevity.

The circular economy has been defined by Eurostat (2019) as "aiming *to maintain the value of products, materials and resources for as long as possible by returning them into the product cycle at the end of their use, while minimising the generation of waste.*"[1]

Another key definition is by the French ministry ADEME which defines the circular economy as *"an economic system of exchange and production which, at all stages of the life cycle of products (goods and services) aims to increase the use efficiency of resources, reduces environmental impacts, while developing the well-being of individuals".*[2]

To summarise, the circular economy promotes the reuse, repair, refurbishment and recycling of products for as long as possible with minimal waste. The circular economy originated as an umbrella concept for

---

[1] "Circular Economy Overview", European Commission, https://ec.europa.eu/eurostat/web/circular-economy (last accessed 10 August 2021).

[2] "Économie circulaire", ADEME, https://www.ademe.fr/expertises/economie-circulaire (last accessed 10 August 2021).

decoupling economic growth from natural resource use, thus creating low carbon societies.[3] [4] It was first popularised by the Ellen MacArthur Foundation shown in Figure 1 to demonstrate how manufacturing loops can be closed to reduce the use of virgin materials.
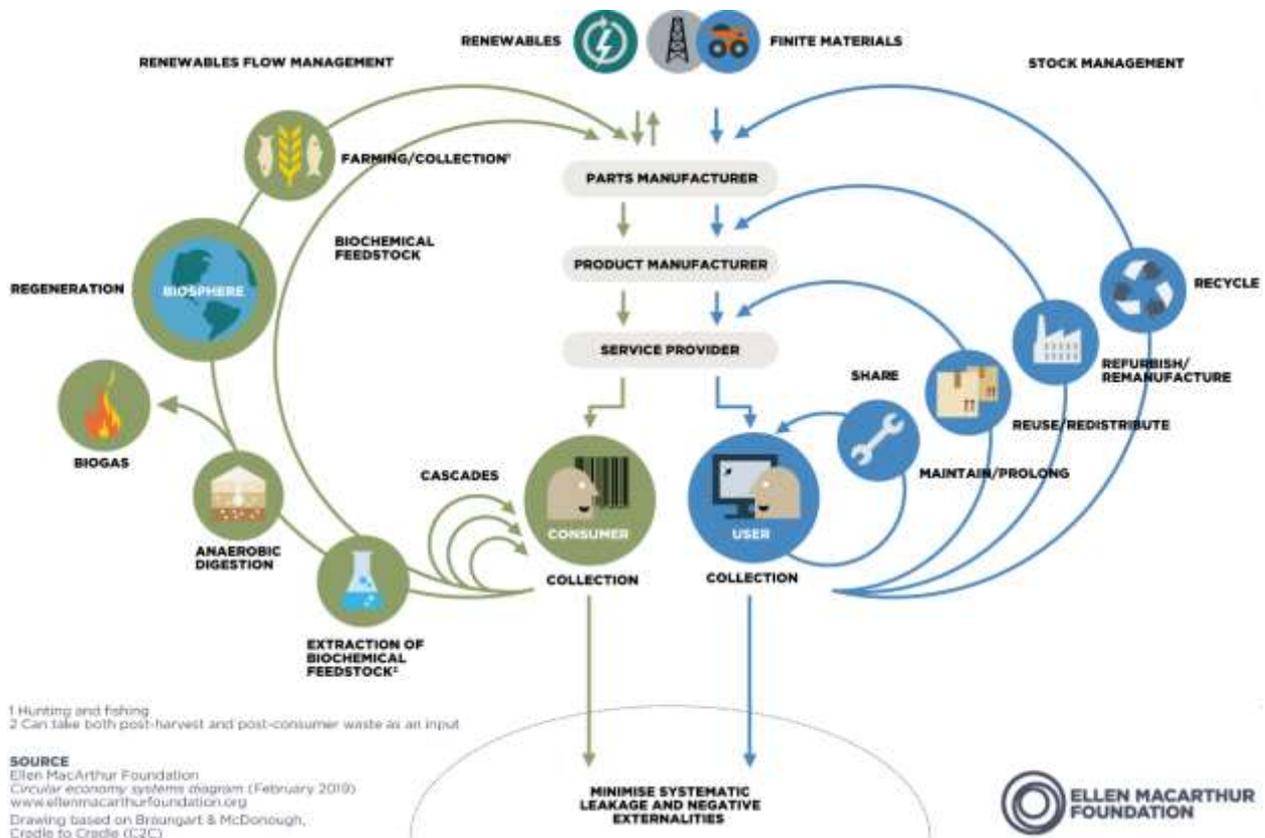

Figure 1. Circular economy systems diagram (Ellen MacArthur Foundation, 2013)

1.3. Purpose of this report

The first step to creating the BLUEPRINT Model (defined in section 1.1) is understanding the current challenges in the FCE region that may hinder the implementation of circular economy practices. This report will outline those challenges and propose measures to solve them. It will draw on data and information provided by the following activity:

1. Resident survey and focus groups

A survey was used to gather valuable insight from residents in Essex, Kent and Peterborough on waste and recycling. Following this, a series of household focus groups were set up to further explore the challenges they face around waste, recycling and circular economy practices.

---

[3] "Indicators for a Circular Economy", European Academics Science Advisory Council, 2016, https://easac.eu/fileadmin/PDF_s/reports_statements/Circular_Economy/EASAC_Indicators_web_complete.pdf (last accessed 10 August 2021).
[4] "Circular Economy in Europe: Developing the Knowledge Base", European Environment Agency, 2016, https://www.eea.europa.eu/publications/circular-economy-in-europe (last accessed 10 August 2021).

2. Residents' behaviour change and the circular economy

2.1. Introduction

Residents' behaviour relating to reducing, recycling and reusing waste is fundamental to a local authority's transition to a circular economy. Without 'buy-in' from residents, local authorities will struggle to increase recycling rates and embed circular economy practices. For this reason, stakeholders and residents in each local authority region were engaged to better understand the challenges they face around waste reduction, recycling and reuse.

2.2. Methodology

Essex County Council (ECC), Kent County Council (KCC) and Peterborough Environment City Trust (PECT) first created a survey for residents. The aim was to gain insight into recycling and waste reduction behaviours, the results of which could be used to highlight possible challenges faced by local authorities when implementing circular economy practices. Some of the survey results were also used to develop the household behaviour campaigns' programme.

The survey received 2,544 responses from residents. 78% identified as female, and almost 50% were aged between 45 and 64.

Following the survey, a series of resident focus groups were set up with residents in Essex, Kent and Peterborough. The aim of these sessions was to gain detailed insights about recycling, reuse and waste reduction behaviours from a small number of residents. Details of the focus group sessions are shown in Table 5.

Table 5. Local authority focus group sessions

Project partner	Date	Number of attendees
ECC	07.05.21	3
ECC	10.05.21	4
ECC	11.05.21	7
PECT	04.05.21	5
PECT	06.05.21	4
PECT	12.05.21	1
PECT	13.05.21	2
KCC	26.05.21	4
KCC	27.05.21	5
KCC	28.05.21	4
	Total	39

Focus groups were kept informal so that residents felt comfortable sharing their thoughts freely. Ahead of the sessions, ECC, KCC and PECT planned some high-level discussion points that covered recycling, waste reduction and reuse behaviours.

A key caveat with this section of the report is that most residents who completed the survey and who took part in the focus groups were already engaged in waste reduction and recycling behaviours. A lack of responses from residents who do not recycle meant that local authorities were unable to identify barriers that these residents face and may pose a limitation to the findings of this research.

2.3. Survey results

2.3.1. Recycling

During the residents' survey 99% of respondents said they recycled. The most recycled items were cardboard and paper, with 99.6% of respondents claiming to recycle these materials. This was closely followed by tins and cans (98.1%) and plastic bottles (97.9%).

The least commonly recycled items were 'hard-to-recycle' materials that often require a separate collection or disposal from companies such as Terracycle. Only 23.3% of respondents claimed to recycle these materials. Items recycled are shown below in Figure 7.
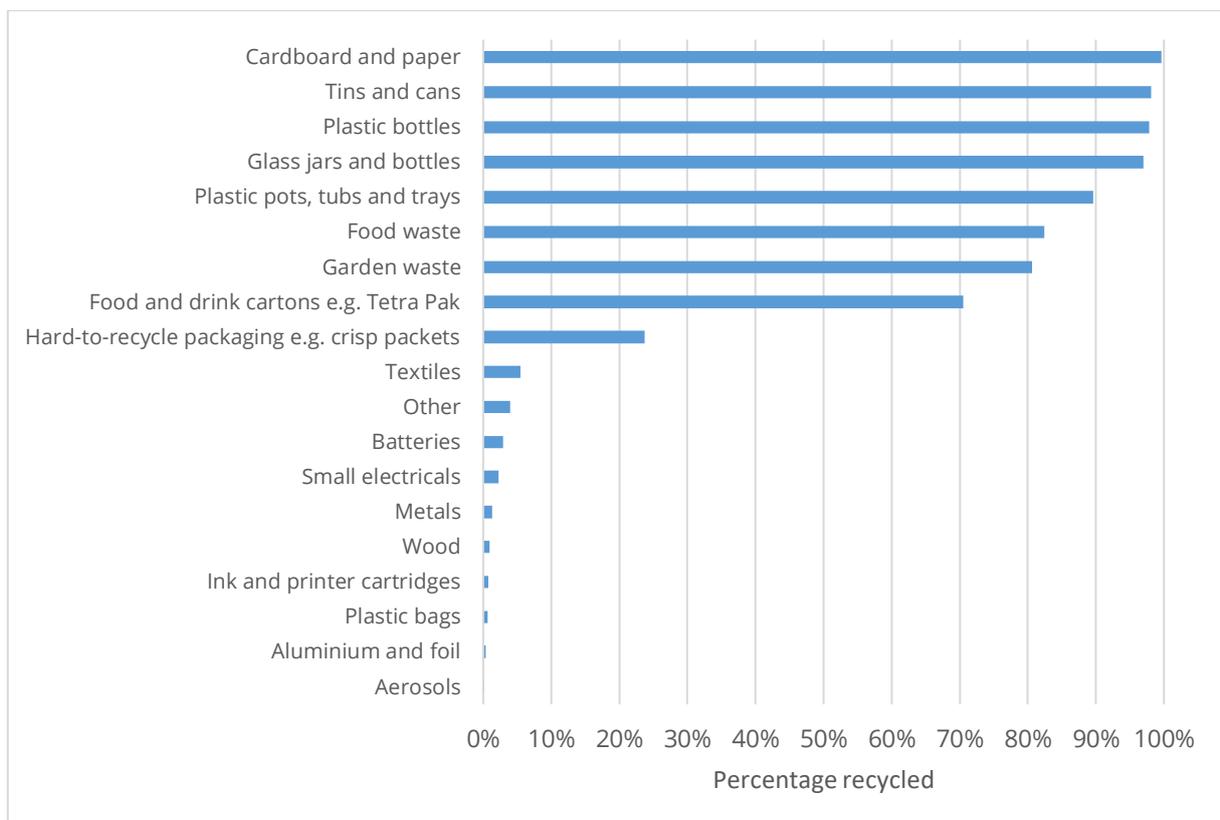

Figure 7. Materials recycled at home by residents in Essex, Kent and Peterborough

1% of respondents said they do not recycle. Their main reasons were either a lack of space to store recycling at home, or lack of recycling infrastructure where they lived. Most of these residents lived in flats.

Some of the responses were:

"The council does not collect recycling from the mobile home park where I live; just mixed rubbish."

"We have no access to a recycling bin. They were removed about ten years ago."

Why do people recycle?

Residents were asked about their reasons for recycling, and the responses are shown below in Figure 8 Just under 50% of respondents claimed to recycle to protect the environment, whilst 32.5% wanted to send less waste to landfill and 16.5% felt a moral obligation to recycle.
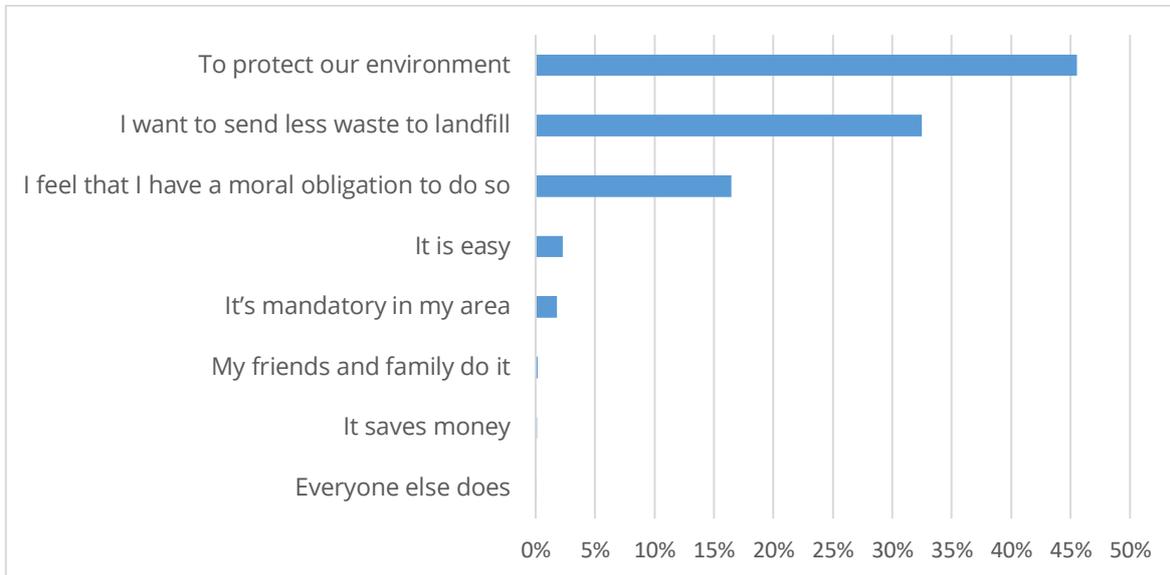

Figure 8. Resident responses to why they recycle

Residents were also asked whether they actively try to increase the amount of waste they recycle, of which 94.2% responded positively.

Of those that said they did not, 48.3% said they were not sure what else they could recycle and 23.8% said they did not have space at home to store more recycling.

Figure 9. Reasons why residents do not recycle more than they already do

Waste reduction

99.1% of respondents said that they take steps to reduce their waste. Respondents were presented with a list of 15 waste reduction steps and ranked how frequently they did each of these. The results are shown below in Table 6.

Table 6. Waste reduction actions (darker colour represents higher frequency)

Action	All the time	Most of the time	Some of the time	Infrequently	Never
Buy food with less packaging					
Use a refillable water bottle instead of buying plastic bottles of water					
Use a reusable coffee cup instead of disposable coffee cups					
Bring a reusable bag for shopping					
Use cloth nappies					
Use reusable sanitary products					
Use reusable tubs and containers for storing food or for lunches					
Cut down on bathroom plastics by using bars of soap or solid shampoo/conditioner					
Use washable cloths instead of disposable wipes					
Cook with leftovers					
Shop at zero waste/refill shops					
Donate/sell unwanted clothes and items instead of putting them in the bin or taking them to the tip					
Look for second-hand clothes/items instead of buying new					
Compost					
Borrow items/tools I need instead of buying new					

Why do people cut down their waste?

Residents were asked about the main reason for reducing their waste (Figure 10). 56.1% of respondents claimed to reduce their waste to protect the environment, whilst 24.5% wanted to send less waste to landfill and 15.1% felt a moral obligation to reduce waste. These are also the top three reasons as to why people recycle.
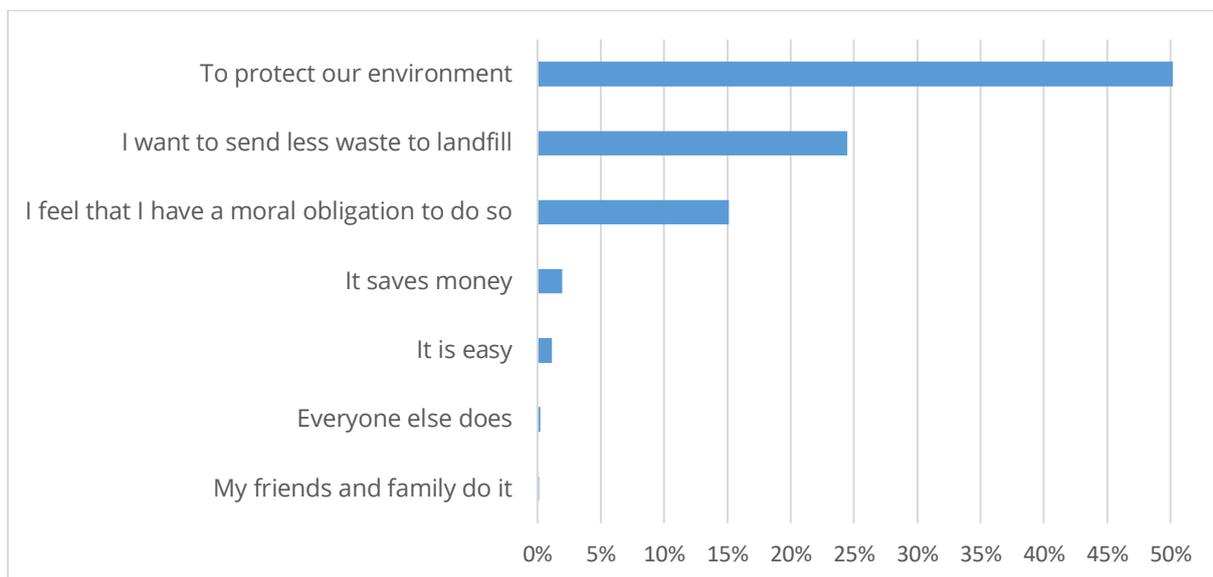

Figure 10. Reasons why people reduce their waste

Respondents were also asked about the challenges they face when cutting down on waste. The most common challenge (61%) was struggling to find low waste/zero waste alternatives to everyday items. 40% also said that zero waste items or items with less packaging were expensive.

The 'not relevant' category included responses relating to recycling issues, such as not all plastics being recyclable, or their local council not collecting certain materials at kerbside. The fact respondents

responded to waste reduction questions with recycling-related answers suggests residents view recycling as a waste reduction method.
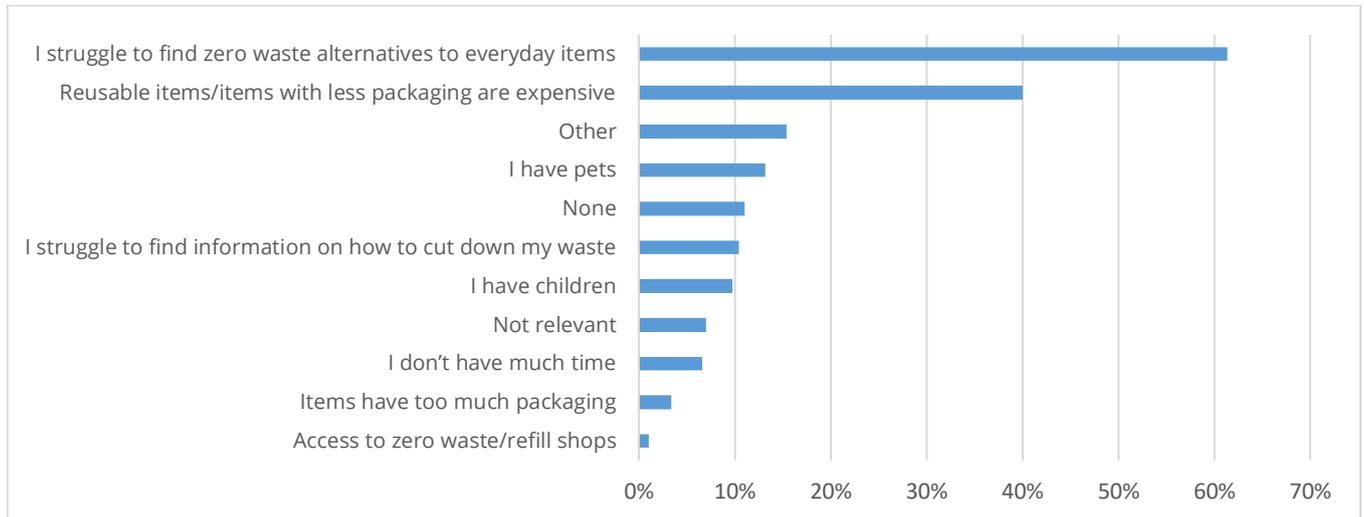

Figure 11. Challenge people face when reducing their waste

Respondents' reasons for not taking steps to reduce their waste are shown in Figure 12. The results were mixed, but the most common reasons included uncertainty around how to reduce waste and that residents have no justification for not taking steps to reduce their waste.
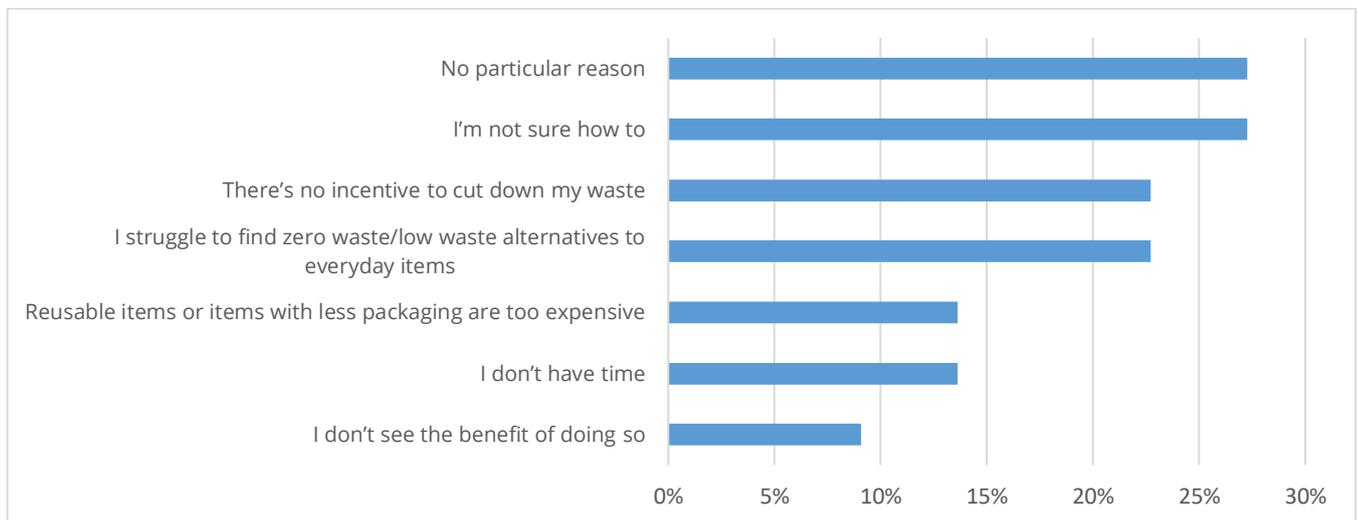
Figure 12. Reasons why people do not take steps to reduce their waste.

2.4.   Resident focus group results

2.4.1. Recycling

Using an icebreaker activity, focus groups participants were asked how they would dispose of different household items. Most residents knew to recycle simple items such as plastic bottles, whereas there were some conflicting responses to items such as food and drink cartons and crisp packets. Some people would put them in the recycling bin, whereas others would go out of their way to use a Terracycle

collection point. Where there was uncertainty, most residents would default to putting items in the general waste bin.

Most residents claimed to take electrical items to the local recycling centre, but a few did mention repair services, or trying to repair the item themselves.

In some cases, this icebreaker activity brought up discussions around the recycling journey, and whether or not local authorities send all waste to landfill or incineration, regardless of residents' recycling efforts.

"I have heard people say that they think the rubbish goes in the same end point regardless of whatever bin it goes in." – Peterborough resident

It was evident that residents were seeking greater transparency around the waste journey, as well as reassurance that their waste gets recycled.

There was also some discussion around reuse, with several residents using buying and selling sites like eBay, Facebook and Freegle/Freecycle. Most residents claimed to use charity shops and selling sites for getting rid of unwanted clothing, or, as a last resort, textile recycling facilities like bring banks. Residents also claimed to use charity shops or selling sites for items such as old books and toys.

What do you find difficult about recycling?

The focus groups also explored barriers residents may face when it comes to recycling. A key theme was confusion around what items can or cannot be recycled, with residents citing a lack of information from their local authority, or confusing recycling information on packaging. Some residents said that, if they were in doubt, they would simply put the item in the recycling bin, regardless of whether the material was recyclable. On the other hand, many people claimed to just put items in the black bin if they were unsure whether it could be recycled.

Another common barrier was packaging, with particular frustration around food packaging typically being unrecyclable.

"We preferred to put things in the recycling bin if we were in doubt, but then we realised that that just contaminates batches. Now if we are in doubt, we put in the general waste bin." – Peterborough resident

Some of the residents involved in the focus groups live in blocks of flats. Concerns were raised that there seemed to be high levels of contamination in communal bin stores, owing to residents not recycling correctly. This often led to further discussion around the fact that not everyone recycles the correct materials or recycles at all. A resident from Kent claimed that they faced difficulties with their own family members who did not put the right items in the right bins.

Finally, residents discussed the barrier of recycling inconsistency across the country and within individual local authorities. Residents did not understand why recycling facilities varied from place to place and highlighted that this often adds to the general confusion around recycling. Some residents from Peterborough also mentioned changing recycling rules, such as keeping caps on plastic bottles and cleaning recycling before putting it in the bin.

2.4.2. Repair

Have you ever repaired something instead of throwing it away?

Since repair is a vital part of the circular economy, residents were asked whether they had explored repair options instead of simply disposing of items.

Residents generally felt that repairing clothes was straightforward, especially when it came to mending a button or fixing a tear. Several residents cited learning these skills from older family members, and that fixing clothes was something they had always done. An older resident from Essex claimed that they had grown up reusing and repairing, and that it was simply 'a way of life'.

"I've invested in a proper sewing kit to repair clothes." – Kent resident

On the other hand, people cited a lack of skills and safety concerns around repairing electrical items. Some residents had used internet resources such as YouTube to find out how to repair items. In general, however, people were not as confident with electricals as they were with textiles.

Residents also flagged that some electrical items simply cannot be repaired at home due to lack of spare parts or the need for specialist equipment.

"...I would not touch anything electrical though, I'm not qualified. I would not know what I was doing. It can be quite dangerous. Clothes, yes." – Peterborough resident

The financial viability of repairing items was also discussed, with several residents claiming that it was often cheaper or better value for money to simply replace a broken item than use a repair service. However, residents seemed genuinely interested in repairing items, particularly as an alternative to disposing of them.

"I'm part of the younger generation; eco-friendly was not really a 'thing' in school...I do not know how to repair items but would love to find out."– Essex resident

2.4.3. Waste reduction

What comes to mind when you think of waste reduction?

Residents were encouraged to reflect on waste reduction. They discussed specific actions they take to reduce waste, such as using reusable water bottles, growing their own food in the garden, and buying second-hand items. One resident from Peterborough said that they were aware of zero waste behaviours but acknowledged that the extent of implementation comes down to time, convenience and lifestyle.

"People become fixated on things like buying metal replacements rather than using up what they've got. They feel like they need to go out and buy something, which is really the antithesis of waste reduction." – Peterborough resident

Several residents understood the term "waste reduction" to encompass a general reduction in consumption of products. In some instances, participants were prompted to discuss "zero waste living". The consensus was that, although waste-free living is appealing in theory, it is often not practical.

What do you find difficult about reducing waste?

Residents were asked to discuss the barriers they face around waste reduction. Many flagged excess packaging, especially on food and from online delivery companies such as Amazon. They said that, in many cases, waste was hard to avoid.

"I enjoy reading the paper, but I'm not interested in the sports sections. It would be great if I could only get the pages I'm interested in, so the others are not wasted." – Essex resident

Residents were also prompted to discuss refill shops, with several claiming they were too expensive to use on a regular basis. One resident stated that refill shops can be hard to access for those without a car, as customers have to bring lots of glass jars and containers. A couple of residents, however, claimed to use refill and zero waste shops on a regular basis.

Some residents addressed the need for systemic change — involving businesses, residents and local authorities — to significantly cut down on waste. It was also suggested that people need to see best practice from local authorities and central government, and that change should not just be the responsibility of residents. In some sessions, there was discussion about reducing waste and being overwhelmed by the volume of information and conflicting advice.

"… you have to prioritise what's more important to you: that it's not made from plastic but might have come from further away, or that the item is produced locally. If you're simply trying to do a good job, it gets a bit overwhelming. Your interest starts to wain and you just make the changes that are easiest." – Peterborough resident

2.5. Conclusion and recommendations

Overall, 2,544 residents were engaged through the waste and recycling survey, and a further 39 people through the focus groups. The results highlighted several challenges that residents face regarding waste and recycling.

Key challenges raised in the survey:

- Only 23% of respondents recycled 'difficult-to-recycle' items that often require a separate collection.
- Lack of recycling facilities in flat blocks.
- 61% said they struggle to find zero waste alternatives to everyday items, and zero waste items or items with less packaging are more expensive.
- Some people are not sure how to cut down their waste.
- Some people view recycling as a waste reduction method.

Key challenges raised in the focus groups:

- Scepticism around the recycling journey and what happens to our waste, and a general lack of trust from residents.
- Confusion over what items can/cannot be recycled.
- Residents do not feel confident to repair electrical items.
- Repairing items is often not financially viable, and many items are not made to be repaired.
- Living waste-free is not seen as practical or achievable.
- Refill and zero waste shops are often more expensive than regular supermarkets.
- Some waste feels unavoidable – like packaging.

Recommendations

Every challenge presents an opportunity for local authorities to improve education and services around waste and recycling. In turn, these changes would ultimately help residents embed circular economy practices in their everyday lives. Based on the challenges raised, the following recommendations are proposed:

Education

- Educate people on what items can be recycled in their local area and provide clear information on items that can/cannot be recycled in each local authority to combat issues around contamination.
- Use environmental messaging when encouraging people to recycle or cut down their waste.
- Demonstrate 'easy switches' people can make to cut down on waste.
- Provide clear and transparent communication about the recycling journey to increase trust and confidence among residents.
- Engage with and encourage 'non-recyclers' to start separating their waste.
- Upskill residents to repair a variety of items at home.

Products

- Ensure all items and packaging can easily be recycled or reused.
- Work to make zero waste items or items with less packaging more affordable.
- Design products that can be repaired easily.

Services

- Improve recycling facilities in blocks of flats.
- Make repair services more affordable and accessible to residents.

Finally, a key point to note is that 99% of respondents who took the survey claimed to recycle, meaning results do not represent the thoughts of 'non-recyclers' and disengaged residents. Furthermore, respondents may have inflated their responses (i.e., claimed to recycle more than they do) as they may have assumed local authorities were looking for positive responses.

The focus groups posed a similar challenge, as only residents who had an interest in waste and recycling took part in the sessions.

Moving forward, it is imperative that local authorities find ways to engage with residents who do not actively recycle or reduce their waste, as this is where interventions can have the most significant impact.

3. Next steps and recommendations

3.1.   User engagement

Engaging residents around circular economy practices such as reuse, repair and recycling will be key in the transition to a circular economy. As highlighted in chapter 4, local authorities will need to provide residents with more information on recyclable materials. The high cost of waste-free products and the skills gap around product repair will also need to be addressed. Furthermore, it is apparent that there are barriers to engaging the wider public in waste and recycling discussions, highlighted by the fact that 'disengaged' and 'non-recycling' residents did not participate in the survey or focus groups.

To remedy this, the BLUEPRINT Project will trial a series of **behaviour campaigns** to determine the most successful and cost-effective ways to engage residents. These pilots will be split into three categories:

1. **Household campaigns** – how best to engage with householders, and which campaign interventions yield the best results regarding waste reduction, reuse, repair and recycling.
2. **Digital campaigns** – how best to engage via a digital platform.
3. **School campaigns** – how best to engage with school pupils and encourage them to practise their learnings at home.

Each pilot will be monitored, evaluated and eventually become best practice case studies that other local authorities can replicate. Each case study will then feed into the final BLUEPRINT Model.

4. References

ADEME, "Économie circulaire", https://www.ademe.fr/expertises/economie-circulaire (last accessed 10 August 2021)

European Academics Science Advisory Council, "Indicators for a Circular Economy", 2016, https://easac.eu/fileadmin/PDF_s/reports_statements/Circular_Economy/EASAC_Indicators_web_complete.pdf (last accessed 10 August 2021)

European Commission, "Circular Economy Overview", https://ec.europa.eu/eurostat/web/circular-economy (last accessed 10 August 2021)

European Environment Agency, "Circular Economy in Europe: Developing the Knowledge Base", 2016, https://www.eea.europa.eu/publications/circular-economy-in-europe (last accessed 10 August 2021)