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# Evidencing the Need for a National Citizens Clothing Circularity Strategy (NCCCS)

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# Acknowledgements

This research was carried out by the authors at the Adam Smith Business School, University of Glasgow and funded by the Economic and Social Research Council in collaboration with Ethical Consumer Research Association. Dissemination was funded by Glasgow Knowledge Exchange Fund. We thank all our participants who took part in this research.

# Author Biographies



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Dr Lynn Wilson is a circular economy consultant, researcher, and educator, who completed her PhD at the Adam Smith Business School, the University of Glasgow in 2022 - *Cleaning the Loop. Driving Consumer Clothing Circularity*, which investigated consumer clothing use and disposal experiences. From 2016 -2017, she was Sector Manager – Manufacturing, Zero Waste Scotland, implementing the Circular Economy workstream, of the National Manufacturing Action Plan. Prior to this role, she was the Sector Manager - Textiles, Circular Economy team at Zero Waste Scotland, contributing to *Making Things Last – A Circular Economy Strategy for Scotland (2013-2016)*. In 2015, she undertook a Churchill Fellowship, spending one month in Japan, researching circular textile heritage, technology, and clothing retail systems to achieve a circular economy.



## **Prof Deirdre Shaw**

Prof Deirdre Shaw – Professor of Consumer Ethics and Sustainability at Adam Smith Business School, University of Glasgow

Deirdre has researched the area of consumption ethics throughout her career, publishing on the subject in a range of international journals, including, *British Journal of Management*, *Work, Employment and Society*, *Journal of Consumer Culture*, *Psychology and Marketing*, *Journal of Business Ethics*, *Marketing Theory*, *European Journal of Marketing*, *Business History*, *Journal of Marketing Management*, *Sustainable Development*; contributing to books and non-academic publications and giving invited talks, supervising PhD researchers in this area and advising policy, business and third sector. She is Associate Director for the University of Glasgow Centre for Sustainable Solutions, Adam Smith Business School Marketing Research Cluster led and Consumer Ethics section co-editor for *Journal of Business Ethics*.



## **Dr Katherine Duffy**

Senior Lecturer in Marketing at the Adam Smith Business School, University of Glasgow

Katherine's research is in the area of consumer culture with a particular interest in clothing sustainability and circularity, and the impact of the digitalisation of consumption. Her research is published in international journals including *Journal of Management Studies*, *Journal of Business Research*, *Gender Work and Organisation*, *Consumption Markets and Culture*, *Journal of Marketing Management* and *Journal of Retailing and Consumer Services*, and in a range of books, industry reports and podcasts. She has also held a visiting researcher post at Lund University, Sweden. Her current research links to understanding consumer clothing practices and the opportunities and challenges for sustainable action – this underpins her PhD supervision and continued industry engagement.

# Executive Summary

Household clothing disposal contributes to 32% of carbon emissions in Scotland (Zero Waste Scotland, 2021). This paper demonstrates the need for a National Citizens Clothing Circularity Strategy (NCCCS) for Scotland. The paper has been informed by research that investigated how consumer citizens manage their clothing acquisition, use and disposal and related industry practices, to highlight the challenges and barriers to sustainable/circular behaviour.

Based on in-depth ethnographic research with 30 households and interviews with 8 textile recycling industry stakeholders, the findings and recommendations presented demonstrate the need to support consumers to consume less, extend the life of clothing and dispose of clothing responsibly. Our findings illustrate the complexity of existing consumer clothing behaviours and the disconnect between what consumers currently do and what industry services are (un)available. Findings are organised around the three key themes of clothing acquisition, use and disposal.

First, in clothing acquisition we found changing bodies, seasons and events resulted in clothing needs that are often temporary. This coupled with poor choices and quality resulted in an abundance of clothing to be managed in the home and hoarding of unworn garments. This put financial, time and physical space constraints on households.

To address these challenges, our recommendations focus on increasing access-based models. Affordable industry and community initiatives that facilitate, for example, rental, sharing and swapping to enable consumers to access clothing when they need it. A national infrastructure and community investment is required to make such services accessible and convenient, thus, ensuring successful consumer uptake. The development of design standards for durability, flexibility, longevity and repair are needed to support consumers in making informed choices that are fit for purpose. Consumers also need support to understand how to effectively care, maintain and repair their clothing post purchase.

Second, in clothing use we found hygiene concerns related to pathogens and bacteria, alongside staining, wear and tear and moths. There was a general uncertainty as to how to manage these challenges and how to avoid them in future. A lack of understanding and confidence in laundry practices to keep clothing in use was evident. Wear and tear, such as, piling and snags reflected a dearth of repair skills and knowledge of garment care, as well as, access to repair support both in terms of skills development and local repair services.

Our recommendations focus on the development of actionable consumer advice to address and manage

these concerns. This should include, education to develop consumer confidence in understanding clothing composition and related effectiveness for proposed use, alongside appropriate laundry practices. Access to clothing maintenance and repair to address the current lack of consumer knowledge and skills, alongside the need for conveniently accessible local repair services.

Third, routes to disposal centred on the household bin, charity donation and resale. Consumers expressed uncertainty and concern as to the impact of disposal, how to dispose of clothing in the least environmentally harmful way and what happens to clothing once it is disposed of. We found a disconnect between existing consumer disposal behaviours and what industry accept as required practice. This resulted in clothing being disposed of in the household bin which would be acceptable for reuse and clothing disposed of in clothing banks ending up in landfill due to a lack of knowledge as to required practice. This included placing garments in a plastic bag and not leaving them outside a full bank.

We recommend the use of practical messaging to consumers on what can be reused and recycled and how to dispose of it. There is also a need for charities, industry and policy to collaborate to provide accessible guidance to ensure that clothing is diverted from household bins and remobilised into appropriate reuse and recycling infrastructures.

Overall, we observed significant levels of uncertainty among consumers as to how to effectively manage their clothing. Similarly, industry was largely unaware of the decisions that underpin consumer behaviours. This resulted in a disconnect between consumer and industry practices, forming a barrier to sustainability.

In conclusion, we highlight the need for guidance to support effective choices at acquisition, access to these choices, skills and/or access to maintenance and repair and appropriate disposal routes for different garments following use. The interconnected nature of consumer and industry practices and needs, alongside the resulting impact on our environment demands a national strategy to ensure that the appropriate infrastructure exists for all stakeholders to take more sustainable action. We argue that national policy is needed to support sustainable change and a mechanism to initiate this is the formation of a NCCCS, with representation from stakeholders across policy, industry, education, consumer citizens and citizen organisations and academia. This mechanism will support the ministerial portfolio for, Green Skills, Circular Economy and Biodiversity to achieve clear routes to action and a coordinated infrastructure, organised around consumer and industry interconnectivity. This is vital to achieve effective sustainable change at scale.



*“Every material that is wasted costs our planet, and it is clear that textiles have a disproportionate environmental impact. They account for almost one-third of the carbon impact of Scotland’s household waste. Making fashion more circular requires changes at all parts of the supply chain, including design, production, consumption and recycling.”*

**Lorna Slater, The Minister for Green Skills, Circular Economy and Biodiversity (Scottish Parliament, 2023)**

# Introduction

As the above quote highlights, addressing the environmental impact of clothing is a concern of the Scottish Parliament. Neglected and vital to achieving change is the role of consumer citizens<sup>1</sup> in taking the actions necessary to underpin the success of clothing policy and industry initiatives. This white paper presents key insights from research with consumers and industry examining clothing acquisition and use through to disposal. We identify the challenges and barriers to taking sustainable action and how consumer (in)action can be an obstacle to industry sustainability initiatives.

Scotland's environmental and circularity ambitions (Scottish Government, Making Things Last – A Circular Economy Strategy for Scotland, 2016) are not aligned with current consumer behaviour. In Scotland, levels of product consumption (including clothing) are 38% higher than Europe (Conde et al., 2022) and household textile waste accounts for 32% of carbon emissions (Zero Waste Scotland, 2021). Current behaviours are unsustainable and there is an urgent need to effectively harness the value of clothing already in existence.

We need to support consumers to consume less, extend the life of clothing and dispose of clothing responsibly. To achieve this, we need to understand how consumer and industry practices can be aligned to support sustainable outcomes. This paper responds to these information needs through the presentation of key insights from research with consumers and industry. In what follows we share the research methodology and central findings organised around clothing acquisition, use and disposal. We highlight the implications of the research findings and make recommendations for policy. Finally, we call for a National Citizens Clothing Circularity Strategy (NCCCS) that is specifically tailored to address the unique challenges presented and will inform the actions and policy of the ministerial portfolio for, Green Skills, Circular Economy and Biodiversity.



Consumer shopping for a new top



Drying laundry



Textile recycling sorting centre

<sup>1</sup> While we mainly use the term consumer in this paper, we do consider people both in their role as consumers and citizens.

# Methodology

This research employed an ethnographic multi-method study with 30 participants from 30 households in Scotland.<sup>2</sup> Over a period of 6 months interviews, diaries and observations explored clothing acquisition, use and disposal. Eight semi-structured interviews with textile recycling industry stakeholders were conducted to understand existing infrastructure and systems of post-consumer clothing processing, sorting, reuse and

recycling. This was important in identifying the (mis) alignment between consumer and industry practices.

Thematic analysis was utilised to identify key themes related to clothing acquisition, use and disposal across consumer and industry experiences. Core insights from the data analysis are presented in the following section. Please find supporting illustrative data in Appendix 1.



Figure 1: Clothing acquisition, use cycle, and disposal.

<sup>2</sup> Whilst there was a diversity in household composition, the participants were recognised as being mainly middle class.



# Research Findings

This section presents key insights from the research across the themes of clothing acquisition, use and disposal. Recommendations are made for each theme to support sustainable/circular actions.

## Consumer Clothing Acquisition

Participants were active in a wide range of clothing acquisition from new (sourced from value to mid-priced retailers) to second-hand (sourced from charity shops, swapping events, resale platforms, siblings and parents) and gifted items. Within households there were conflicting views between members in terms of appropriate clothing behaviours. This included, volume purchased (e.g., online shopping by teenage children) and quality (e.g., a partner buying low priced, poor quality). Households did own an abundance of clothing. Four key areas represent frustrations felt in relation to clothing acquisition and opportunities for change.

**Children's clothing:** Participants with babies, children and teenagers all discussed the problems of outgrowing clothing. This included everyday frequently worn items, such as, school uniforms, as well as, infrequently worn occasion wear. While there was a willingness to share school uniforms locally, challenges of wear and tear (e.g., greying white shirts, trousers that wear out at the knees) were barriers to circulation. While some children within the household participated in high levels of clothing acquisition, others were interested in learning the skills necessary to repair and maintain their clothing.

**Temporality:** Adults similarly had times when specific clothing was necessary but only for limited periods. Examples included, during/after pregnancy, weight fluctuations, occasions (e.g., weddings) and seasonal wear (e.g., holidays, winter). Often, such 'temporary' garments were regarded as limited in style, size and as being expensive (e.g., maternity bras), putting pressure on the family budget, in some cases at a time when other expenses were being incurred, such as, preparation for a new baby.

**Poor quality purchases:** Participants were frustrated by poor quality purchases that were not fit for purpose (e.g., protection from wet or cold) and did not wear well. This included t-shirts and sweatshirts stretching out of shape and becoming discoloured after one or two washes and jeans becoming threadbare quicker than similar past purchases.

**Hoarding:** Participants lead dynamic lives, requiring multiple forms of clothing for different uses within a given day, week or season across household members (e.g., a 24-hour cycle may require different clothing for work,



## Consumer inspecting new clothing acquisition

exercise, social events, sleep; while seasonal weather and holidays demand specific clothing). Other clothing was unworn due to poor choices, changing style preferences, poor fit and/or unwanted gifts. Some garments had never been used and still had their tags on. In some instances, garments were kept for sentimental reasons, in others due to uncertainty as to what to do with them. This clothing, both used temporally and unused, was stored in drawers and wardrobes in bedrooms and in some cases extended into other parts of the home, including, cupboards, hallways, suitcases and spare bedrooms. Such volume of clothing took up space in the home and required time and labour to manage the storage of 'excess' items.

<sup>3</sup> A collaboration between the authors and the British Standards Institution is evidencing the need for a Sustainable Fashion Standard.

## Recommendations

- Body changes (e.g., growing children, pregnancy, weight changes), seasons, events (e.g., holidays, weddings) resulted in clothing that was required temporarily. Such clothing was taking up space, time and effort in the home and could be expensive in terms of cost per wear. While access-based business models in the form of rental, leasing and subscription exist, these are currently niche, predominantly online and have limited uptake from consumers. National support and investment in access-based business models is required, to make it easy, convenient and affordable for consumers to access, alongside incentivisation schemes to encourage consumers to trial new clothing systems. Funding bodies, that work in partnership with government (e.g., The National Lottery and governmental community funding schemes) could prioritise support for community clothing sharing schemes, such as, mending repair hubs and community clothing libraries (Callmer and Bradley, 2021).
- Clothing design standards for durability, flexibility, longevity and repair are required to accommodate clothing that can grow with the body and address areas of known wear and tear.
- Many garments cluttering up the home were the result of poor buying choices and lack of understanding of garment quality. Urgent action is needed to support consumers to identify and avoid poor clothing purchases. This requires a review of current garment labelling related to composition, laundering, care and disposal, for example, how many wears a consumer can expect from a garment and minimum guarantees of functionality in relation to specific needs.<sup>3</sup> Indeed, in the UK, it is not mandatory for a brand to include washing instructions on a garment (UKFT, 2023). These issues are particularly important where clothing is acquired online and where, especially in relation to resale platforms, there is limited opportunity to evaluate the quality and fit of garments pre-purchase. Even where return options are available these are time consuming and environmentally impactful (e.g., in terms of packaging and transportation). We know that some consumers do not think it is worth the effort to return purchased garments (The Industry Fashion, 2022), while some retailers do not resell returns (Tait, 2023). Thus, consumers need support on how to choose well, as well as, more practical advice in relation to care and repair.
- We found participants willing to engage in clothing acquisition from community circulation initiatives. This was accessible for those living in communities active in such engagement. To extend the benefits of such community circulation, we suggest there is a need for a national infrastructure that facilitates local clothing circulation schemes. This will not only embed local circular clothing initiatives, but also support the development of national networks of clothing acquisition, across different community stakeholders, including, schools and community groups, that are attentive to local needs.

## Clothing use

Consumers shed 50 grams of dirt every day, including, fat, skin, sweat and various other forms of bodily fluid (Lagerspetz, 2018). Laundering clothing is a major contributor to ocean microfibres (Davies et al., 2021). Participants experienced four key challenges related to the use and maintenance of their clothing.

**Pathogenic staining:** Pathogenic experiences related to how participants interact with everyday garments, such as, undergarments closest to intimate body parts where residues (e.g., urine, blood, faeces) are transferred to clothing. Such instances can raise hygiene concerns, with ambiguous evaluations as to whether laundering is sufficient or if it was clinically safe to keep clothing in use (e.g., where a garment has been soiled by unwell children).

**Bacteria:** In the form of sweat and skin shedding, bacteria also raised hygiene concerns. To address this, care products (e.g., deodorant) were used to reduce sweating and associated body odours. This interaction frequently resulted in yellow and grey staining and a build-up of residue. This was difficult to remove. Some participants, determined to keep clothing in use, used clothing dyes to camouflage the stains.

**Wear and tear:** The body is constantly moving within the constraints of a garment. This friction can cause piling and snags and where bones are rubbing against textiles, causes wear and can tear clothing if it encounters a hard surface. A common example was children's school clothing, such as, trousers damaged by children falling on their knees and causing holes. Some participants were skilled in clothing repair or in adapting garments (e.g., turning trousers into shorts), others had relatives who did this for them. Some kept a 'rag bag' where a variety of torn and worn clothing was used for clothing repair, craft projects and/or repurposing. Not all households, however, had such maintenance and repair skills.

**Moths:** WRAP (2021) estimates that 21-30% of clothing owned is never worn. We observed an abundance of clothing in storage in the home. In many households, such clothing attracted moths that destroyed textile surfaces and left deposits of moth larvae (Xavier-Rowe et al., 2018). Once in the home participants found it impossible to remove moths, resulting in destruction of garments made from the natural fibres that the moths feed on.



Frayed shirt cuff



Sweat stained t-shirt



Moth hole on wool jumper

## Recommendations

- Consumer experience of pathogenic and bacterial cues on clothing was accompanied by uncertainty as to how to manage such garments. Consumer messaging advising to wash less and at lower temperatures (Laitala et al., 2018, 2020), conflicts with the demands of eradicating suspected and visible pathogens, bacteria and staining. Further research is needed to identify how to best care for garments exposed to pathogenic and bacterial residue stains, to support the development of actionable consumer advice.
- There was a high level of interest in, and need for, maintenance and repair of garments as a result of everyday wear and tear. Not all households had, or felt able to, access the skills and tools to support the maintenance and repair needed to keep garments in active use. Education is necessary across consumer groups, and we observed interest in acquiring such skills among younger members of some households. This highlights the need to embed these skills early (e.g., through the school curriculum) to support a lifetime of more sustainable behaviour, as well as, offer support reflective of differing levels of consumer interest, knowledge and experience.
- While awareness of the importance of maintenance and repair is critical, not all consumers will want to acquire such skills and in some instances specialist expertise/ equipment is required. We observed among participants those who sought repair services. These, however, were often difficult to locate locally, challenging to evaluate cost and quality, with identification of a trustworthy service being the result of trial and error. There is a need to increase specialist clothing repair services in local areas, that support consumers with a range of maintenance and repair services. Clothing repair services could also be considered for VAT reduction as trialled in Sweden (Dalhammer et al., 2020).
- Consumers need support to understand the fibre composition of acquired clothing so they can effectively judge if a garment will be fit for purpose during use. For example, keeping out the rain, keeping the body warm in the cold, not result in sweating, aligned to household laundry practices and if maintenance and repair needs can be met (e.g., where staining and snagging occur). Due to a lack of understanding of clothing fibre composition, we would describe many of our participants as experiencing 'fibre poverty'. This resulted in the acquisition of clothing that was not fit for its intended purpose. Over 60% of clothing consumed is produced from petro-chemical based fibres (Palacios et al., 2021). Unless specifically treated to mimic natural fibre properties (e.g., in technical sportswear), such clothing is ineffective in generating warmth in cold weather, results in sweating and is challenging to repair. A lack of education regarding these fossil fuel industry by-products has resulted in consumers experiencing the negative effects of this clothing, which is in abundant supply, at point of use.
- Consumers need clear guidance on how to effectively manage and avoid moth infestations through clothing and home maintenance, regular cleaning routines and use of natural moth prevention and eradication tools that are less harmful to the environment. This is important given the growth of second hand buying and calls to use natural fibres, such as, wool considered better for people and planet (Campaign for Wool, 2023) but which also attract moths when not adequately maintained (Total Wardrobe Care, 2023).

## Clothing Disposal

Consumers dispose of 336,000 tonnes of clothing in the UK (WRAP, 2021). In Scotland, this equates to 4% of household clothing waste when measured in tons, but 32% when measured in carbon emissions (Zero Waste Scotland, 2021). We found participants expressing uncertainty and concern as to the impact of clothing disposal, how to dispose of clothing in the least environmentally harmful way and what happens to clothing once it is disposed of. We observe these challenges in three key areas.

**Household bin:** As noted in the previous section, in clothing use pathogenic and bacteria staining can occur. Other garments were worn until they were not considered fit for reuse, such as, undergarments. When this occurred, many participants disposed of garments in the household bin. While feeling guilty about doing so, the idea of putting such items in the clothing bank, evoked responses of embarrassment and concern that they did not know where these items would end up and whether they would be wanted. Other participants rescued such garments from the bin but were unsure what to do with them.

**Donating to charity:** Confusion in terms of what was acceptable to donate, how to donate it and what happens to it once it is donated was a significant issue for our consumer participants and a source of disconnect between consumer practices and industry requirements:

- Participants varied in terms of their evaluation of what was acceptable to donate. In some instances, clothing that was deemed substandard by consumers, mainly due to problems of poor quality, was donated for reuse. Industry participants highlighted concerns with the quality of donated clothing, noting that only 50% of clothing donated to charity is sold in charity shops. The remainder is sold to textile recyclers.

- How to donate was also fraught with uncertainty. Our industry participants highlighted the need to deposit clothing into clothing banks in a plastic bag to avoid the items becoming contaminated (e.g., with moths, odours, active stains). However, the plastic bag charge left households with the understanding that plastic bags are problematic and resulted in a lack of plastic bags in the home. Further, while our industry participants highlighted that clothing should not be left outside clothing banks (as donations are vulnerable to the elements), where effort had been made to take the clothing to a clothing bank, consumer participants were reluctant to take it back home again if the clothing bank was full or malfunctioning. Often participants were unaware that such behaviour was fly tipping and illegal (Scottish Government, 2023).
- Consumer participants were unaware of what happened to their donated clothing but were keen to learn.

**Resale via digital platforms:** Some participants were active on digital resale platforms. This was mainly younger participants, as older participants, often with families, complained that they found selling on digital platforms difficult and the financial gain was not sufficient for the effort expended.



Charity shop



Clothing bank

## Recommendations

- While our consumer participants experienced uncertainty as to what was (un)acceptable to put in the clothing bank, resulting in garments being put in the household bin, this was unambiguous to our industry participants. From an industry perspective all items, if they are laundered, can be placed in the clothing bank (the exception is duvets and pillows). For textile recyclers, garments from discount retailers and/or made from synthetic fibres are not acceptable for some secondhand markets and, thus, can be difficult to resell. Synthetic fibres, such as, polyester is dominant in new clothing, with over 60% of clothing polyester based (Palacios et al., 2021) which in addition cannot be easily recycled. It is vital that this information is clearly communicated to consumers to divert clothing from landfill, facilitate reuse and impact the acquisition of clothing that can be reused/recycled.
- Consumers need practical guidance on how to put clothing in the clothing bank. Clothing that is unbagged or left outside the bin is not acceptable from an industry perspective. Clothing banks need to be accessible to consumers, emptied frequently to avoid fly tipping and consideration given to locating clothing banks in indoor sites safe from the elements.
- Consumer participants experienced overflowing textile recycling bins. It is important to ensure that the introduction of local authority kerbside collections for textiles by 2025 are sufficient for volume and textiles are kept clean and dry. Our industry participants shared that this is challenging as information on household disposal practices is currently lacking and may differ across different local authority areas, while outdoor collection schemes risk exposure to the elements. To ensure that collection schemes match levels of household disposal is important to ensure that clothing remains free from contamination and is fit for reuse/recycling. Further understanding of household disposal practices and volumes across disposal routes is required.
- Consumer participants wanted to know where their clothing goes post-disposal. Industry participants shared that while around half of charity shop donations are sold in stores, the remainder goes to textile recyclers with onwards routes within UK, Eastern Europe and Global South and conversion to other uses, including, industrial clothing cloths and insulation. In some instances, we found items that were being put in the household bin by consumers, including, bras and socks, were in demand from recyclers for reuse. Consumers are seeking transparency and reassurance in relation to where their clothing goes post-disposal. Such information is necessary to support appropriate disposal routes for different garments resulting from consumer knowledge and confidence.
- Clear guidance is needed for consumers in terms of what is (un)acceptable to donate to charity shops. To facilitate a tighter loop between donation and purchase across a diversity of consumers, charities need access to good quality donations that encourage both donation and purchase. If successful, this has the potential to reduce demand for new clothing.
- Overall, national campaigns that support consumers with clear information about how to dispose of and donate clothing and advice on the most appropriate routes for different clothing items given their various state of wear and tear is vital. There is a need for charities, industry and policy to work together to provide consumers with clear, accessible and transparent information on websites, recycling points, campaigns, social media and inside charity shops. This is essential to divert clothing from household bins and support reuse.
- To build momentum around local community clothing sharing initiatives, community investment and support is needed to create digital information points that support sharing of clothing locally – both disposal and acquisition. Informal school uniform sharing was prevalent in school catchment areas, but this could be extended to support formal and seasonal wear clothing libraries, as well as, local easy to use resale sites, that reduce the complexity of large commercial resale platforms. Community resale platforms could be extended to borrowing, sharing and renting community wardrobes. This could be affordable options for households on tight budgets and, as highlighted in the section on acquisition, enables access to temporary use clothing, offering variety, while freeing up space in the home.

# Conclusion

Our households revealed a diversity of needs across a range of consumers. As such, there is no one solution across clothing acquisition, use and disposal that will work for everyone. It is important, therefore, that a range of routes to action are offered in these areas to reflect the diversity of consumer citizens in Scotland. It is vital that routes to action enable consumers to act with confidence when acquiring, using and disposing of clothing. This will free consumers from many of the burdens clothing currently presents. For example, freeing up space in the home, diverting clothing from household waste and releasing consumers from the frustration of inadequate clothing. This is also vital to ensure that consumer practices are aligned with policy and industry sustainability facing initiatives. Consumer habits can present significant barriers to sustainability and changes to existing behaviours need to be considered within the system of household practices.

We observed consumers who want to do the 'right' thing but are uncertain as to what was the 'right' course of action. The clothing industry is a black box to consumers, while similarly, industry is largely unaware of household practices. Understanding of what their clothing is made from and what that means for functionality and disposal, how to maintain and repair clothing, how to dispose of clothing and what happens to it once you do, was unknown to many of our consumer participants, resulting problems, including, fibre poverty. There is an urgent need to address these issues to ensure the demand for and circulation of good quality clothing fit for purpose, repair, longevity and reuse. Guidance is needed to support good choices at acquisition, access to these choices, skills and/or access to maintenance and repair and appropriate disposal routes for different items following use.

The interconnected nature of consumer and industry practices and needs, alongside the resulting impact on our environment demands a national strategy to ensure that the appropriate infrastructure exists for all stakeholders to take more sustainable action. Clothing acquisition and disposal models that are connected, access-based models, services and community initiatives need to be supported to raise consumer awareness of their presence as a viable choice. Consumers are being asked to move away from deeply entrenched habits and behaviours, thus, alternatives need to be accessible, convenient and easy to use.

We argue that national policy is needed to support sustainable change. Clear routes to action and a coordinated infrastructure organised around consumer and industry interconnectivity is vital. To initiate this, we recommend that the Scottish Parliament Cross-Party Group on the Circular Economy, support the formation of a National Citizens Clothing Circularity Advisory

Group (NCCCAG) consisting of representatives across policy, industry, education, consumer citizens and citizen organisations and academia. The purpose of this group will be to develop and deliver an agreed time bound framework of short, medium and long term goals. The overall outcome will be a coherent National Citizens Clothing Circularity Strategy (NCCCS) that works collaboratively towards radical change in addressing Scotland's clothing sustainability needs, implemented by the Minister for Green Skills, Circular Economy and Biodiversity. A collaboratively informed national strategy is critical to implement such a system transformation at scale. We urge commitment from the Scottish Parliament to take forward this proposal to address the recommendations made in this paper.

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# Appendix 1

## Examples From Interview Data

### Theme: Clothing Acquisition – Buying new, second hand and hoarding

*"I guess just the nature of sometimes you buy a skinny jean that looks great on you, and then you might put a few pounds on, and that skinny jean doesn't look great anymore." (Pearl)*

*"These ones are H&M, we would have bought them in Poland, they would have been new then, I think. So, she would have worn them for maybe...eight or nine months given the size of them." (Tara)*

*"I was part of the committee for our local playgroup who decided to raise funds [clothes swap]. So, you took a bag of clothing and sorted it into ages, and then we invited people to buy a ticket and go along." (Carla)*

*"I don't keep stuff for the sake of it, I keep stuff because I don't like throwing out because I don't like waste, if it's fabric, I tend to put it in a basket and not know what to do with it." (Fern)*

### Theme: Clothing Use – Wear and tear, impact of the body, quality and durability

*"When you've used a certain kind of antiperspirant deodorant or something, or maybe just sweat, and you get those colour changes under the arms." (Tara)*

*"Unfortunately, I put it in the wash, and being viscose, it has a tendency to shrink...I do like it, but I have no idea how I would un-shrink it." (Elaine)*

*"I wouldn't bother trying to repair those [jeans], no. They're getting to that stage where it's time for them to go. I just think they become shapeless." (Alan)*

*"They offer a lifetime guarantee on all of their products, and that basically means that if something like this happens, to one of their garments [clothing brand], you can return it to them and they have it repaired, and they have these two incredible women who are highly skilled and can pick up these stitches [jumper hole] and repair it." (Janice)*

*"Knitwear and jersey, like t-shirts and things like that, are typical things that I would have high turnover, than, say, woven fabrics. Just because I seem to feel that with a t-shirt, you buy it from a shop, wear it once and the fit is really nice, you wash it once, and then it's done." (Lisa)*

*"It sat in the wardrobe for a long time, and then when I took it out when we were doing the clear out, this has an example of moth holes. So, here you can see that it's quite a big hole here, I can put my finger through it. So, this was just moths hanging about in the wardrobe while it sat there for a few years unworn." (Graham)*

### Theme: Clothing Use – Wear and tear, impact of the body, quality and durability

*"Sportswear, cycling gear, basically [donating to charity]. I went through a phase of buying it, it's [brand] synthetic fabric...They're 100% polyester, machine washable. It was a phase I went through of wearing sports gear, and cycling a lot, and it's not biodegradable at all." (Toby)*

*"It goes to outside of Sainsbury's, there's a deposit area. They're always full. We have gone all different times of the day and night; they're bursting at the seams with clothes. And so, we usually just put them in a bigger plastic bag, and if it rains, they get wet, but we leave them on the side, because there's never a chance to get them in, they're always full." (Sophie)*

*"We get a lot of fly tipping around textile banks" (Local Authority Representative)*

*"Got rid of two bras during lockdown - the straps were all frayed and bits of material was hanging off the cups. Threw them in the bin because they were too worn out for anyone else to use." (Paula)*

*"So, I don't quite understand why the person who is taking it to a charity shop would possibly think that somebody else might want to buy it [badly worn garment], but at the other end, we're not allowing the message to come through that actually we can collect any textile [textile recycling industry], and if it is at all recyclable, it will find a recycling route." (Textile Recycling Industry Expert)*

*"I've got some knitted stuff which is just...this one I don't really know if it's good enough to go to charity. It's too big for me. I'm never quite sure what charity shops really want, or whether they're really annoyed when people give them stuff that they then must dispose of because it's not good enough for the shop." (Morna)*

*"We go through a checking process [manually] and that process...is about the quality of the item. And that's when you do that grading...whether it has holes, rips, tears or whatever. And we produce quite a simple guideline for them [charity shops] to follow, but really, we leave it up to the individual store to decide on their own level of quality." (Revolve Representative)*

*"When you put an item of clothing either in a textile bank or let's say you donate it on to a charity shop, in the case of a charity shop, they'll decide on whether it can be sold in the shop or not, or whether it must be sold out the back end. But it's only about 50% of clothing donated to a shop is actually sold in the shop, and the remainder is sold on [to textile recyclers]." (Textile Recycling Industry Expert)*

*"Me and my husband took an Ikea bag full of clothes [to clothing bank], and we didn't know that the clothes had to be in plastic bags, and we thought that being in plastic bags would be worse because that's more plastic, and then you thought someone would have to deal with plastic on the other side. So, we started putting our items, some of which were in pretty good condition, into this clothing bin, and the sign on it was ripped off that said it had to be in plastic bags. And the janitor for the school yard came out and started yelling at us that we were wasting our time, we shouldn't be putting it in without plastic bags, and when they came to collect it, the people who were collecting it would just take it out of the bin and put it straight into the household waste." (Kiara)*

*"Some of the things I've got are barely worn, to be honest with you, some things are still new with tags. I've worked in retail for so long that I've got so many things, and I've been doing a lot of selling on a local site like Gumtree, it's called the JCB things to sell and free site, and I've had a great reaction from a lot of my things on there." (Pearl)*

# Further Information

The research outlined in this white paper is part of a wider portfolio of research on circularity and clothing. If you would like any further information on this and/or our other research, or to request hard copies of this white paper, please email: [Deirdre.shaw@glasgow.ac.uk](mailto:Deirdre.shaw@glasgow.ac.uk)

Further outputs related to the current research in the form of a film and podcast series can be accessed via the links below.

## **Fabric of Society Film**



<https://youtu.be/oGhOTIRvpxY>

## **Cleaning the Loop Podcast Series**



[https://youtube.com/playlist?list=PLa14ZJ7ZROoa2sTXT\\_LIAxBv\\_ir5rChV8](https://youtube.com/playlist?list=PLa14ZJ7ZROoa2sTXT_LIAxBv_ir5rChV8)