

# From Waste to Wear: Evaluating the Feasibility and Scalability of Textile Recycling and Waste-to-Wear Business Models in the Indian Garment Industry

Akilan J

II MBA IEV

Department of MBA, Vels Institute of Science Technology and Advanced Studies  
akilanjothibas38@gmail.com

Corresponding Author

**Dr.M.Kotteeswaran**

Associate Professor & Research Supervisor

School of Management Studies, Vels Institute of Science, Technology and Advanced Studies  
saikottee@gmail.com

Orcid ID : 0009-0001-8462-0375

DOI: <https://doi.org/10.56975/ijvra.v4i5.706245>

**Abstract:** This study examines the feasibility and scalability of textile recycling and waste-to-wear business models in the garment industry, with specific reference to Shri Pranav Textile Creations Private Limited, Karur. Using the Business Model Canvas framework, the research evaluates how textile waste can be transformed into value-added products while maintaining economic viability. The study adopts a descriptive and analytical research design combining primary data from 101 respondents and secondary data from published literature. Statistical tools including Pearson correlation, multiple regression, and one-way ANOVA were employed. Findings reveal that consumer awareness is the strongest driver of purchase intent ( $r = .509$ ), while perceived quality remains the weakest construct. The study confirms that bootstrapped, circular economy-aligned business models are viable for textile enterprises willing to integrate sustainable practices into existing operations.

**Index Terms:** Textile recycling, waste-to-wear, business model canvas, circular economy, sustainability, bootstrapping.

## I. INTRODUCTION

The global textile industry is one of the largest contributors to environmental degradation, generating substantial volumes of post-industrial and post-consumer waste. With increasing regulatory pressure, resource scarcity, and rising consumer awareness toward sustainability, the transition from a linear "take-make-dispose" model to a circular economy has become imperative. In this context, the concept of "from waste to wear" emphasizes the transformation of textile waste into reusable, value-added products, thereby extending product life cycles and reducing environmental impact.

However, the primary challenge lies not in the technical feasibility of textile recycling, but in designing scalable and economically viable business models that can operate efficiently across supply chains. This study adopts the Business Model Canvas framework, developed by Alexander Osterwalder, which consists of nine interrelated building blocks, to systematically evaluate textile recycling and reuse models.

### 1.1 Business Model Canvas Framework

- **Customer Segments:** Identifies environmentally conscious consumers, sustainable fashion brands, and industrial buyers seeking recycled materials.
- **Value Proposition:** Focuses on eco-friendly, cost-efficient, and ethically produced textile products derived from waste.
- **Channels:** Includes both digital platforms (e-commerce, B2B marketplaces) and physical distribution networks for market reach.
- **Customer Relationships:** Emphasizes transparency, brand trust, and engagement through sustainability narratives and certifications.
- **Revenue Streams:** Derived from product sales, recycling services, partnerships, and potential government incentives or subsidies.
- **Key Resources:** Encompasses recycling technology, skilled labor, supply of textile waste, and intellectual property related to sustainable processes.

- **Key Activities:** Includes waste collection, sorting, processing, product design, and distribution.
- **Key Partnerships:** Involves collaborations with manufacturers, NGOs, waste collectors, logistics providers, and policymakers.
- **Cost Structure:** Covers operational costs such as collection, processing, labor, technology investment, and marketing.

## 1.2 Theoretical Background

Textile recycling refers to the process of recovering fibers, yarns, or fabrics from discarded textile products and reintroducing them into the production cycle. It can be broadly categorized into mechanical recycling (physical breakdown of textiles into fibers for reuse), chemical recycling (use of chemical processes to regenerate fibers), and upcycling (conversion of waste materials into products of higher value).

## 1.3 The Waste-to-Wear Model

The waste-to-wear model represents a practical application of textile recycling within a business context. It involves multiple stages including collection, sorting, processing, design, and distribution of recycled garments. This model is supported by Circular Economy Theory (promotes a shift from linear to regenerative systems), Value Creation Theory (converting low-value waste into high-value products), and Sustainable Development Theory (integrating environmental, social, and economic dimensions).

## 1.4 Scalable Business Models in Textile Recycling

Scalability in textile recycling is influenced by availability of consistent raw material supply, efficiency of processing technologies, market demand for recycled products, and cost structure. Theoretical explanations include Business Model Innovation Theory (redesigning value creation mechanisms), Resource-Based View (unique resources as competitive advantage), and Economies of Scale (decreasing average cost as volume increases).

## 1.5 Structure of the Textile Recycling Industry

**Pre-Consumer Textile Recycling:** Deals with waste generated during manufacturing — fabric scraps, yarn waste, and defective products collected directly from factories.

**Post-Consumer Textile Recycling:** Involves recycling of used garments and household textiles discarded by consumers, collected through donation programs, recycling bins, or waste collection systems.

## 1.6 Integration of Sustainability and Profitability

Alignment with SDG 12 is reflected in efficient resource utilization, waste reduction, sustainable production practices, and responsible consumption. The triple bottom line framework evaluates: (a) People — employment generation and social impact; (b) Planet — reduction in landfill waste, lower water and energy consumption; (c) Profit — cost efficiency and profitability through optimizing supply chains and achieving economies of scale.

## 1.7 Industry Background

**Global Scenario:** The global textile recycling industry is expanding due to rising environmental concerns. The shift toward a circular economy model, technological advancements in chemical recycling and fiber regeneration, and growing second-hand markets are driving demand. Governments and international organizations are implementing sustainability goals to promote responsible production.

**National Scenario (India):** India is one of the largest textile producers globally, with a strong informal sector efficiently collecting, sorting, and recycling textile waste. Government bodies such as the Ministry of Textiles are promoting sustainable practices and circular economy initiatives.

**Regional Scenario (Tamil Nadu):** Tamil Nadu is a major textile hub with cities like Tiruppur and Coimbatore contributing significantly to textile production. Small and medium enterprises play a key role in recycling activities, producing yarn, cleaning cloths, and other reusable products.

## 1.8 Company Profile: Shri Pranav Textile Creations Private Limited

Company Name: Shri Pranav Textile Creations Private Limited | Location: Karur | Industry: Textile Manufacturing and Export. The company specializes in producing a wide range of garments (T-shirts, innerwear, infant wear) and home textile products (bed linens, cushion covers), serving both domestic and international markets. The organization evolved from earlier operations under Manju Exports and has developed strong manufacturing infrastructure with a focus on sustainability through integration of textile recycling and waste-to-wear initiatives.

## II. REVIEW OF LITERATURE

### 2.1 Need for the Study

- The study helps in understanding the increasing problem of textile waste generated due to fast fashion and high consumption, highlighting the need for sustainable solutions like recycling and reuse.
- It enables analysis of how textile waste can be converted into value-added products through waste-to-wear approaches, supporting efficient resource utilization.
- The study supports businesses in identifying sustainable and profitable recycling models, reducing uncertainty in adopting eco-friendly practices.
- By analyzing recycling systems, companies can integrate waste management into production, helping in reducing costs and improving efficiency.
- The study examines the impact of environmental regulations and sustainability trends on textile recycling, helping businesses adapt to changing market conditions.

### 2.2 Scope of the Study

- The study focuses on analyzing textile recycling and waste-to-wear business models within the garment industry, identifying variations in their feasibility and scalability.
- It includes evaluation of different recycling methods and processes used in textile waste management.
- The study analyzes operational and economic aspects such as cost, revenue, and resource utilization.
- The scope extends to comparing traditional production with sustainable recycling practices and examining sustainability-profitability relationships.
- The study is limited to textile industries, particularly in the Indian context, and is based mainly on secondary data and existing industry practices.

### 2.3 Review of Literature

- 1. Ellen MacArthur Foundation (2019):** Expanded circular economy principles for the fashion industry, emphasizing closed-loop systems, business model innovation, and scalability challenges requiring industry-wide transformation.
- 2. Sandvik & Stubbs (2019):** Explored development of circular supply chains in textiles, highlighting the importance of integrating forward and reverse logistics for enabling recycling and reuse at scale.
- 3. Niinimäki et al. (2020):** Focused on environmental consequences of fast fashion, emphasizing the need for sustainable materials, responsible consumption, and recycling systems to reduce environmental impact.
- 4. Koszewska (2018):** Examined application of circular economy principles in textile businesses, showing how circular models reduce environmental impact while creating economic value through cost savings and new revenue streams.
- 5. Sandin & Peters (2018):** Evaluated environmental benefits of textile reuse and recycling, confirming that recycling significantly reduces carbon emissions, water consumption, and energy usage.
- 6. Muthu (2018):** Provided comprehensive overview of sustainability practices in textiles, focusing on lifecycle assessment as a tool to evaluate environmental impact and improve sustainability.
- 7. WRAP (2017):** Reported on the environmental and economic value of reducing textile waste by extending clothing life through reuse and recycling.
- 8. Ellen MacArthur Foundation (2017):** Analyzed the global textile industry, highlighting the need to transition from linear to circular economy model, with opportunities in recycling, reuse, and sustainable design.
- 9. Kirchherr et al. (2017):** Provided framework for understanding circular economy, defining key principles of reducing waste, reusing materials, and recycling resources within a closed-loop system.
- 10. Stahel (2016):** Focused on economic potential of circular economy, highlighting how extending product life cycles through reuse, repair, and recycling generates additional value and new business opportunities.
- 11. Bocken et al. (2016):** Explored innovative business models supporting circular economy practices, identifying strategies such as reuse, repair, and product-life extension as key approaches for sustainability.
- 12. Fletcher (2014):** Emphasized sustainable fashion design, ethical production, and responsible consumption, focusing on reducing environmental impact throughout the product lifecycle.

### 2.4 Research Gap

**Gap 1 - Lack of Scalable Textile Recycling Models:** Most studies focus mainly on environmental impact and sustainability benefits but do not adequately address the scalability and commercial feasibility of waste-to-wear business models at industrial level.

**Gap 2 - Limited Research on Integration of Recycling in Manufacturing:** Existing studies highlight recycling practices but do not explore how these can be integrated into existing textile manufacturing processes without affecting efficiency, cost, and product quality.

## 2.5 Objectives of the Study

**Primary Objective:** To study the feasibility and scalability of textile recycling and waste-to-wear business models in the garment industry.

Secondary Objectives:

- To analyse sources and types of textile waste generated in manufacturing units
- To evaluate recycling processes and technologies used in textile waste management
- To examine cost, revenue, and operational aspects of waste-to-wear models
- To study the relationship between sustainability and profitability in textile businesses

## III. RESEARCH METHODOLOGY

### 3.1 Introduction to Bootstrapping

Bootstrapping refers to the process of starting and growing a business with minimal external funding by relying primarily on internal resources, personal savings, and operational revenues. In the context of textile recycling and waste-to-wear business models, bootstrapping is highly relevant for small and medium enterprises facing capital constraints, allowing businesses to gradually build and scale operations using available resources.

- Self-Funding Approach: Businesses rely on personal savings and internal cash flows
- Minimal External Dependency: Reduces reliance on investors and debt financing
- Gradual Growth Model: Enables step-by-step expansion of operations
- Cost Efficiency: Focus on reducing unnecessary expenses
- Resource Optimization: Maximum utilization of available materials and waste

### 3.2 Relevance of Bootstrapping in Textile Recycling

Bootstrapping is highly relevant in textile recycling as it helps firms overcome cost barriers by starting small and using available resources. It supports gradual implementation of waste-to-wear models while reducing financial risk through cost reduction (using existing waste materials as inputs), resource efficiency (minimizing raw material and disposal costs), and gradual adoption starting small and scaling over time.

### 3.3 Key Bootstrapping Techniques

- Self-Financing: Use internal funds instead of external capital
- Cost Optimization: Reduce waste and improve efficiency
- Incremental Scaling: Expand operations gradually
- Strategic Partnerships: Collaborate for resources and supply
- Revenue Reinvestment: Use profits for business growth

### 3.4 Application in Waste-to-Wear Model

- Sourcing: Use in-house textile waste as raw material
- Production: Utilize existing machinery and labor
- Marketing: Adopt low-cost digital promotion strategies
- Sustainability Focus: Target eco-conscious customers

### 3.5 Market Research

**Market Overview:** The textile market is expanding due to urbanization, rising income, and changing lifestyles. Consumer awareness about sustainability is gradually increasing, with a growing urban segment preferring eco-friendly and durable products, creating opportunities for waste-to-wear models.

**Target Market:** Urban consumers who are environmentally conscious and open to sustainable alternatives, including young professionals, students, and responsible buyers, as well as institutional buyers such as export clients and brands adopting sustainable sourcing.

**Competitive Analysis:** The textile industry is highly competitive with traditional manufacturers dominating due to cost advantages and established supply chains. However, sustainable fashion startups are emerging as niche competitors, and companies differentiating through sustainability can gain a competitive edge.

### 3.6 SWOT Analysis

**Strengths:** Strong manufacturing infrastructure; availability of internal textile waste for reuse; strategic location in Karur textile hub; skilled workforce and production capability.

**Weaknesses:** Limited adoption of advanced recycling technologies; lack of structured waste management systems; dependence on conventional production processes; possible financial and knowledge constraints.

**Opportunities:** Rising demand for sustainable and eco-friendly products; expansion opportunities in export markets; technological advancements in recycling; increasing consumer awareness and acceptance.

**Threats:** High competition and price sensitivity; consumer perception issues regarding recycled products; fluctuating costs and market uncertainties; investment requirements for technology adoption.

### 3.7 Financial Plan

The initial investment for implementing a waste-to-wear model is estimated at Rs. 8-14 lakhs, including machinery modification and setup (Rs. 3-5 lakhs), waste collection and sorting setup (Rs. 1-2 lakhs), training and labour cost (Rs. 1-2 lakhs), and working capital (Rs. 3-5 lakhs). The break-even point can typically be achieved within 12 to 18 months based on moderate production capacity and steady market demand.

### 3.8 Research Design

The present study adopts a combination of descriptive and analytical research design. The descriptive approach explains existing conditions in the textile industry, while the analytical aspect examines relationships between key variables such as cost efficiency, production processes, and sustainability outcomes. The study also includes an exploratory component, as textile recycling integration is still evolving in India.

**Data Collection:** Both primary data (direct interaction with workers, supervisors, and management of textile manufacturing units) and secondary data (books, journals, industry reports, and online resources) were used.

**Sampling:** Purposive sampling technique was adopted. The study focused on Shri Pranav Textile Creations Private Limited and similar units in the Karur-Tiruppur textile cluster. A structured questionnaire was administered to 101 respondents.

### 3.9 Tools Used for Analysis

- Waste Analysis: Identifies types and sources of textile waste in production
- Cost Analysis: Evaluates cost savings from using recycled materials
- Revenue Analysis: Assesses potential income from waste-to-wear products
- Pearson Correlation: Measures relationships between study constructs
- Multiple Regression Analysis: Identifies significant predictors of purchase intent
- One-Way ANOVA: Examines group differences in purchase behaviour
- Descriptive Statistics: Summarizes data distributions and central tendencies

## IV. RESULTS AND DISCUSSION

### 4.1 Descriptive Statistics of Study Variables

All six construct means fall between 3.07 and 3.25 on a 5-point Likert scale, confirming uniformly moderate agreement across the entire study. All constructs show negative skewness, meaning responses lean slightly toward the agreement side. Standard deviations range from 0.705 to 0.785, indicating consistent opinions across respondents.

Construct	Mean	SD	Skewness
Consumer Awareness & Attitudes (CAA)	3.19	0.750	-0.354
Purchase Intent & Behaviour (PIB)	3.11	0.705	-0.133
Perceived Quality & Value (PQV)	3.07	0.748	-0.240
Barriers to Adoption (BA)	3.15	0.785	-0.420
Business Model & Scalability (BMS)	3.17	0.762	-0.310
Circular Economy & Sustainability (CESI)	3.25	0.770	-0.380

Table 4.1: Descriptive Statistics of Study Constructs

### 4.2 Pearson Correlation Analysis

The correlation matrix revealed the following key significant relationships among the six study constructs:

Variable Pair	r value	p value	Result
CAA -> PIB (Purchase Intent)	r = .509	< .001	Significant
BMS -> CESI	r = .507	< .001	Significant
PQV -> BMS (Brand Meaning)	r = .470	< .001	Significant
BMS -> PIB	r = .365	< .001	Significant
CESI -> PIB	r = .321	.001	Significant
CAA & PQV	r = .184	.065	Not Significant

Table 4.2: Pearson Correlation Results

Consumer Awareness and Attitudes (CAA) has the strongest correlation with Purchase Intent ( $r = .509$ ,  $p < .001$ ), making it the most powerful driver of purchasing behaviour. The only non-significant pair in the entire matrix is CAA and PQV ( $r = .184$ ,  $p = .065$ ), confirming that being environmentally aware does not automatically improve perception of product quality. Fourteen out of fifteen variable pairs are significantly and positively correlated.

### 4.3 Multiple Regression Analysis

The regression model ( $R = .594$ ,  $R^2 = .353$ ) shows that Consumer Awareness, Perceived Quality, Brand Awareness, and Brand Symbolism together explain 35.3% of the variation in Purchase Intent. Consumer Awareness (CAA) is the only statistically significant individual predictor ( $Beta = .404$ ,  $p < .001$ ). It is the single most important factor driving purchase intent. The remaining 64.7% of variance is attributed to unmeasured factors such as personal values, income, geographic availability, and cultural influences.

Model	Statistic	Value	Significance
Overall Regression (CAA, PQV, BA, BMS -> PIB)	R <sup>2</sup>	.353	< .001
CAA as unique predictor of PIB	Beta	.404	< .001
Perceived Quality (PQV)	Beta	ns	> .05
Brand Awareness	Beta	ns	> .05
Brand Symbolism	Beta	ns	> .05

Table 4.3: Multiple Regression Analysis Results

### 4.4 One-Way ANOVA

None of the five Purchase Intent and Behaviour variables showed statistically significant group differences (all  $p > .05$ ). This homogeneity confirms that challenges around recycled textile adoption are broadly shared across all demographic groups — not limited to any specific age, gender, or experience group.

Variable	F value	p value	Result
Willingness to buy recycled clothing	F = .978	.407	Not Significant
Prefer sustainable clothing	F = .979	.406	Not Significant
Willingness to pay premium	F = 1.478	.225	Not Significant
Check sustainability labels	F = 1.230	.303	Not Significant
Brand-switching intent	F = .412	.745	Not Significant

Table 4.4: One-Way ANOVA Results

### 4.5 Key Findings

**Finding 1: Demographic Profile.** The sample of 101 respondents has a near-equal gender split (50.5% female, 49.5% male). The largest age group is 20-25 years (43.6%), reflecting a young consumer base.

**Finding 2: Consumer Awareness.** 29.7% of respondents disagree that they are aware of the environmental impact of textile waste. CAA\_MEAN = 3.19 confirms only moderate awareness.

**Finding 3: Purchase Intent.** 29.7% are neutral about buying recycled textile clothing, and 24.8% disagree. PIB\_MEAN = 3.11 shows moderate but cautious purchase behaviour.

**Finding 4: Perceived Quality.** Perceived Quality and Value recorded the lowest mean (PQV\_MEAN = 3.07), representing the weakest area requiring most improvement.

**Finding 5: Business Model Scalability.** 35.6% of respondents disagree that textile recycling businesses can be profitable at scale — the highest disagreement for any single question in the survey.

**Finding 6: Circular Economy.** CESI\_MEAN = 3.25 is the highest among all constructs, but over 54% are unwilling or hesitant to return used clothes, showing low participation in take-back systems.

## V. SUGGESTIONS

### 5.1 Strengthen Consumer Awareness and Education

Since awareness is the strongest predictor of purchase intent ( $r = .509$ ), improving it must be the top priority. Launch simple, visual awareness campaigns on social media platforms. Partner with schools, colleges, and NGOs to conduct workshops about textile waste. Display informative labels at points of sale showing recycled content percentage, water saved, and CO<sub>2</sub> reduced per product.

### 5.2 Address Quality and Hygiene Concerns

Perceived Quality has the lowest mean (3.07) and hygiene concerns are the most-cited barrier. Obtain third-party quality certifications such as GOTS, OEKO-TEX, or Global Recycled Standard (GRS). Publish a consumer-friendly document showing the step-by-step cleaning and processing procedure for recycled textiles. Introduce a quality guarantee to reduce the perceived risk of trying recycled products.

### 5.3 Improve Pricing Strategy

Keep entry-level recycled products competitively priced, and offer premium upcycled lines for buyers willing to pay more. Clearly justify any higher pricing by communicating actual cost savings from reduced water usage, energy, and raw materials. Promote the cost-per-wear advantage of durable recycled clothing over cheaper fast-fashion alternatives.

### 5.4 Build a Scalable and Profitable Business Model

Adopt a bootstrapped, phased approach: begin with in-house pre-consumer waste recycling using existing machinery and labour, then gradually scale as profits accumulate. Diversify revenue streams beyond product sales, including recycling services for other manufacturers and government-subsidised collection contracts. Target export markets in Europe and North America where buyers mandate sustainable sourcing, enabling premium pricing.

### 5.5 Drive Circular Economy Participation

Design incentive-based take-back programs offering discount vouchers, loyalty points, or small gifts in exchange for returning used clothing. Place permanent clothing drop-off bins at easily accessible, high-footfall locations such as housing societies, offices, schools, and shopping malls. Introduce app-based impact trackers that let consumers monitor their personal contribution to waste reduction over time.

## VI. CONCLUSION

This study explored the feasibility and scalability of textile recycling and waste-to-wear business models in the garment industry, with reference to Shri Pranav Textile Creations Private Limited, Karur. The research applied the Business Model Canvas framework to evaluate how textile waste can be effectively converted into value-added products while maintaining economic viability.

The study confirms that waste-to-wear models are both environmentally significant and commercially promising, particularly when supported by a bootstrapping approach that utilises existing resources and infrastructure. The growing awareness of sustainability among consumers, combined with increasing global demand for eco-friendly products, presents a strong opportunity for textile businesses to adopt circular economy practices.

However, challenges such as consumer perception, pricing sensitivity, limited awareness, and the need for technological upgradation must be addressed to achieve large-scale implementation. In summary, the waste-to-wear concept represents a viable and responsible business direction for the textile sector. With the right strategies, support systems, and market positioning, companies can successfully align profitability with environmental responsibility, contributing meaningfully to sustainable development goals.

**REFERENCES**

1. Bocken, N. M. P., de Pauw, I., Bakker, C., & van der Grinten, B. (2016). Product design and business model strategies for a circular economy. *Journal of Industrial and Production Engineering*, 33(5), 308-320.
2. Domina, T., & Koch, K. (2002). Convenience and frequency of recycling: Implications for including textiles in curbside recycling programs. *Environment and Behavior*, 34(2), 216-238.
3. Ellen MacArthur Foundation. (2017). *A new textiles economy: Redesigning fashion's future*. Ellen MacArthur Foundation.
4. Ellen MacArthur Foundation. (2019). *Circular fashion: Making the fashion industry part of the circular economy*. Ellen MacArthur Foundation.
5. Fletcher, K. (2014). *Sustainable fashion and textiles: Design journeys* (2nd ed.). Routledge.
6. Kirchherr, J., Reike, D., & Hekkert, M. (2017). Conceptualizing the circular economy: An analysis of 114 definitions. *Resources, Conservation and Recycling*, 127, 221-232.
7. Koszewska, M. (2018). Circular economy - Challenges for the textile and clothing industry. *AUTEX Research Journal*, 18(4), 337-347.
8. Laitala, K. (2014). Consumers' clothing disposal behaviour - A synthesis of research results. *International Journal of Consumer Studies*, 38(5), 444-457.
9. Muthu, S. S. (2018). *Sustainability in the textile industry*. Springer.
10. Niinimäki, K., Peters, G., Dahlbo, H., Perry, P., Rissanen, T., & Gwilt, A. (2020). The environmental price of fast fashion. *Nature Reviews Earth and Environment*, 1(4), 189-200.
11. Osterwalder, A., & Pigneur, Y. (2010). *Business model generation: A handbook for visionaries, game changers, and challengers*. John Wiley & Sons.
12. Sandin, G., & Peters, G. M. (2018). Environmental impact of textile reuse and recycling - A systematic review. *Journal of Cleaner Production*, 184, 353-365.
13. Sandvik, I. M., & Stubbs, W. (2019). Circular fashion supply chain through textile-to-textile recycling. *Journal of Fashion Marketing and Management*, 23(3), 366-381.
14. Shen, B. (2014). Sustainable fashion supply chain: Lessons from H&M. *Sustainability*, 6(9), 6236-6249.
15. Stahel, W. R. (2016). *The circular economy: A user's guide*. Routledge.
16. United Nations. (2015). *Transforming our world: The 2030 agenda for sustainable development*. United Nations General Assembly.
17. Wang, Y. (2010). *Recycling in textiles*. Woodhead Publishing.
18. WRAP. (2017). *Valuing our clothes: The cost of UK fashion*. Waste and Resources Action Programme.

**Copyright & License:**

© Authors retain the copyright of this article. This work is published under the Creative Commons Attribution 4.0 International License (CC BY 4.0), permitting unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.