

# **Final Report**

## **Sustainability, Cricket Gear, Clothing and Apparel: Report on Cricket Clothing**

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**Professor Martin Charter and Joanna Czutkowna**

**The Centre for Sustainable Design®, Business School for the Creative  
Industries, University for the Creative Arts**

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## **Disclaimer**

This open access research has been conducted by the authors in order to raise awareness of sustainability issues relating to cricket gear which may impact on the sport. It should not be used for any other purpose.

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## Contents

Executive Summary.....	7
Section 1 Background .....	11
<b>Introduction .....</b>	<b>11</b>
<b>1.1 This document.....</b>	<b>11</b>
<b>1.2 Report structure.....</b>	<b>11</b>
<b>1.3 Background.....</b>	<b>11</b>
<b>1.4 Purpose.....</b>	<b>12</b>
<b>1.5 Definitions .....</b>	<b>12</b>
<b>1.6 Scope .....</b>	<b>13</b>
<b>1.7 Methodology .....</b>	<b>13</b>
<b>1.8 Confidentiality .....</b>	<b>14</b>
Section 2 Materials .....	14
<b>2.1 Introduction .....</b>	<b>14</b>
<b>2.2 Materials for player performance .....</b>	<b>14</b>
<b>2.3 Polyester.....</b>	<b>14</b>
<b>2.4 Coloured versus White clothing .....</b>	<b>15</b>
<b>2.5 Sublimation printing.....</b>	<b>16</b>
<b>2.6 Issues with virgin polyester.....</b>	<b>16</b>
<b>2.7 Recycled polyester .....</b>	<b>16</b>
<b>2.8 Commercial Alternatives to polyester .....</b>	<b>17</b>
2.8.1 Innovation.....	17
2.8.2 Natural Fibres.....	18
2.8.3 Mixed fibres .....	20
<b>2.9 Legal requirements.....</b>	<b>21</b>
<b>2.10 Closed Loop.....</b>	<b>21</b>
<b>2.11 A case study from the clothing sector.....</b>	<b>22</b>
<b>2.12 Summary.....</b>	<b>22</b>
Section 3 Supply Chain.....	23
<b>3.1 Introduction .....</b>	<b>23</b>
<b>3.2 Opaque supply chains.....</b>	<b>23</b>
<b>3.3 A change in retail habits .....</b>	<b>24</b>
<b>3.4 Production methods.....</b>	<b>24</b>
<b>3.5 Country of origin .....</b>	<b>24</b>
<b>3.6 Covid impacts and supply chain ethics .....</b>	<b>25</b>
<b>3.7 Extended producer responsibility.....</b>	<b>26</b>

<b>3.8 Outsourced production units .....</b>	<b>26</b>
<b>3.9 UK production .....</b>	<b>26</b>
<b>3.10 Issues within supply chains .....</b>	<b>27</b>
<b>3.11 Audits .....</b>	<b>28</b>
<b>3.12 Blockchain to support transparency .....</b>	<b>28</b>
<b>3.13 Supply chain willingness towards sustainability.....</b>	<b>29</b>
<b>3.14 Summary.....</b>	<b>29</b>
<b>Section 4 Factors influencing Sustainability in Cricket .....</b>	<b>30</b>
<b>4.1 Introduction .....</b>	<b>30</b>
<b>4.2 Sustainability awareness .....</b>	<b>30</b>
<b>4.3 Climate change.....</b>	<b>31</b>
<b>4.4 Sponsorship and logos.....</b>	<b>31</b>
4.4.1 National team sponsorship .....	32
<b>4.5 Sustainability guidelines by governing bodies.....</b>	<b>32</b>
<b>4.6 Clothing regulations in play .....</b>	<b>33</b>
<b>4.7 Barriers to Innovation.....</b>	<b>34</b>
<b>4.8 Affordability.....</b>	<b>35</b>
<b>4.9 Margin .....</b>	<b>37</b>
<b>4.10 Women and girls .....</b>	<b>37</b>
<b>4.11 Coloured clothing .....</b>	<b>37</b>
<b>4.12 Summary.....</b>	<b>38</b>
<b>Section 5 Use Phase .....</b>	<b>38</b>
<b>5.1 Introduction .....</b>	<b>38</b>
<b>5.2 Customer Communication on Product Maintenance.....</b>	<b>38</b>
<b>5.3 Staining.....</b>	<b>40</b>
<b>5.4 Repair .....</b>	<b>40</b>
<b>5.5 Hand me downs-informal sharing networks .....</b>	<b>41</b>
<b>5.6 Reuse Schemes.....</b>	<b>42</b>
5.6.1 Lord’s Taverners Sports Kit Recycling Programme (LTSKR).....	42
5.6.2 Cricket Kindness .....	45
5.6.3 Bat for a Chance .....	47
5.6.4 Play it Again Sport .....	47
5.6.5 Issues with donations.....	47
5.6.6 Networks .....	48
5.6.7 Social value.....	48
5.6.8 Funding.....	49
5.6.9 Purpose-driven .....	49
<b>5.7 Resale .....</b>	<b>49</b>
5.7.1 Position in the UK.....	49
5.7.2 Resale and disposal in overseas markets .....	51

<b>5.8 Garment to Garment Recycling</b> .....	<b>51</b>
<b>5.9 Disposal</b> .....	<b>51</b>
<b>5.10 Summary</b> .....	<b>52</b>
Section 6 Conclusions and Recommendations .....	53
<b>6.1 Research Gaps</b> .....	<b>53</b>
<b>6.2 Overall Findings</b> .....	<b>53</b>
6.2.1 Materials .....	53
6.2.2 Production.....	53
6.2.3 Factors influencing sustainability in cricket .....	54
6.2.4 Use phase .....	54
<b>6.3 Conclusions</b> .....	<b>55</b>
<b>6.4 Recommendations</b> .....	<b>56</b>
Appendix 1: Green Claims Code .....	57
Appendix 2: Images - Various .....	58
<b>Images from Decathlon site visit</b> .....	<b>58</b>
Appendix 3: PASIC (Platform for Accelerating Sustainable Innovation Cricket) .....	61

## List of Figures and Tables

Figure 1 Screenshot from www.Asket.com showing levels of traceability within their supply chain on a product level.....	22
Figure 2 shows the country of origin, price comparison and composition found on care labels for adult and junior cricket clothing .....	25
Figure 3 England Cricket Team list of kit and Shirt sponsors.....	32
Figure 4 Image of Gray Nicholls off-cut glove.....	35
Figure 5 Screenshot of FLX kids short sleeve cricket shirt.....	36
Figure 6 Image shows a game being played with one team wearing white clothing and the other wearing coloured. ....	38
Figure 7 Comparison of cricket shirt details shown on product page across multiple retailers. ....	39
Figure 8 Screenshot from H&M website Take Care section.....	40
Figure 9 Shows ECB All Stars T Shirt with Personalised name, creating a barrier for reuse. ..	41
Figure 10 The white pins indicate collection hubs for LTSKR .....	42
Figure 11 LTSKR Collection standards document. ....	43
Figure 12 Image showing the process of Cricket Kindness collection and reuse.....	46
Figure 13 Image shows condition of cricket equipment for sale in a Bolton Hospice charity shop on May 29 <sup>th</sup> , 2022. ....	50

Figure 14 Image shows clothes dumped in Chile’s Atacama Desert, image from the Guardian Instagram page. ....	51
Figure 15 Clothes buried in the sand in Ghana.....	52
Figure 16 Junior cricket kit in Decathlon store .....	58
Figure 17 Adults cricket kit in Decathlon store.....	58
Figure 18 Kookaburra Care label.....	59
Figure 19 Gunn and Moore Care label.....	59
Figure 20 FLX Care Label .....	59
Figure 21 Decathlon’s own brand junior shirt .....	60
Figure 22 Gunn and Moore junior shirt .....	60
Figure 23 Shows the carbon footprint for the FLX Decathlon shirt as shown on its online store. ....	60

## Executive Summary

This document is part of The Centre for Sustainable Design<sup>®</sup> (CfSD)<sup>1</sup> investigation into sustainable cricket gear and clothing. This report will focus on cricket clothing, defined as cricket shirts, sweaters, trousers and caps/sunhats. It is a final report based on desk research, stakeholder interviews and site visits. The prime focus of the report is primarily on England and Wales and the amateur<sup>2</sup> game.

## Findings

### Overall

- There is a lack of data on the size of the cricket clothing market in the UK.
- Supply chains are very opaque, and transparency around where and how goods are made has been difficult to find.
- Growth in world participation will increase demand for cricket clothing.
- Cricket 'whites' have traditionally been the norm for the majority of amateur cricket.
- The volume of coloured cricket clothing worn in amateur and professional games is increasing compared to cricket whites.
- There is a lack of data on what happens to cricket clothing when a player has finished with it, e.g., at the end of the (1<sup>st</sup>) use of the lifecycle.
- Technical and performance barriers regarding material and regulations within the game can inhibit sustainability efforts.

### Materials

- Most cricket clothing is made from virgin polyester on an amateur level or polyester and elastane on a professional level.
- Printing limitations and performance demands limit the materials from which cricket clothing can be made.
- Innovation within material choice has been limited. However, Warwickshire County Cricket Club trialled a bamboo polyester mix cricket shirt, and cricket shirts made from recycled polyester have been worn on an ad hoc basis at a professional level in some countries.
- Coloured clothing requires sublimation printing, which needs a high percentage of polyester to print on successfully.

### Production

- Two types of production strategies have been identified,
  1. Stock production: mainly manufactured in Asia, generally large quantities committed to in advance, primarily white polyester cricket clothing.
  2. On-demand production tends to be more locally sourced, coloured clothing, with some production in the UK and additional finishing such as printing and embroidery done locally.

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<sup>1</sup> The Centre for Sustainable Design<sup>®</sup> was established in 1995 and is based at Business School for the Creative Industries at the University for the Creative Arts

<sup>2</sup> People who play the game on a recreational basis

- China, Bangladesh, and India have been identified as countries for stock production. In comparison, the UK and Pakistan have been identified as manufacturing on-demand production.
- No agreed auditing tool is used across the sector to monitor social and environmental standards in production units.

### **Use**

- No data has been found on the impacts in the use phase of cricket clothing.
- It is unknown how long players usually use their cricket clothing and the reasons for disposal.
- Changes in sponsorship and players require teams to update clothing more frequently within the professional game.
- There is little guidance on how to care for, extend use, and sustainably dispose of cricket clothing. This information would benefit amateur players and consumers.

### **Reuse**

- A limited number of reuse schemes exist. Four programmes have been identified, the most well-known being the Lord's Taverners Sports Kit Recycling Scheme.
- Donations to these reuse schemes are a mix of excess stock<sup>3</sup> from brands and also clothing that players have used and are now finished with.
- There appears to be little re-use of excess stock or end of (1<sup>st</sup>) life cricket clothing in England and Wales, with a lot of items being sent overseas.
- Excess stock may need to be sent abroad due to contractual obligations agreed with sports brands or demands from overseas players.
- The condition of used clothing donated varies with some items visibility heavily used. This can affect reuse opportunities, especially if players have a preference for nearly new clothing.
- Sponsorship and club logos create a barrier to reuse by other clubs
- Informal hand-me-down sharing exists; however, this is difficult to quantify.
- There has been an increasing demand for personal ownership of cricket gear and clothing over the past 20 years. Previously a shared club kitbag may have provided items for players to use while playing at the club.

### **Disposal**

- No research has been found on the disposal of cricket clothing.
- It is assumed that cricket clothing is either disposed of within domestic waste, given to textile recycling banks, donated to charity shops or donated to one of the reuse programmes identified.
- It is unlikely cricket clothing is sorted specifically from other clothing, and therefore it is likely to follow a similar disposal route as all other clothing.

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<sup>3</sup> Excess stock is usually unsold inventory that has never been worn. It may still have all packaging and labelling intact.



- Generally, a high percentage of clothing is sent to 3<sup>rd</sup> markets for second-hand sale. Some of these markets are at capacity, and a significant portion of clothing is considered waste and sent to landfills.
- Some initial indications are that good quality cricket and other sports clothing may be re-used in 3<sup>rd</sup> markets as leisure wear.

### Conclusions

- With over 300 million people estimated to play cricket worldwide and 300,000 in England and Wales, cricket has a significant environmental and social impact. There is a responsibility for the game to identify ways to reduce those impacts and explore new sustainable innovation opportunities
- The game of cricket is going through significant change, and the ‘white ball’ formats are bringing in more coloured clothing in the professional game. There are indications that more coloured clothing is starting to be worn in amateur men’s and women’s games.
- As identified in the BASIS (British Association for Sustainable in Sport) Hit for Six report<sup>4</sup> cricket will be one of the sports most affected by climate change, and sustainability is becoming increasingly important to many stakeholders. Much of the focus has been on stadia, and further investigation is needed into how to increase sustainability in cricket clothing and other gear.
- There are significant gaps in research related to the development, use, reuse, repair, recycling and disposal of cricket clothing.
- There has been limited innovation in the materials used to make cricket clothing, with virgin polyester being the dominant fibre.
- The minimal reuse infrastructure seems to be geared to distribute clothing and other gear overseas, with limited reuse within England and Wales.
- A lack of transparency within the supply chain creates a barrier to a greater understanding of the social and environmental impacts of cricket clothing production.
- There is a significant lack of knowledge over what happens to the end of (1<sup>st</sup>) use clothing. There are indications that some of it is reused through the limited number of reuse schemes.
- With only 1% of clothing (generally) being recycled, it can be assumed that only a tiny fraction of cricket clothing is recycled.

### Recommendations

- Establish a stakeholder working group to focus on sustainability (and within it circularity) of cricket clothing that aims to clearly understand data gaps and barriers to reuse, repair, and recycling. Stakeholders to be briefed to produce a roadmap that aim to increase sustainability considerations in cricket clothing. This might be aligned with DEFRA policy activities related to the potential introduction of Extended Producer Responsibility (EPR) and eco-design for the clothing and textiles sectors.

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<sup>4</sup> <https://basis.org.uk/resource/hit-for-six/>

- Set up a forum to understand the sustainability (and within it circularity) of clothing across sports sectors to determine good practices and barriers that might be transferred between sports in cricket.
- Cricket brands to commit to greater transparency concerning their supply chains by publishing country of origin for their garments (and where possible, details of the manufacturing units used) on their websites.
- Sports clothing stakeholders to collaborate, sharing best practice e.g. FIFA Pledge to support the cricket sector develop and build on existing sustainability frameworks.
- Conduct additional research into the research gaps identified within this report, to develop greater understanding and deeper investigate opportunities identified.
- Accelerate material innovation and recycling infrastructure development related to cricket clothing.
- Develop alternative ways to show sponsorship and cricket clothing to give it a longer usable life could reduce the volume of discarded clothing.
- Explore sustainable innovation and R&D happening in clothing, fashion and sectors, with a view to knowledge transfer to cricket clothing. For example, technologies and processes related to removing badges, printed logos and sponsorship on cricket clothing.

## Section 1 Background

### Introduction

Initial research by The Centre for Sustainable design® (CfSD) has found that there is increasing recognition of the potential impacts of climate change and other sustainability issues related to cricket gear and clothing. A recent report highlighted that cricket is likely to be the sport most affected by climate change<sup>5</sup>. However, much of the sustainability focus has been on venues and playing conditions. There has been little consideration of sustainability issues relating to cricket clothing and gear.

### 1.1 This document

This report is part of an investigation into cricket clothing and equipment sustainability. This document will specifically focus on cricket clothing, defined as cricket shirts, sweaters, trousers and caps/sun hats. A complimentary report focuses specifically on sustainability, cricket gear, structure and governance issues. Both documents serve as a partner to each other. The prime focus of the report is primarily on England and Wales and amateur game.

### 1.2 Report structure

This report consists of the following:

- Section 1 provides the background, purpose, definitions and scope of the overall report.
- Section 2 covers the findings on the issues related to the materials used and potential alternatives to make cricket clothing.
- Section 3 covers the findings on the supply chain, including country of origin, transparency issues and auditing.
- Section 4 covers a range of factors influencing the sustainability of cricket clothing, including affordability and sponsorship.
- Section 5 covers the findings on the repair, reuse, resale and recycling of cricket clothing.
- Section 6 concludes the report, identifies opportunities and highlights recommendations.

Further details are provided in the Appendix.

### 1.3 Background

A small number of brands have dominated the UK cricket clothing market. Due to market size, brand market share and confidentiality concerns, there has been opacity within production markets and supply chains.

There has been a significant shift to online retail, with many amateur players buying clothing online. There are indications that 'bricks and mortar' retail sales of cricket clothing and gear have declined, and sales are primarily through larger sports retailers. For example, Decathlon and Sports direct. There are also indications that many cricket gear distributors have stopped supplying clothing. Many cricket brands do not specify where their products are made on their websites, so it is difficult for consumers to know from where the clothing originates.

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<sup>5</sup> <https://basis.org.uk/resource/hit-for-six/>

There are potential affordability issues for some amateur players due to the amount of cricket clothing and equipment required in play the game: this is being presently intensified by the 'cost of living' crisis. The demand for low price cricket clothing has enabled retailers driving competitively low clothing prices, e.g., Decathlon, to grow in the market.

There has been little push for innovation within cricket clothing, especially at an amateur level, mainly due to price pressures. With 80% of environmental impact factored in at the design stage, it is vital for brands to start affecting change at this stage. Price implications most often dictate material and production decisions and sustainability improvements usually have to be weighed against the costs involved for brands to determine if they are commercially viable.

#### **1.4 Purpose**

The objectives of the research are:

- Understand sustainability issues related to the materials, production and use phase of cricket clothing in the amateur and professional game.
- Investigate sustainable innovation initiatives related to cricket clothing in the amateur and professional game.
- Consider sustainable opportunities related to cricket clothing in the amateur and professional game in the UK.

The report will focus on the materials used in cricket clothing, supply chains, sustainability in the use phase and opportunities for reuse within the amateur and professional games.

#### **1.5 Definitions**

**Clothing** - In the England and Wales Cricket Board (ECB) regulations, clothing items listed for approval in the professional game refer to shirts, sweaters, trousers and caps/sunhats<sup>6</sup>. For this report, 'clothing' will be defined as the same. While other clothing, such as base layer garments, are referred to in the ECB clothing and equipment regulations, these shall fall outside this report's definition. Cricket footwear will be addressed separately in section 1.6 due to the significantly different materials and supply chains used compared to cricket clothing.

**Equipment** is defined as bats, balls and protective equipment, including gloves and pads. While equipment is discussed within this report, separating these items from clothing is essential as they use different materials, require different safety standards, and have other opportunities for reuse. Equipment is out of scope for this report, and the aforementioned complementary report focuses specifically on issues related to sustainability and cricket gear.

**Amateur** refers to people who play the game on a recreational basis.

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<sup>6</sup> Country blazers are referred to in the ECB clothing and equipment regulations but only for captains at the coin toss and are therefore considered out of the scope of this report.

## **1.6 Scope**

The scope of this report will cover issues related to the production and manufacturing of cricket clothing. It will not focus on a country-by-country analysis of the social and environmental issues related to individual countries of origin. As data is exceptionally limited on the volume and location of where cricket clothing is manufactured, it remains challenging to quantify the geographical impacts on each individual country.

Due to the limited data available, it remains unclear where cricket clothing ends up when players have finished with it. It is assumed that cricket clothing is treated as all other clothing. Some of the figures available relate to the clothing industry overall and are not specific to cricket clothing; this will be made clear in these cases.

More research is needed to categorise the impacts by professional and amateur level within the game. For this report, it will be assumed that professional players have the ECB supply them at an international level or by County Cricket Clubs or franchises, and/or sponsors at a national/regional level. Professional County Cricket Clubs adhering to the ECB clothing and equipment regulations may buy 'blank' shirts and trousers, which are then embroidered or printed with club names and logos in adherence to ECB logo size and location regulations. Players at an amateur level will generally have to buy their clothing. Some leagues or clubs may have clothing provided by the club itself or sponsored by a local company. With over 6500 clubs, more research is needed to map the procurement responsibilities and clothing ownership at the professional and amateur levels. This is an area for future research to understand how cricket clothing is bought and how frameworks and guidelines could support more sustainable procurement practices and decision-making.

Due to the different materials and supply chains required for cricket footwear, footwear will not be covered in-depth in this report and is an area for further research. Cricket shoes are made from leather or a synthetic leather alternative. The new wave of natural-based alternatives to leather may offer an opportunity for innovation. The environmental impact of leather, synthetic, and natural-based leather alternatives for cricket footwear is an area for further research. Cricket shoes also have metal spikes screwed into the shoe's sole. The complexity of these components and their life cycle impact merit further investigation.

## **1.7 Methodology**

The research on cricket clothing has been conducted in parallel to ongoing research into cricket equipment. The focus has been on England and Wales while considering the global context. The work for this final report has been based on desk research using published and unpublished sources, primary interviews and site visits.

There is little published research on cricket clothing sustainability or circularity. Much of the research referenced in the report was not from formal journals but instead found on specialist clothing, sports or sustainability websites. Due to the lack of specific case studies in cricket clothing, case studies from other clothing sectors have been included as relevant examples to demonstrate initiatives that could be applied to cricket clothing and the industry.

## **1.8 Confidentiality**

During this research, a series of interviews were held with people within the cricket sector. Due to confidentiality, most information has been anonymised, and the term stakeholder has been used to protect identities.

The authors would like to thank all contributors who shared information during online interviews and site visits.

## **Section 2 Materials**

### **2.1 Introduction**

This section details the findings on materials used to make cricket clothing. Polyester is the dominant material used, derived from fossil fuels it has long term sustainability implications. The printing technique used on cricket shirts requires predominantly a polyester base, so material innovation faces technical barriers. To date, a move in the overall clothing market towards replacing virgin polyester with recycled polyester has not been implemented at scale in cricket in England and Wales; this may be driven by a lack of cost adequate recycling infrastructure available at a commercial scale.

Material choice is one of the most critical factors in determining how sustainable cricket clothing can be. However, in the professional game, performance dictates the materials used, and the price is usually seen as the predominant factor in the amateur game. Sustainability may be much less of a priority compared to cost and performance. Material composition is the main factor in determining if clothes can be recycled and how durable garments are when worn; it is vital that these factors are considered in the design phase, and they will have a significant impact on the use, reuse and disposal phase.

### **2.2 Materials for player performance**

The primary driver for fabric choice is usually player performance in the professional game. Increased performance may be enhanced by adding additional finishes to the fabrics, which could be cooling or stain resistant. These are usually chemical-based, and the sustainable impacts of these chemicals need to be further investigated. These added finishes can also add complexities to recyclability. Ultimately moving to more sustainable fabrics will only be commercially achieved if they can deliver the same, if not increased performance benefits to the player, or if they can achieve the same or lower costs than the current fabrics being used.

### **2.3 Polyester**

The majority of cricket shirts are made from polyester. This is the case for white and coloured clothing at professional and amateur levels. Some of the clothing at the professional level may also contain a small percentage of elastane (also derived from fossil fuels) for performance reasons. (Polyester is generally at least 75% of the material blend.) Sportswear as a whole is heavily reliant on polyester.

Polyester is used for a variety of reasons,

- It has high functionality, which is needed for professional sports
- Multiple finishes can be applied, which can help with factors such as keeping the player cool and absorbing perspiration.
- It is a very affordable material

- It is available in multiple production markets.
- It is easy to care for in the use phase, with customers being able to wash this easily in a washing machine.

#### **2.4 Coloured versus White clothing**

Polyester is also used in coloured clothing for technical reasons, to achieve the bright, distinctive colours needed for tournaments such as the T20. This is due to the printing technique used called sublimation printing<sup>7</sup> which requires a majority polyester blend to print on. It is predicted that the volume of coloured clothing will grow due to new formats such as the Hundred and increasing participation in the women's game, these formats influence the amateur game. The ECB All Stars<sup>8</sup> and Dynamos<sup>9</sup> programmes<sup>10</sup> give young players a coloured shirt when signing up (See Section 5.5). Stakeholders have commented that the bright clothing engages children and is necessary to encourage young people's participation in the game.

In the professional game, formats such as T20 and the Hundred specify coloured clothing in contrast to test cricket and county cricket, which specifies white clothing. The debate over the growth or decline of the game's different formats is outside this report's scope. Still, an increase in these new formats may drive a switch to coloured clothing at an amateur level. Women and girls also show an increasing preference for coloured clothing over white clothing<sup>11</sup>. However, in women's test cricket white clothing is used and is viewed as a 'badge of honour'.

While this report focuses on England and Wales, the importance of the IPL, the Indian Premier League, must be noted. With India being one of the most important markets for cricket, it has an influence globally. With T20 being a key format for the Indian market with players wearing coloured clothing, this could drive a move towards coloured clothing globally in the amateur game.

In the Scottish Eastern and Western ECB Premier Divisions in England, they have the option to play in coloured clothing instead of whites.

*"The clubs wanted a change to increase the appeal of club cricket for younger cricketers. Coloured kit moves towards replicating what we see at the World Cup and Franchise competitions around the world."*<sup>12</sup> Bob MacFarlane – Chairman of East League Management Group

The lifecycle environmental issues associated with the production of coloured cricket clothing compared to white cricket clothing needs further research. For example, due to the impact of

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<sup>7</sup> Sublimation printing uses specialised paper fixed to the fabric under heat which enables the inks to transfer across to the fabric.

<sup>8</sup> <https://www.ecb.co.uk/play/all-stars>

<sup>9</sup> <https://www.ecb.co.uk/play/dynamoscricquet>

<sup>10</sup> The ECB All-stars is for children aged 5-8 aimed to introduce them to cricket. From aged 8 children progress to the ECB Dynamos program.

<sup>11</sup> <https://www.independent.co.uk/life-style/women/cricket-white-gear-women-period-b2115926.html>

<sup>12</sup> <https://www.cricketscotland.com/premier-leagues-go-pink/>

the additional dyeing process, coloured clothing is perceived as more damaging to the environment.

## **2.5 Sublimation printing**

Sublimation printing is the leading printing technique for coloured shirts; the need for such bright colours can create a barrier to changing the fabric compositions of shirts. Sublimation printing is the preferred method for colourful shirts due to its speed, quality of finish, depth of colour achieved and comparable costs to other print methods. Whilst white clothing has traditionally been worn for the amateur game, there are indications that wearing coloured clothing may be increasing. The environmental implications of this need to be better understood.

## **2.6 Issues with virgin polyester**

The main environmental issue associated with virgin polyester is that it is a synthetic material derived from petroleum and relies on oil for its production. With increasing concern over the use of fossil fuels, many see polyester as inherently unsustainable.

Polyester also sheds microfibres when washed, and thus microplastics are released from the garment; this is evident during the wash cycle when up to 700,000 microfibers can be released in a single load of laundry. Microplastics have been found in almost all regions on earth and have recently been found in the blood<sup>13</sup> for the first time. Microfibres are discussed more in sections 2.7 and 5.2.

The global polyester fibre market was valued at over USD 90 billion in 2020<sup>14</sup>. Polyester holds a significant share of the overall clothing materials market and is the dominant material used in sportswear. The sustainability issues associated with polyester are faced by multiple sportswear sectors and are not unique to cricket.

## **2.7 Recycled polyester**

Recycled polyester is seen as a commercial alternative to virgin polyester. Recycled polyester is an established technology, first adopted by brands pioneering sustainability in the 1990s. Most recycled polyester fabric is derived from PET plastic bottles<sup>15</sup>. Although recycled polyester is commercially available, it has an increased cost compared to virgin polyester. The price difference can depend on the availability of PET plastic bottles in the market and can fluctuate. At the time of writing, stakeholders have shared that they have seen issues with the availability of recycled polyester and that prices can be up to 25% higher than virgin polyester.

Due to the increased awareness of sustainability across all sectors, recycling mills have faced increased demand. Chandru Wadhwanu, Joint Managing Director of a primary recycling plant

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<sup>13</sup> <https://www.ecotextile.com/2022032429124/materials-production-news/scientists-find-microplastics-in-human-blood.html>

<sup>14</sup> <https://www.gminsights.com/industry-analysis/polyester-fiber-market#:~:text=Global%20Polyester%20Fiber%20Market%20size,with%20shifting%20consumer%20preferences%20for>

<sup>15</sup> [https://textileexchange.org/wp-content/uploads/2020/06/Textile-Exchange\\_PREFERRED-Fiber-Material-Market-Report\\_2020.pdf](https://textileexchange.org/wp-content/uploads/2020/06/Textile-Exchange_PREFERRED-Fiber-Material-Market-Report_2020.pdf)



in Africa, shared that large drinks organisations increasingly want to use their old PET bottles to make new plastic bottles to achieve closed-loop recycling and meet company sustainability targets. This limits the availability of bottles that the clothing sector can use. As recycled polyester fabric demand grows, there have been suggestions that new PET bottles are being produced just to be made into polyester fibres so that retailers can brand their garments 'recycled'. Social issues are associated with the waste collection for PET bottles, and ensuring workers are fairly paid and treated ethically is challenging to audit.

There are a few examples of cricket shirts being made from recycled polyester. India's 2015 cricket team clothing produced by Nike was worn for a tri-series against Australia and England, and then the World Cup. It was manufactured using an average of 33 plastic bottles to make each set (one shirt and one trouser). A spokesperson referenced the clothing's stretchability and moisture-retaining properties while sharing that using recycled polyester showed the team's effort to conserve the environment and be socially responsible.

Another example is the Sri Lankans team's clothing for the ICC World Cup 2019, made from upcycled waste plastic collected from the beaches of Sri Lanka<sup>16</sup>. The equivalent of 30,000 plastic bottles were used. The 2021 T20 Sri Lankan team shirts were also made from recycled polyester<sup>17</sup> and are an example that the high-performance demands required of professional clothing can still be achieved using recycled materials. However, even though clothing using recycled polymers can be seen as more sustainable as it is not using virgin resources, it does not avoid the problem of microfibres and microplastics.

While a transition from virgin polyester to recycled polyester is increasing in other parts of the clothing sector, it has not yet been implemented at scale within cricket clothing. Further research is needed to understand all the reasons for this. The feedback from stakeholders indicated it was due to the increased costs associated.

Biobased polyesters are in development but represent less than 1% of total polyester fibre production. More research is needed to discover if they can be a commercial alternative in the future.

## **2.8 Commercial Alternatives to polyester**

Due to multiple factors listed in section 2.3, polyester has dominated the sportswear market, while alternatives exist, many cannot compete on a price or performance level. Fibres often need to be blended together to achieve the desired strength and durability. Innovation will be necessary for the development of new materials which can compete with polyester.

### **2.8.1 Innovation**

There are multiple sustainable innovations in development, using unique materials such as seaweed, coffee and algae. For example, new materials from food and food waste, such as Pinatex - made from pineapples, may have future applications for products such as gloves or shoes. While these materials may offer massive potential for the future, many are not scaled

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<sup>16</sup> <https://interplasinsights.com/plastics-materials/sri-lanka-cricket-unveils-icc-world-cup-2019-jersey-made-fro/>

<sup>17</sup> <https://apparelresources.com/business-news/manufacturing/sri-lankan-t20-wc-2021-jerseys-made-recycled-plastic-waste-mas-holdings-joined-hands-supply-chain-partners-produce/>

to a commercial level or are available at a price to competitively match the existing materials being used. Further research is needed to monitor the development of this new wave of materials and assess their material properties in regard to those required for player performance.

Other fibre blends can be considered; however, it is essential to note that all fibres can have issues with their supply chains and social and environmental impacts.

## **2.8.2 Natural Fibres**

Natural fibres are often seen as a more sustainable choice. However, it is essential to consider the full life cycle of these fibres and the impacts they bring. The impacts of cotton and wool will be considered.

### **2.8.2.1 Cotton**

Cotton has been used in cricket shirts in the past and is still used for some shirts today<sup>18</sup>, albeit through higher-end cricket brands. Cotton is highly water-intensive to grow and, as such, can score poorly on some sustainability tools due to its high-water usage and land needs. While the debate on the volume and impact of pesticides and insecticides continues<sup>19</sup>, conventional cotton relies on chemicals to keep yields and supply high.

There have been recent social issues around cotton grown in the Xinjiang region, with many brands boycotting Xinjiang cotton, an area responsible for providing 20% of the world's cotton<sup>20</sup>. There have also been social issues associated with cotton in the past, for example, in India due to seed monopolies and debt incurred by farmers.

*“More than 270,000 Indian cotton farmers have killed themselves since 1995. Campaigners say a contributing factor may be the high price of genetically modified seeds flooding the market, piling pressure on poorly paid growers, and forcing many into a cycle of unmanageable debt.”<sup>21</sup>*

These issues and consumers' growing awareness have seen a considerable increase in the demand for organic cotton. However, limited land is available, and organic cotton does not produce the same high yields as conventional cotton.

### **2.8.2.2 Organic cotton**

Organic cotton has been used in the production of cricket shirts<sup>22</sup> by small cricket brands and can be seen as more sustainable than conventional cotton. There are certification bodies in place to ensure the authenticity of organic cotton through the supply chain, such as the Global Organic Textile Standard (GOTS). However, even these certifications can have issues. The

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<sup>18</sup> <https://neblake.com/products/mkiii-cricket-shirt-long-sleeve>

<sup>19</sup> <https://www.forbes.com/sites/brookerobertsislam/2021/12/06/silenced-data-means-we-dont-know-global-impacts-of-cotton-pesticides/?sh=2a9e0a7b668b>

<sup>20</sup> <https://www.bbc.co.uk/news/extra/nz0g306v8c/china-tainted-cotton>

<sup>21</sup> <https://www.theguardian.com/global-development/gallery/2014/may/05/india-cotton-suicides-farmer-deaths-gm-seeds>

<sup>22</sup> <https://neblake.com/products/the-goochie-short-sleeve-cricket-shirt>

below excerpt from a 2020 GOTS press release shows that 20,000 metric tonnes of certified organic cotton proved to be counterfeit.

*“GOTS, through its own investigation, has finally obtained substantial documentary evidence confirming rumours about systematic fraud abusing the Indian government certification system of organic cotton production. In the course of surveillance audits by GOTS accreditation body IOAS – a regular part of the GOTS quality assurance – attended by GOTS experts, they detected fake Raw Cotton Transaction Certificates (TCs). These TCs had been created by fraudsters using APEDA (Agricultural and Processed Food Products Export Development Authority of the Indian Government) templates with fake QR codes which led to a cloned APEDA website to pretend the TCs were authentic. GOTS has assured knowledge of 20,000 metric tons fake material<sup>23</sup>.”*

While certifications are important to ensure the supply chain maintains transparency, they must be seen as part of the solution and not the complete solution. Fibre to fabric supply chains can remain opaque with multiple intermediaries, and complete transparency from fibre to the retailer is often challenging to achieve.

### **2.8.2.3 Wool**

Cricket jumpers retailing at £30-40 are usually made from polyester or acrylic (also derived from fossil fuels). Polyester and acrylic are used due to their affordable price point and ability to be easy to care for and machine washable. However, wool should be considered a viable material for cricket jumpers. There are examples of cricket jumpers made from wool in the past, with players such as Joe Root, ex England test captain, nostalgically sharing his jumper used to be knitted by his grandma<sup>24</sup>. Cricket jumpers made from lambswool are available<sup>25</sup> from specialist cricket clothing retailers. The properties of wool deliver the performance needed for players, primarily warmth and ease of movement, as well as sustainable benefits such as being biodegradable.

Currently, wool has been underutilised as a resource. Many farmers have raised issues that the cost of sheering their sheep is higher than the cost they receive from the sale of wool. Despite wool fleeces being very affordable, the infrastructure to convert the fleece into a woollen yarn through processes such as spinning is limited in the UK. The type of sheep will dictate some of the properties of the woollen yarn, with some breeds being more suitable for woollen textiles. Wool is still not commercially price comparable to polyester, and although potentially a superior material, it has tended to be at the higher price end of the market. History has proven wool is a viable alternative in terms of performance, yet price demand for cheaper materials and ease of care has been prioritised over sustainability. Price has driven the switch to synthetic options, which have a significant environmental impact as they cannot biodegrade like wool.

Merino wool is used in base layers for other sports such as snowboarding, so when spun in lighter weights, it could also be an option for cricket shirts. In tennis, Andy Murray partnered

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<sup>23</sup> <https://global-standard.org/news/gots-press-release-gots-detects-evidence-of-organic-cotton-fraud-in-india>

<sup>24</sup> <https://www.sportskeeda.com/cricket/england-brings-back-the-traditional-knit-cream-sweater-to-cricket>

<sup>25</sup> <https://neblake.com/products/the-brian-close-cricket-jumper>

with Woolmark to develop a performance tennis kit he wore at Wimbledon in 2021—crediting its breathability, thermoregulation, comfort in play, and renewable and biodegradable properties. There are currently very few merino wool sheep farmers in the UK, most in New Zealand and Australia. Wool is biodegradable and can be seen as a very sustainable material at the end of life. However, some argue that the impact of raising sheep can have a negative environmental impact, and therefore it is essential to consider the full life cycle of a fibre.

### 2.8.3 Mixed fibres

Creating mixed fibre blends such as cotton/polyester makes many garments even more challenging to recycle. Generally, only 1%, of clothing potentially is recycled back into clothing (see Section 2.10); the recycling technology for one fibre, for example, cotton, may differ from that of polyester. As each fibre has different properties and reacts differently to heat and chemicals, for instance, it can mean mixed blend garments cannot be currently easily recycled. Therefore, to increase recyclability (if product life extension options e.g., reuse, repair, etc. are exhausted), mono fibres such as 100% polyester are a preferred option. However, the logistics of the sorting and recycling infrastructure must be in place at the end of the garment's life, and at present greater coordinated collecting, sorting and recycling logistics need to be implemented.

New Balance, the England team's previous cricket sponsor, stated an aim to use 50% recycled polyester by 2025<sup>26</sup>. However, recycled polyester was not used in the national clothing during their sponsorship, which ended in April 2022. In April 2022, ECB announced Castore as their new clothing sponsor and highlighted that the teamwear would use recycled materials (though it did not specify what percentage recycled fibres will account for.) It is unclear if this has been implemented due to limited information on the Castore website.

*“England athletes will help to design the team wear, creating a uniquely England Cricket style, with recycled material to be used in the manufacture of the matchday playing kits.”<sup>27</sup>*

The Birmingham Bears, Warwickshire County Cricket Club's (WCC) T20 team, trialed shirts made from a bamboo charcoal mix as an alternative fabric to 100% polyester. The fabric was a blend of 50% bamboo charcoal and 50% polyester. Polyester is a significant part of the blend as it is used to add strength and achieve the depth of colour allowed by sublimation printing (see Section 2.5) which requires a high polyester content to print on successfully.

Birmingham Bears T20 2020/21 replica shirt<sup>28</sup> is marketed as “believed to be cricket's most sustainable playing shirt”, on the Edgbaston online shop, due to its composition of 50% bamboo and charcoal and 50% polyester, which was developed to “significantly reduce the use of plastics.” It is unclear if Birmingham Bears (WCC) are still using the mixed fibres in their shirts.

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<sup>26</sup> <https://www.newbalance.com/sustainability/>

<sup>27</sup> <https://www.ecb.co.uk/news/2248054>

<sup>28</sup> <https://edgbastonshop.com/product/birmingham-bears-t20-shirt-2020-21/>

## 2.9 Legal requirements

Although, to date, there appears to be limited sustainability focus on cricket clothing, as brands start to increasingly market their sustainability efforts in line with other sectors within the clothing market<sup>29</sup>, backing up sustainability claims will become increasingly important to maintain customer trust and brand integrity.

The Green Claims Code published in 2021 by the Competitive Markets Authority<sup>30</sup> aims to ensure that statements made about sustainability can be fact-checked and independently verified.<sup>31</sup> See Appendix for more information. The UK government website states that;

*Before making a green claim, businesses should understand how their product, brand or business has an impact – both positively and negatively – on the environment for its whole life cycle.*

In the case of the Birmingham Bears cricket shirts, the following statement appears on the product page of their online store.

*“The new-look 2020/21 Birmingham Bears T20 shirt, which is believed to be cricket’s most sustainable playing shirt. The shirts are manufactured from a sustainable material formed of a 50 percent mix of bamboo and charcoal, with polyester, to significantly reduce the use of plastics.”*

For example, applying the rationale behind a green claim stated above, it would be helpful to customers at the point of sale if more information was provided to increase understanding as to why this blend is more sustainable. Providing a comparable life cycle information through Life Cycle Assessment to measure the impact of this blend against 100% polyester would be beneficial. It is encouraging to see an example of material innovation within the sector and a club leading in prioritising sustainable materials, but this is an isolated example, and the provision of more precise information would help quantify sustainability claims made.

To increase transparency, cricket brands, clubs and retailers need to add fact-based information to their websites to support any sustainability claims related to clothing. Most cricket websites do not list fabric composition on their product page or the country of origin where the goods were made<sup>32</sup>. This information would be helpful to consumers when making informed decisions about purchasing cricket garments.

## 2.10 Closed Loop

Generally, only around 1% of used or previous worn clothing is made into new clothing in a closed-loop cycle. This is partly due to the recycling infrastructure, the complexities of sorting

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<sup>29</sup> In a 2020 McKinsey survey: “Consumer sentiment on sustainability in fashion”

Of consumers surveyed, 57 percent have made significant changes to their lifestyles to lessen their environmental impact, and more than 60 percent report going out of their way to recycle and purchase products in environmentally friendly packaging. <https://www.mckinsey.com/industries/retail/our-insights/survey-consumer-sentiment-on-sustainability-in-fashion>

<sup>30</sup> <https://www.gov.uk/government/publications/green-claims-code-making-environmental-claims>

<sup>31</sup> More details about green claims code criteria can be found in the appendix

<sup>32</sup> <https://www.prodirectcricket.com/products/Nike-SS-Game-Polo-Sail-Obsidian-Mens-Clothing-232871.aspx>

garments, the limitations of blended recycling, and the fact that many clothes are sent abroad for charity purposes.

Some cricket brands have been investigating closed-loop recycling using clothing from multiple sports (not just cricket clothing). The trials have used excess new stock, not used clothing. Used clothing may bring additional complexities to closed-loop recycling, such as ensuring the condition and composition of the garments and the collection and sorting of garments to be recycled. Closed-loop logistics need to be further developed as they can create a long reverse logistics supply chain with the additional issues of carbon emissions from transportation. However, some countries, such as China, do not allow used clothing to be imported. This can mean a limited amount of feedstock suitable for recycling within some geographical regions.

### 2.11 A case study from the clothing sector

With an increasing focus on sustainability in the wider clothing industry, existing frameworks and strategies could also be applied to cricket clothing production to improve transparency. Asket<sup>33</sup>, a Swedish clothing retailer known for its sustainability, shows a traceability percentage broken down by manufacturing, milling, raw materials and trims to communicate to the customer their awareness of where the product and fabrics are made. The website also shows images of the factory and shares information about the manufacturing unit which produces its goods. Asket also calculates a carbon dioxide (CO<sub>2</sub>) impact for its garments. The brand does not focus on terminology like sustainability on its website. Instead, it uses words such as transparency and traceability, allowing the customer to understand their impact and give them information about the garment's origin. This can act as an example for cricket brands and online retailers in terms of how to communicate to customers and explain the levels at which they have transparency in different aspects of their material supply chain.

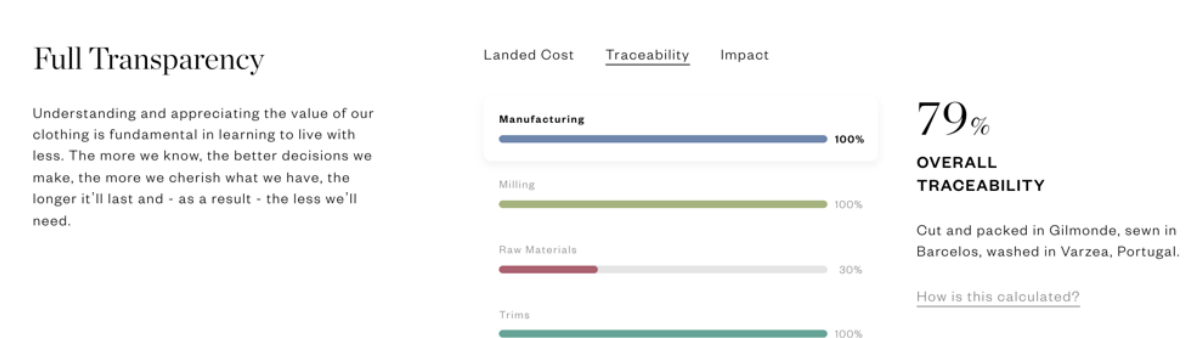


Figure 1 Screenshot from www.Asket.com showing levels of traceability within their supply chain on a product level.

### 2.12 Summary

The performance and price challenges of cricket clothing limit the materials used for its production. Although substantial new material innovation is happening, much of it is still under development and has yet to be scaled to a commercial level. A barrier to changing materials is price, especially in the amateur game. County cricket clubs such as Warwickshire, pioneering material innovation, set an example to the rest. However, all sustainability claims

<sup>33</sup> <https://www.asket.com/gb/>

need to be backed up and evidenced with precise data to the customer. The sector is generally very opaque, and much of the necessary information is not easily accessible in the public domain.

## **Section 3 Supply Chain**

### **3.1 Introduction**

The supply chain for cricket clothing is very opaque. During this research, it has been challenging to establish the country of origin for garment production and material production. The supply chain is often kept secret due to brand confidentiality. However, transparency is needed to understand the level at which sustainability exists.

As the game develops, with a potential move to increased use of coloured clothing in amateur cricket influenced by new professional game formats such as the Hundred, the nature and speed of the supply chain will have to adapt to meet these needs. Covid has caused substantial disruption to supply chains globally, both in terms of worker availability and increased freight costs. With some countries still closed to foreign visitors, it is currently not possible for many to visit and audit their factories. An example of the delays was given by a small cricket distributor who placed an order to Indian suppliers in August 2021 and received their delivery in May/June 2022.

### **3.2 Opaque supply chains**

Supply chains are traditionally opaque, especially within the clothing sector. There has been a history of 'middle men' or fabric and production agents that act between the buyer and the garment factory. The incentive to keep contacts and original production sources 'secret' means buyers cannot go directly to the factory and cut out the middleman to achieve a cheaper price denying these middlemen their cut or commission. This supply chain structure can mean transparency in where garments are made and where the fabrics and fibres are sourced can be challenging to determine. Factories can often subcontract to neighbouring factories during busy times without informing buyers. Without a representative in the country of manufacture who visits the factories unannounced, it can be difficult to confirm where products are made.

Some cricket brands have a long history of working with their suppliers, established over many years. It is these long-standing relationships which have proved fundamental during Covid. Establishing mutual trust between the garment factory and the buyer has been essential when buyers cannot travel and meet suppliers personally. The relationship between the garment factory and buyer is often very strong, with the garment factory often sourcing the materials for the buyer (many brands do not have a specific fabric person within their office in the UK.) So, while they have transparency over the garment producer, they do not necessarily have direct transparency over the fabric supplier or where the fibres are sourced. Although a common practice in the clothing supply chain (as the garment factory usually quotes prices as an FOB (freight on board) price, which includes all fabric and making costs as one), it does create an element of opacity in knowing who the fabric supplier is and the working conditions and environmental performance of the factory. It also makes it more difficult to understand an actual cost of a garment without having clear transparency on a

fabric cost (without any garment suppliers' upcharge). Fabric choice is an important decision for the buyer and often makes up most of the cost price of the garment. In sports clothing, ensuring that the material can achieve the required performance is vital. The factory making the garment will often have substantial knowledge of which fabrics are available from their fabric mills and which fabrics will pass the required quality standards.

### **3.3 A change in retail habits**

There has been a significant shift to online retailing intensified due to many stores being closed during Covid. While traditional cricket retail stores still exist, their numbers appear to have declined, with the emergence of major sports chains now providing for multiple sports. In addition, consumer behavior has changed for many, with online buying being the norm with the rise of many e-commerce sites for cricket clothing and gear. This change in retail has also brought issues in terms of transparency of country of origin to customers. The production source is opaque to many cricket clothing customers if not shown on retailers' websites (this contrasts with other clothing sectors such as fashion, which generally show the country of origin on their websites). Country of origin is often written on the physical care label as required by some countries by the law. Still, as physical stores selling cricket gear have reduced in the past decade, it can be difficult for amateur players to access this information before purchasing.

### **3.4 Production methods**

Two types of production methods have been identified for cricket clothing production.

- Stock production - which provides high quantities of repeat styles - is usually batch produced with orders placed by cricket clothing brands based on long-lasting relationships. Production is quite secure as repeat business is stable, and usually, there is a supportive reciprocal relationship between manufacturer and brand.
- On-demand production is lower quantities that need to be made to shorter lead times. Currently, manufacturing has been identified in the UK and Pakistan. While Covid was a catalyst to many clothing brands nearshoring production within the UK. Increasing costs are now pushing brands to place orders overseas again, in countries such as Pakistan.

### **3.5 Country of origin**

On most of the smaller cricket retailers' websites visited at the time of writing, few had any sustainability information or statement. Many websites did not even list the country of origin. Amateur players have little to no access to information regarding suppliers' social and environmental sustainability to support their decision-making when choosing cricket clothing. Listing the country of origin is a legal requirement on physical care labels in some countries. However, this requirement is not being echoed online, despite the increasing movement of consumers buying online. Major physical sports retailers such as JD Sports do not sell cricket clothing in every store; thus, a customer would need to seek out a physical cricket store to access this information.



## Adults

Brand	FLX Decathlon own brand	Gunn & Moore	Kookaburra
Price Shirt	£9.99	£19.99	£19.99
Price trouser	N/A	£19.99	£17.99
Price sweater	£12.99	N/A	£29.99
Composition	100% polyester	100% polyester	100% polyester
Country of Origin	Bangladesh	India	China

## Junior

Brand	FLX Decathlon own brand	Gunn & Moore	Kookaburra
Price Shirt	£7.99	£14.99	£14.99
Price trouser	N/A	£14.99	£14.99
Price sweater	N/A	N/A	£19.99
Composition	100% polyester	100% polyester	100% polyester
Country of Origin	Bangladesh	India	China

Figure 2 shows the country of origin, price comparison and composition found on care labels for adult and junior cricket clothing<sup>34</sup>

A visit to Decathlon Stockport store, a multisport retailer and potential destination for amateur cricket players to purchase clothing stocked FLX-its own brand, Kookaburra and Gunn and Moore (other brands such as Gray Nicholls, Canterbury and Surrige are stocked online at Decathlon but are sold and shipped out by another company.) The care labels revealed that each brand was made in a different country. It also highlighted the substantial difference in price between the two established brands and Decathlon's brand, which retailed for half the cost of the others. At the time of writing, the country of origin for the FLX brand was not visible on the Decathlon website, so customers would have to visit the store in person to acquire this information.

As cricket is a highly seasonal game, e.g., from April to September, there are delivery demands; Decathlon's peak season for sales for cricket is April-August. They allow 11 meters of wall space for cricket clothing, footwear and protective pads during this time, which reduces to 2 meters after the peak and is replaced by rugby products. Therefore, it is essential that there are no delays to production and that they can get quick replenishment to bestselling items. This can lead to brands putting pressure on suppliers to meet delivery deadlines and repeat orders quickly, or brands carrying excess inventory. Hence, they have enough product for the season to maximise sales.

### 3.6 Covid impacts and supply chain ethics

Covid 19 has disrupted supply chains immensely. As each country emerges from the pandemic at different times (during this research, the UK had no Covid 19 restrictions while Shanghai in China was entering a lockdown of 26 million people), players can become frustrated if clothing

<sup>34</sup> During an in-person visit to Decathlon on 02.04.22. See Appendix for accompanying images.

is unavailable during the playing season, the pressure caused by this seasonal demand can cause brands to continue to push on price and delivery lead times. This puts increasing pressure on factories to make up time when they are allowed to open, leading to overtime for workers who may not be compensated sufficiently. The increased push to make up production may also mean double shifts or increased factory occupancy, which may not be suitable if many workers are unvaccinated against Covid 19.

It is difficult for customers to understand the regulations and requirements that a brand is working to unless it is communicated clearly and published in the public domain (usually online). Brands can provide a sustainability statement, an ethical standards document, or a code of conduct document which would inform customers.

Covid 19 has also had enormous implications for the freight industry, with the cost of freighting goods increasing in some cases more than ten times. Some products now cost more to ship than make; this rising cost for cricket clothing retailers, online platforms and distributors either needs to be absorbed, passed onto the consumer, or pushed back onto the supplier.

### **3.7 Extended producer responsibility**

Another aspect to consider is the concept of Extended Producer Responsibility (EPR) for those who put the products on the market. EPR for textiles has been implemented in France and is due to come in force in Sweden and Netherlands in 2023 and should be a serious consideration for brands wanting to future-proof their business strategy. In the UK, DEFRA is presently considering the post BREXIT policy options for clothing and textiles including EPR and eco-design. The EU Strategy for Sustainable and Circular Textiles<sup>35</sup> sets out a framework and key actions to transition towards a more circular economy. While not yet adopted by the UK, it will have indirect affects for those shipping to European countries and act as a benchmark for more sustainable practice.

While not yet mandatory there is an opportunity for brands to think proactively in regard to future policy and investigate possible services or business models needed in the entire life cycle of a garment, such as repair, rental and resale models. Other sectors in the clothing industry have embraced these opportunities as future commercial business strategies.

### **3.8 Outsourced production units**

Most brands are using 'outsourced' factories rather than owning their factories. This gives little visibility to whether garments are outsourced to a neighbouring factory (a widespread occurrence with busy factories). It can be challenging to gain a suitable level of transparency on working conditions and factory compliance unless the brand has someone on the ground visiting the production unit(s) at regular announced and unannounced intervals.

### **3.9 UK production**

It is potentially the case that some of the UK factories making cricket clothing are making fashion products too. It is believed that some manufacturers are not specialising in cricket or even sportswear but are working across all types of clothing, especially in smaller factories.

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<sup>35</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022DC0141>

This indicates that many reputable fashion brands' audits could potentially be shared with those brands producing cricket clothing. This needs further research but offers an opportunity to reduce 'auditing fatigue' and costs for the suppliers.

While onshore production is being used to customise clothing (such as printing names or embroidering logos), garment production is not comparable in price to many overseas suppliers. For example, a cricket retailer sells caps at £4.99 on their UK store. To make the cap in the UK, the making costs alone (this does not include fabric or trims) starts at £9.50 using a Yorkshire-based sewing factory. Making the cap involves five specialist machines; the time per cap in the UK factory is 20 mins, the time given per cap for production abroad is 11 minutes. To retail at £4.99, the fabric cost, making cost, packaging, freight, workers' wages, and retailers' profit has to be factored in. With the fabric cost and retailers' profit usually the highest percentages making up the retail price, workers' wages must be incredibly low, and workers must have an extraordinary level of speed to produce these ethically. By producing locally, transport emissions can be reduced. However, due to high wages, many brands cannot make as profitably within the UK.

### **3.10 Issues within supply chains**

The issues facing cricket clothing supply chains are unknown as details around their supply chains remain opaque and manufacturing unit locations or company details are not released publicly. Multiple issues exist within supply chains, and it is not uncommon for suppliers to withhold information that would cause them to fail an audit. Factories can keep 'double books', keeping two sets of records, one to pass the audit and another that reflects reality. Overtime is one of the most common issues; it is often not compensated appropriately, and workers may not get the notice they need to work overtime. Overtime may be caused by delivery demands placed on a factory by a buyer rather than be a common practice by the factory. It is unknown what standards or codes manufacturing units making cricket clothing adhere to as there is no public transparency or traceability in the public domain; this is mainly due to brand confidentiality.

It is common to have shared dormitories, accommodation, and meals as part of a worker's payment package. This can tie workers to a factory and make it difficult to leave. There can also be practices of factories holding workers' documents, so they cannot travel outside of specific areas, which is particularly difficult for migrant workers. There can be issues around workers joining trade unions, and workers can be exposed to danger if they try and expose the reality of working conditions.

The tragedy of Rana Plaza<sup>36</sup>, which killed 1,138 garment workers when a factory collapsed in Bangladesh, also highlights the risk of poorly maintained facilities and fire and safety violations that put lives at risk. It is unknown what issues exist specifically in the cricket clothing supply chain as supply chains remain opaque and information on production units used is not available in the public domain. As no agreed auditing tool has been confirmed across the sector, it is unknown to what level individual brands require audits to be conducted and to what level standards must be met.

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<sup>36</sup> <https://www.theguardian.com/business/2016/may/31/rana-plaza-bangladesh-collapse-fashion-working-conditions>

### 3.11 Audits

It is the responsibility of individual brands to assess the standards in the factories that they use. Production units may be audited and visited regularly when taking on new suppliers for the first time. When working with suppliers known to the brands for many years, audits may not be required as often. Production units may get audited yearly or be asked to send audits that other brands have conducted to prove they can meet required standards. A stakeholder shared that they used to visit their supplier's factories at least every year, but due to Covid, they have been unable to visit for almost 3 years. With external auditing teams unable to visit, this could lead to manufacturers social and environmental standards beginning to drop if they are not monitored regularly. Audits can be expensive and time-consuming for brands and suppliers; suppliers may be asked to fulfil audits from many companies. Pre-Covid 19, many buyers would visit their suppliers and production units regularly and conduct informal site checks during their visits. These would most likely be visits arranged months in advance, primarily focusing on placing orders or new clothing developments and not specifically for assessing factory standards or working conditions. Sedex is an industry-standard tool for auditing factories within the clothing sector used by some stakeholders. Still, individual brands decide if to use independent auditors or employ auditors as part of their company.

Among stakeholders who took part in the Sustainability, Cricket gear, Clothing and Apparel: Stakeholder workshop on 15<sup>th</sup> July 2021, there was a feeling of 'auditing fatigue' by suppliers<sup>37</sup>. Instead of asking suppliers to conduct additional audits is their potential to try and share audits or build on work that has already been done?

When introducing any additional code of conduct, building on work that has already been done is essential. A relevant example is the FIFA Pledge - which was passed in the 1990s that aimed to remove child labour from football supply chains. This might be used as a framework for cricket clothing and/or gear. FIFA has committed to publicly revealing the production sources for its clothing; by adopting this radical transparency, it sets an example to other sports.

### 3.12 Blockchain to support transparency

Technology can support creating transparency, accountability, and an undeniable chain of custody throughout the supply chain. Although at an early stage of application, Blockchain<sup>38</sup> has been used in other sectors to provide information from source to customer. A pilot project conducted by Australian Wool Innovation to track wool provenance across its supply chain could set an example e.g. if Australian wool were to be used in cricket jumpers or merino wool used for cricket shirts, for example.

*"The pilot project worked with seven supply chains, tracing from woolgrowers through to exporters, to understand the nature of business processes, types of claims and data available. The prototype established looks to enable participants to*

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<sup>37</sup> <https://cfsd.org.uk/wp-content/uploads/2022/01/Final-Report-Sustainability-Cricket-Gear-Stakeholder-Workshop-18-1-22.pdf>

<sup>38</sup> Blockchain can be used as an indisputable ledger which enables a clear chain of custody throughout the supply chain, tracking and recording each process in the supply chain.

*navigate this supply chain opacity, offering blockchain-backed information that remains reliable.*<sup>39</sup> John Roberts acting CEO of AWI

### **3.13 Supply chain willingness towards sustainability**

There has been an assumption by many stakeholders that sustainable materials and practices would add high cost; the general view was that cost would need to be transferred to the customer, and players would be unwilling to pay high prices. Thus, due to the price-sensitive nature of cricket clothing, this could lead to a reduction in sales.

As customers start to prioritise sustainability, brands which cannot react quickly enough will begin to lose market share; combined with policies such as EPR, brands will need to adapt if they want to remain relevant in the market. The push for brands to monitor and reduce their Scope 3 carbon emissions (emissions produced by their supply chain) is an essential step in taking responsibility for their products' full impact throughout the life cycle. It is unclear how cricket clothing brands will tackle these issues, and further research is required.

Many international factories may have clients who have already completed sustainability focused R&D. Suppliers are increasingly aware of the need for global brands to be seen as sustainable and are often willing to support the development of sustainable materials. As with any relationship, the partnership between the supplier and buyer needs to be solid and mutually beneficial, built on trust and willingness for suppliers to invest time and money in new developments. Opportunities such as zero waste cutting techniques or utilising cutting waste are now relatively common. Buyers need to allow a budget for innovation and accept a certain level of cost implication. However, there can be a historical tendency to push manufacturers to maintain or reduce prices yearly despite rising global costs.

Many production countries are also increasingly looking at their sustainability policies, which will filter through to the factory level. Buyers can support by encouraging factories to use renewable energy sources or working with LEED (Leadership in Environmental and Energy Design) factories.

### **3.14 Summary**

With supply chains disrupted due to external factors like Covid 19, the war in Ukraine, Brexit, and high inflation, prices are increasing across the supply chain at the time of writing. Deliveries of raw materials and finished garments are facing disruption and delays, creating pressure on manufacturers and leading to practices such as outsourcing to undisclosed factories. The cost percentage increase if brands switch to more sustainable materials and supply chains fluctuates. At present there appear to be limited pressures on specialist cricket clothing brands to adopt sustainability policies. While many stakeholders interviewed felt personally that the sector would need to make changes, they also commented that the cricket sector is very price sensitive and would struggle to bear increasing costs.

To date, there are no sector-specific environmental or social standards that have been established for cricket stakeholders to monitor their supply chain. FIFA Pledge offers an

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<sup>39</sup> <https://fashionunited.uk/news/business/everledger-partners-with-australian-wool-innovation-on-blockchain-tracing-tech/2021122460307>

example of existing practice from other sports, which could be considered a benchmark to create something similar for cricket.

## **Section 4 Factors influencing Sustainability in Cricket**

### **4.1 Introduction**

Understanding the drivers and challenges that impact sustainability in cricket clothing is essential. Indications are that customers are open to a move towards sustainable garments across the wider clothing sector; at the same time, many consumers cite affordability issues regarding sustainable clothing. The cost of the equipment needed to play cricket has been raised as a barrier to sports participation. With sponsorship playing a pivotal role in funding clubs at a professional level and in some cases at an amateur level, the impact of sponsorship logos on the length of use of cricket clothing needs to be reviewed.

### **4.2 Sustainability awareness**

Increasing awareness of sustainability issues among consumers is evident in other clothing market sectors. Recent studies show that consumers place more importance on sustainable credentials during buying decision-making. In recent studies

*77% of consumers surveyed said sustainability is important to them, 57% of respondents were willing to change their buying habits to reduce any negative impact on the environment, and 70% will actively educate themselves on sustainability through researching the production process. 64% of respondents were more likely to purchase a garment if new technologies could prove its sustainability claims.”<sup>40</sup>*

The statistics above do not relate specifically to cricket clothing but clothing in general. It is unknown if the percentages would be the same if the survey were conducted specifically for cricket clothing. This is an area for further research.

It is important to note that it may be another person other than the player who is the decision-maker in terms of buying cricket clothing. For example, a parent may purchase for their child, or one family member may take responsibility for buying clothes for the household. This may be particularly evident in the youth game where parents may be the purchaser and therefore consider sustainability more or less highly than the intended wearer of the garment. Younger players may have the strongest will to buy sustainable clothes; however, the parent may make the purchase and may have different priorities, such as budget, often resulting in negotiation between what the child wants and what the parent can afford.

In the youth game, players may be provided with clothing via the club, with parents invoiced for the cost of the garments. In this case, there is limited opportunity to buy based on sustainability credentials as the product may have already been purchased and is likely part of a team kit which must be worn to play. Players in this instance have an opportunity to

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<sup>40</sup> <https://fashionunited.uk/news/business/how-blockchain-is-paving-the-way-for-greater-transparency-sustainability-within-the-fashion-industry/2021011953031>

influence more sustainable clothing procurement by advocating for clubs to buy from reputable and sustainable suppliers.

Indications suggest sustainability will increasingly become more important when making purchases; however, the attitude towards any increasing costs passed onto the consumer to pay for more sustainable clothing can often be a barrier. Often there exists an attitude and behaviour gap between what consumers say and what consumers do<sup>41</sup>. During the research, multiple stakeholders have raised the price sensitivity of garments within cricket. Affordability is covered in more detail in section 4.8

### **4.3 Climate change**

BASIS (British Association for Sustainability in Sport) works to raise awareness of multiple sustainability issues across the sports sector, including the impact of climate change. Due to unpredictable weather and increasing temperatures, this is a crucial issue for cricket clothing. Developing clothing that supports the players' performance throughout the game and adapts to varying temperatures will require continued technological innovation. Multiple clothing changes at the professional level may be needed as temperatures rise, which requires additional sets of clothes to be transported with the players, incurring freight costs and the associated CO2 impacts of extra luggage as they travel internationally. Recent years have seen cricket grounds flooded in parts of the UK and Australia, and extreme heatwaves have been experienced in India and Australia, both key cricket nations

Climate change has massive implications for cricket and is predicted to be the sport most affected by rising temperatures and unpredictable weather. Players may have heat exhaustion and heat stroke issues limiting their ability to play. In July 2022, the UK experienced its hottest day ever, resulting in reduced hours of play for clubs such as Northamptonshire and Lancashire.

### **4.4 Sponsorship and logos**

Sponsorship of cricket clothing in the amateur game varies depending on individual clubs. For sponsored clubs, it can provide a revenue stream to cover the running costs of the cricket club. In the professional game, the sponsorship and naming of cricket shirts dictate a limited life for the garments due to sponsors changing and players changing clubs. It is a barrier to reuse as it can limit the appeal for second users. In the amateur game, the impact of sponsorship has on lifespan of cricket clothing has yet to be quantified.

Further research is needed to understand which levels of the game benefit from sponsorship and if there are alternative ways sponsors' advertising can be attached to cricket clothing so that it could be made removable. Multiple stakeholders have raised the issue that as sponsors change regularly, clothes need to be discarded or replaced, and there is no clear strategy for their disposal. Some items can be reused and sent to recycling schemes such as Lord's Taverners Sports Recycling Scheme, which is discussed in detail in section 5.6.

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<sup>41</sup> [https://corporate.zalando.com/sites/default/files/media-download/Zalando\\_SE\\_2021\\_Attitude-Behavior\\_Gap\\_Report\\_EN.pdf](https://corporate.zalando.com/sites/default/files/media-download/Zalando_SE_2021_Attitude-Behavior_Gap_Report_EN.pdf)



#### 4.4.1 National team sponsorship

Due to the design of cricket clothing at a professional level, e.g., they are club-specific, player-specific, and have sponsors logos, barriers to garments being used by multiple users or repurposed for second-hand or third-hand use exist.

The image below details the changes in kit sponsors and shirt sponsors for the England team since 1996; the changes indicate there may have been around eight new variations of shirts produced due to sponsorship changes alone. This only considers one set of clothing for one tournament. New shirts are needed as an estimation every 2.5 years due to sponsorship changes. The ECB changed its clothing sponsor in April 2022 to Castore (see sections 2.8.3 and 4.9), replacing New Balance and resulting in another change of kit for the England team.



Figure 3 England Cricket Team list of kit and Shirt sponsors<sup>42</sup>.

#### 4.5 Sustainability guidelines by governing bodies

International Cricket Council (ICC), founded in 1909, is the world governing body for cricket. It has 106 members and works together with members to grow the sport. The England and Wales Cricket Board ECB, founded in 1997, is the governing body for cricket in England and Wales. More details about these governing bodies can be found in an accompanying report focusing on the game's structure and governance.

The governing bodies of the ICC and the ECB have placed their sustainability focus on the built environment and impacts of holding tournaments, with little emphasis on cricket gear and clothing to date. Limited guidelines exist on sustainability for cricket clothing.

The ICC have a 1-page guide to sustainable kit and clothing<sup>43</sup> as part of a larger sustainability and climate change document. In the guide, they encourage clubs to

- Consider donating to reuse organisations such as Lord's Taverners Sports Kit Recycling scheme.
- Invest in durable kits that can last multiple seasons

<sup>42</sup> Image subject to copyright

<sup>43</sup> [https://www.iomcricket.co.uk/uploads/4/9/2/0/49200123/environmental\\_sustainability\\_resource\\_pack.pdf](https://www.iomcricket.co.uk/uploads/4/9/2/0/49200123/environmental_sustainability_resource_pack.pdf)



- Ask current suppliers about their sustainability credentials
- Consider partnering with a sustainable sports clothing supplier for the national kit

The guide does not detail what questions to ask clothing suppliers. It does not consider the issue of changes in sponsorship, which can be the driver to replace clothing rather than durability issues.

#### **4.6 Clothing regulations in play**

Clothing requirements are described in the ECB<sup>44</sup> Clothing and Equipment Regulations and the ICC Clothing and Equipment Rules and Regulations<sup>45</sup>. Both detail what is acceptable within clothing worn at a professional level. The rules primarily focus on the size and position of sponsorship logos and the percentage of colour within a garment. If the regulations are broken, there are high repercussions such as fines.

The ECB Clothing and Equipment Regulations detail the repercussions of breaking any of the regulations. The ICC also has a similar document with serious financial implications for offences. This may create a barrier to innovation in terms of trying anything which may contravene any of the regulations in these documents. ECB must approve all clothing as detailed in their regulations.

*2.1 It is an offence for a Team to fail to comply strictly with the criteria in these Regulations, including by failing to obtain the required ECB Commercial Team approval for any clothing and/or equipment used during a Competition, as specified in these Regulations, and/or by permitting any of their Cricketers to wear and/or use clothing and/or equipment, during a Competition, which has not been approved by the ECB Commercial Team*

*2.2 It is an offence for a Cricketer to fail to comply strictly with the criteria in these Regulations, including by wearing and/or using clothing and/or equipment, during a Competition, which has not been approved by the ECB Commercial Team.*

*2.3 It shall also be an offence under the Regulations for any official or employee of a Member of the ECB (including a Cricketer) to assist, incite or encourage any Cricketer to commit a breach of Regulation 2.2 above.*

*2.4 It shall also be an offence under the Regulations for a Team to allow any Cricketer on their Team to wear any unapproved clothing and/or use any unapproved equipment during a Competition.*

*2.5 A Team and/or Cricketer (or an official or employee of a Member of the ECB in respect of any offence under Regulation 2.3) who commits an offence by breaching the Regulations is liable to have disciplinary proceedings brought against them in which event the provisions of the Cricket Discipline Commission's Regulations shall*

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<sup>44</sup> <https://resources.ecb.co.uk/ecb/document/2021/03/16/8f7c81d5-a114-4f84-9aaf-f7b2bf0e8378/19.Clothing-and-Equipment-Regulations-2021-vF.pdf>

<sup>45</sup> <https://resources.pulse.icc-cricket.com/ICC/document/2021/08/04/32c25bbc-8fae-44a2-814a-58988df82905/ICC-Rules-and-Regulations-19-Clothing-and-Equipment-July-2021.pdf>

*apply. The Cricket Discipline Commission shall be entitled to fine the Team, for which the relevant Cricketer in breach is registered or was otherwise playing at the time when the alleged breach was committed, up to a maximum of £3,500 for the first offence and up to £31,000 for the second offence. For any subsequent breach of the Regulations the Cricket Discipline Commission may order such fines or take such other action as it thinks fit in accordance with the Cricket Discipline Commission Regulations.*

Detailed clothing and equipment regulations are essential for the governance of the game. The rules encourage uniformity across cricket clothing and do not allow deviations from the regulations.

#### **4.7 Barriers to Innovation**

Some stakeholders have stated that strict adherence to the regulations could limit sustainable innovation within the game. For example, ICC regulations at the professional level stipulate colour limitations in the amount of colour allowed on gloves in professional matches. Due to colour restrictions, Gray Nicholls coloured gloves<sup>46</sup>, made using coloured offcuts from the previous production, contravene these regulations.

The Off-Cut gloves are available online as part of first phase of the Gray Nicholls Innovation Lab's approach to considering sustainability in product development.

*'The Off-Cut Pro contains the same high class features that adorn our top level gloves, but design-wise these are unique. The gloves contain discarded materials from our factory, ensuring that every set of Off-Cut gloves is different.*

*Recycling old materials is great for sustainability, and also for your wallet. Re-using materials allows us to keep the cost of the product down, without any compromise on performance.'*<sup>47</sup>

Producing using offcuts means all gloves are unique and reduce waste, which is promoted as a selling point. They are priced slightly cheaper than the comparable white glove, allowing consumers to get a high end glove and encourage more sustainable purchases. With the increased volume of coloured clothing and equipment, finding sustainable solutions to manage coloured waste is essential. However, innovation needs to consider the game's regulations and work within these boundaries if items are to be worn at a professional level. However, a broader question is, do the regulations need to adapt to enable more sustainable clothing and gear to be produced?

In amateur games, the same regulations do not necessarily apply; in this case, upcycled gloves could have broader appeal than presently recognised. Interestingly, these gloves were marketed to be slightly cheaper than the main range because they use offcuts. However, it is unknown if any additional labour cost for cutting and selecting the offcuts by the factory workers was incurred.

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<sup>46</sup> <https://www.gray-nicolls.co.uk/pages/off-cuts-collection>

<sup>47</sup> <https://www.gray-nicolls.co.uk/products/off-cuts-pro-batting-gloves>



Figure 4 Image of Gray Nicholls off-cut glove.

#### 4.8 Affordability

In both stock and on-demand manufacturing, overheads for suppliers have been increasing. Some brands have absorbed the increased costs by reducing their profit margins. However, it has become increasingly difficult to do so and keep year-on-year growth, and ultimately costs are being passed on to customers. This can add to the issue of affordability of cricket clothing. Some ex-professional players such as Matt Prior, have already spoken about the problems of accessibility and affordability of cricket training and equipment<sup>48</sup>, (although this tends to be due to the cost of the equipment rather than the clothing).

By analysing major brands accessible online and in physical stores, Decathlon cricket clothing was found to be the most affordable available at the time of writing, with junior shirts retailing at 7.99 GBP and adults at 9.99 GBP. Decathlon allows customers to pay using Klarna, an e-payment service, which enables costs to be managed and paid in 30 days, giving those on lower incomes more opportunity to spread the payment cost.

<sup>48</sup> <https://twitter.com/mattprior13/status/1483883226754174977?lang=en-GB>

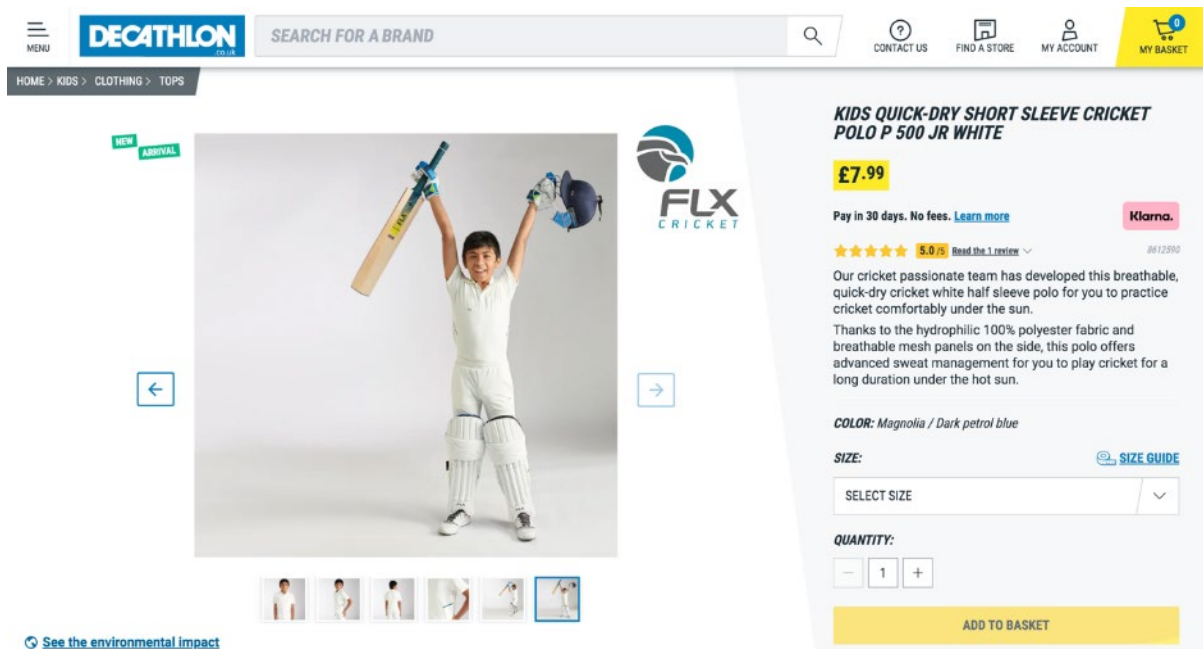


Figure 5 Screenshot of FLX kids short sleeve cricket shirt<sup>49</sup>

Decathlon has launched its own cricket brand FLX which retails at half the price of the other significant competitors such as Gray Nicholls, Gunn and Moore and Kookaburra. During an informal discussion with a member of staff in their Stockport store, they shared that the company have strong targets on sustainability with a goal of 15%-20% of all sales coming from more sustainably designed products in the future. Staff trained on sustainability have access to the monthly sustainability impact reports monitoring progress. Sustainable products are highlighted in-store through product signage, and the environmental impact is also shown online (see Figure 23 in Appendix). For the junior FLX cricket shirt pictured above, they estimate the carbon footprint as 4.44 kg. There is also an opportunity to learn more about how the brand defines and measures sustainability which can be found on its website. Due to Decathlon selling multiple products for sports and having international stores, sustainability has been prioritised by the brand at a company level. The brand has stated that they will allocate substantial resources to monitoring and improving sustainability credentials<sup>50</sup>. For most SME cricket retailers, resource constraints in terms of cost and knowledge, often create a barrier to introducing more sustainable working methods and products.

In terms of driving sustainability, particularly for cricket clothing, global brands that sell other products directly to consumers generally lead the way. This is due to sustainability pressures and transparency increasingly demanded in the broader clothing market. Brands, such as Nike, release a sustainability impact report, which acts as an example of greater transparency. However, the report covers the brand as a whole; therefore, precisely what impact cricket clothing has is unclear.

<sup>49</sup> [https://www.decathlon.co.uk/p/kids-quick-dry-short-sleeve-cricket-polo-p-500-jr-white/\\_/R-p-329733?mc=8612590](https://www.decathlon.co.uk/p/kids-quick-dry-short-sleeve-cricket-polo-p-500-jr-white/_/R-p-329733?mc=8612590)

<sup>50</sup> <https://sustainability.decathlon.com/>

#### **4.9 Margin**

Given the cost price of clothing and the fact that it is an exceptionally cost-sensitive market, achieving high margins on clothing products can be challenging. Therefore, any additional costs in terms of R&D or KPIs for sustainability (especially within SME cricket brands) are challenging to absorb.

Unless the brand is global, such as Nike or New Balance, which also sells clothing under their own brand as direct-to-consumer sportswear, there is little evidence of regularly released sustainability reports or clothing-specific sustainability policies in the cricket clothing sector. Castore, the ECB clothing sponsor from April 2022, has no visible sustainability policy on its website at the time of writing. It is unclear if/how sustainability and sustainable materials are part of ECBs clothing procurement policy when choosing new sponsorship suppliers and how this is defined and quantified.

The stagnant cost of retail prices within clothing and the devaluation of clothing due to regular discounting and sales have educated the customer to shop around for the lowest price, with search engines such as Google allowing almost instant price comparison across a range of brands. A few well-known brands dominate cricket clothing, and competitive pricing is seen as essential to maintain market share.

#### **4.10 Women and girls**

Although the game has witnessed increased participation by women and girls, cricket clothing is still primarily designed for men or marketed as uni-fit. During the site visit to the Stockport Decathlon store, all of the cricket clothing stocked in-store and available online had navy or blue trimmings; no other trim colour was available. All imagery was shot on boys or men. Although it is marketed as uni-fit, there is little evidence of this being promoted to girls or women.

There is an opportunity for brands to provide garments such as shirts, trousers and shoes designed specifically for women, and new categories such as sports bras will be needed. New brands such as Lacuna<sup>51</sup>, a women's cricket brand designed by women for women, have entered the market to fill the gap. Female players have indicated that wearing clothes that do not fit properly (as they are designed for men) can affect their performance. This is an area to be addressed.

Lewes Priory Cricket club have switched from white kit to black kit to support female participation in the game<sup>52</sup>. Concerns from players wearing white clothing while on their period have been raised as an issue by multiple stakeholders. Some coaches interviewed believed this to be a dominant factor in girls dropping out of the sport as they hit puberty.

#### **4.11 Coloured clothing**

As discussed in Section 2.4, there has been a shift to coloured clothing. However, having multiple sets of clothing, coloured and whites and different clothing designs for various tournaments can add to the already high costs. It is unclear at present the extent of this challenge in the amateur game, e.g., in some places, there are leagues where white clothing

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<sup>51</sup> <https://lacunasports.co.uk/en/>

<sup>52</sup> <https://www.independent.co.uk/life-style/women/cricket-white-gear-women-period-b2115926.html>



is played in, but there may be separate T20 tournaments where coloured clothing is required. Amateur games have recently been seen played with one team in whites and the other in coloured clothing, which has traditionally not been the case.



Figure 6 Image shows a game being played with one team wearing white clothing and the other wearing coloured.

#### 4.12 Summary

Multiple factors exist that influence sustainability within cricket clothing. This include external factors such as sustainability awareness of consumers and climate change to internal factors such as regulations and sponsorship deals. Affordability and competitive prices are key factors that currently inhibit introducing more sustainable products and materials. The opportunity of the female game and new developments around fit and coloured clothing is crucial to giving women and girls more equality on the field.

### Section 5 Use Phase

#### 5.1 Introduction

The use phase of cricket clothing has a substantial environmental impact, from how the garment is washed, to how long it is worn and disposed of when no longer needed. Reuse schemes can contribute to environmental and social sustainability, but they are extremely limited in cricket clothing and gear, focusing primarily on using excess stock. No data has been found to quantify the sustainable impact of the use or disposal phase of cricket clothing.

#### 5.2 Customer Communication on Product Maintenance

Brand	Item	Composition	Washing instructions
Gray Nicholls <a href="http://www.gray-nicolls.co.uk">www.gray-nicolls.co.uk</a>	Pro performance short sleeve shirt	90% polyester, 10% spandex	Not listed
Adidas via <a href="http://www.allroundercricket.com">www.allroundercricket.com</a>	Adidas elite short sleeve playing shirt	Not listed	Not listed
Slazenger via <a href="http://www.Sportsdirect.com">www.Sportsdirect.com</a>	Long sleeve cricket shirt men's	Polyester	Not listed

Canterbury via www.cricketdirect.co.uk	Canterbury classic cricket shirt	100% Polyester	Not listed
Gunn and Moore via www.playwiththebest.com	Premier club men's shirt	100% Polyester	Not listed
New Balance via www.cricketdirect.co.uk	New balance cricket polo shirt	100% Polyester	Not listed
Kookaburra via www.kobaburrasport.co.uk	Pro player cricket shirt	100% Polyester	Not listed

Figure 7 Comparison of cricket shirt details shown on product page across multiple retailers.

On multiple cricket clothing websites visited during the research, when comparing a similar cricket shirt, none listed washing instructions, and none gave the customer additional information on how to extend the life of their garments on the product page.

The table above also highlights that brands may sell directly through their own website or they may be retailed through other distributors or cricket destination websites. Each may have different processes and release different information.

Simple recommendations such as washing at 30 degrees or washing on shorter washes could be suggested. Comparing the CO2 and the electricity cost saved by changing from a 40-degree wash to a 30-degree wash or a 60-minute wash to a 30-minute wash could be communicated.

The associated microfibres and microplastics discussed in point 2.8 continue to be a substantial environmental issue with limited solutions at present. Actions such as washing polyester clothing in a 'Guppy Friend' bag<sup>53</sup> (a smooth bag in which polyester clothing is put before putting it in the washing machine) captures any loose microfibres within the bag, could be considered by consumers and suggested on retailers' websites in the care section. These bags retail at 25GBP, which if buying specifically for cricket clothing is an added cost to an already cost-intensive sport. Washing machines with a microfiber filter or external microfiber filters<sup>54</sup> that can be added to existing machines are now available on the market and might be considered; these also come with added costs and require some skills to fit, so they may not be practical to implement for many customers.

Care instructions and manuals could be easily added to many cricket brands and retailer websites. While there is a debate that providing this information reduces sales as customers are encouraged to repair rather than buy new, it does open up new business models in terms of repair kits and services. Additional information could be added to websites on how to repair, remake and refresh clothes to make them last longer, including videos and articles about removing stains and odours, repairing zips and refreshing white clothing.

Other clothing sectors such as fashion have done this. H&M, for example, have a section on their website about caring for your garments. Topics include how to keep whites white, care for synthetics, and keep microfibres out of the ocean—all issues which apply to cricket

<sup>53</sup> <https://en.guppyfriend.com/products/guppyfriend-waschbeutel>

<sup>54</sup> <https://planetcare.org/>

clothing. Organisations such as the V&A Dundee are also working to educate people on how to extend the life of their garments<sup>55</sup>.

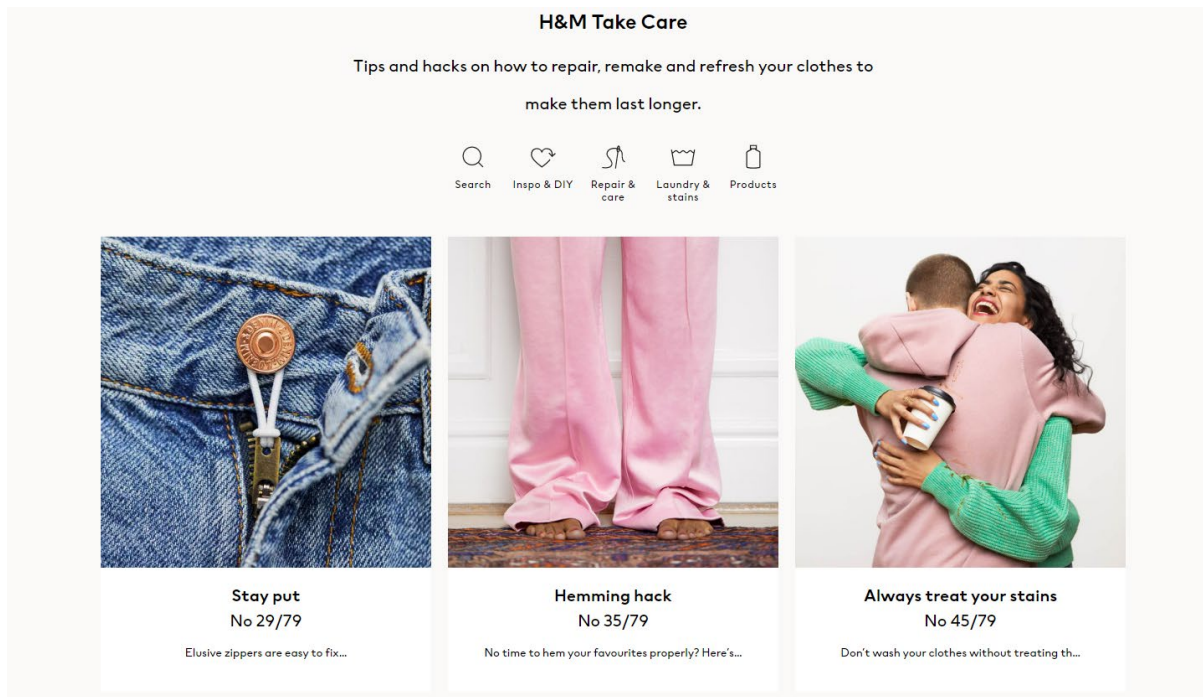


Figure 8 Screenshot from H&M website Take Care section

### 5.3 Staining

It is unknown what the main issues are in the use phase. It could be assumed that tears and staining are two of the main problems. Staining may occur either from the red ball or grass stains on white and coloured clothing but will be more obvious on white clothing. However, no data has been found on why and the frequency of which players would need or want to replace their cricket clothing.

### 5.4 Repair

No data has been found on if players would take the time and expense to repair their cricket clothing. Players may lack the skills to repair, be unwilling to pay for a repair or believe replacing rather than repairing their clothing is more practical as the clothing costs are low.

Repair cafes, where people can take objects or garments to be repaired, could play a vital role for those who want to repair their clothing or equipment but do not have the skills. Repair cafes encourage a mentality of repair rather than replacement. If held within cricket club venues, it could help both the extension the life of garments but can add social value by bringing communities together, with the cricket club as the destination. However, the types of repairs done by a repair café are usually repairs to seams or replacement zips which may differ from the repairs needed to cricket clothing which could require patching or stain removal. These may require different skills and rely on volunteers who are able to mend a wide range of clothing repairs.

<sup>55</sup> <https://www.vam.ac.uk/dundee/info/sewing-box-for-the-future-resources>



Despite opportunities to extend product life, there still seems to be a preference for purchasing new clothing partly due to the cost of replacing compared to repair, the convenience of buying new compared to finding repair services, and preferences towards having new clothing.

### 5.5 Hand me downs-informal sharing networks

Sharing garments, especially as children grow out of them, has been an informal common practise; this may be done through friends or family networks, parents at school, or within clubs. Handing down cricket clothing and equipment enables an extended use phase for the garment but also reduces costs of buying new. This is an informal process, and it is hard to quantify or track its impact. However, it offers the potential for garments to have multiple lives. The ECB All Stars programme provides children with a shirt with their name on it, so it then becomes difficult to hand this down.



Figure 9 Shows ECB All Stars T Shirt with Personalised name, creating a barrier for reuse.

Covid 19 has been a factor in the reduction of sharing clothes between friends and informal networks. Some stakeholders spoke about previous practices, such as a communal kit bag belonging to the club, which contained equipment players would share. During Covid 19, there has been a change in how players socially distanced in spaces such as the changing room; some schools now advise children to come dressed in their PE kit on days they have sport rather than getting changed together at school as was the norm pre Covid. Children may now come dressed for cricket and require their own complete set of clothing and equipment rather than borrow or share items.

## 5.6 Reuse Schemes

The reuse schemes identified for cricket clothing to date are:

- Lord's Taverners Sports Kit Recycling Scheme
- The Cricket Kindness Project, also known as [cricketcharity.org](http://cricketcharity.org)
- Bat for a Chance
- Play it Again Sport (accepts all sportswear, not specific to cricket)

Of those identified for cricket Lord's Taverners and Cricket Kindness are the most established. However, they are both small scale operations driven by individuals rather than larger establish networks that you might see in other areas e.g., Furniture Re-use Network.

### 5.6.1 Lord's Taverners Sports Kit Recycling Programme (LTSKR)

LTSKR is an established organisation known for accepting cricket clothing and equipment for reuse. They have a centralised warehouse in Ipswich where they categorise and organise the donations. Using their network of donation hubs, usually cricket clubs, LTSKR enables players to drop their unwanted garments with local clubs, who then arrange donations to be sent to the centralised warehouse in Ipswich at agreed intervals.



Figure 10 The white pins indicate collection hubs for LTSKR

The map above shows the collection hubs for LTSKR, while a number of collection points exist, they can be concentrated in particular areas, resulting in some geographical locations having multiple convenient drop off points while others may have none. Collection hubs are voluntary so rely on the willingness of clubs and volunteers.

Lords Taverners ask all donors to

- ensure that all items are properly cleaned and usable
- all clothing/equipment must be in a sealed container, box, or bag

Collection hubs have the right to refuse any donation on LTSKR's behalf if the above steps are followed. LTSKR have a collection standards document on their website detailing what garments they will take and in what condition. Despite clear guidelines, LTSKR receives items in various conditions, evident during a site visit conducted in June 2022. The reuse scheme primarily covers cricket equipment and clothing, but also takes other sportswear.



**LORD'S TAVERNERS**  
**Sports Kit Recycling**

Donate your sports kit so that you can give someone else the chance to enjoy sport

 <b>Good to go</b>	 <b>No thanks</b>
 Cricket, rugby & football equipment	 Other sports equipment (e.g. hockey sticks)
 Tennis balls, cones, bibs and other coaching kit	 Goals, scrum bags, corner flags, weights
 General sports clothing, trainers and boots	 Intimate items (e.g. sports bras, underwear, jockstraps)
 Paired items are tied together	 Unpaired (1 cricket glove)
 Clothing is washed	 Broken, large holes or rips
 Shoes are cleaned of mud	 Rust, mould or blood

Please donate usable sports kit only

[www.lordstaverners.org/sportskitrecycling](http://www.lordstaverners.org/sportskitrecycling)

Figure 11 LTSKR Collection standards document.

Their goal is to limit any items going to landfills; if clothing and equipment are in usable condition, they will reuse them. During the site visit, clothing from multiple sports, charity event T-shirts, and new stock was seen. Cricket shoes were also seen, and staff members did repairs such as replacing spikes on shoes.

Sorting garments and equipment is a highly labour-intensive job. All items received are counted and recorded. Sometimes a single item (which should belong to a pair, for example, pads, shoes, or gloves) are donated. The recycling centre will hold onto these in the hope they can make a pair in future. Undertaking the time-intensive task of going through boxes of individual items to find possible pairs at regular intervals. When the pallets of donated items are received, they are weighed. Any plastic or cardboard is weighed and recycled, and all usable items are recorded for potential reuse. Any items beyond use are weighed so that LTSKR can quantify the wastage and measure their impact. At the time of writing, around 95% of everything received could be reused. This high figure is due to the dedication of the staff members and shared values of not letting any useable items go to waste.

In 2019, LTSKR doubled the number of kits distributed, supporting groups in need such as refugees and asylum seekers, minority groups, and those living in deprivation or without access to team sports. In 2019 shipments were sent to 17 countries, with the biggest shipment to Brazil. In the same year, LTSKR supported the provision of sports kits to the Wicketz programme in the UK (another initiative by Lords Taverners supporting young players).

In 2019 LTSKR donated and distributed

- 11,000 jumpers and training jumpers
- 4750 trousers and bottoms
- 1000 pairs of shoes, boots and trainers

Including clothing and equipment, 10,000 kg of kit was donated, and 25,000 people benefited from the donations. Almost 18 tonnes have been saved from landfill in the last 3 years<sup>56</sup>.

By providing equipment and clothing to those in need, LTSKR has a substantial social impact. There are various case studies on their website demonstrating how making cricket gear accessible and removing barriers to participation in sport can improve self-esteem and engage communities. are available on their website. Key impacts include increased opportunities for young people to join teams, have access to coaching, and regularly play team sports and compete. This has improved health and fitness benefits and builds confidence and self-respect. Providing support to marginalised and economically disadvantaged groups allows access to sports that previously would not have been possible.

Due to the strong demand for clothing and equipment from other countries, much of the cricket clothing is donated overseas. Cricket clothing brands may also impose contractual agreements prohibiting resale or reuse in the UK to protect brand image. It is unclear how much clothing and gear is re-used in the UK. When applications are received, LTSKR does a level of due diligence on the applicants to ensure that the clothing goes to recipients who need it. Successful applicants are asked to do a case study or take pictures as this can help demonstrate some of the impacts of providing clothing to players in need and reducing barriers to sports participation. The scheme is funded as part of the Lord's Taverners Charitable Programmes.

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<sup>56</sup> <https://www.lordstaverners.org/how-we-help/charitable-programmes/sports-kit-recycling/case-study-brazil/>

LTSKR relies on the demand for clothing to ensure that the warehouse does not become a storage centre for cricket clothing; instead, clothing moves from those who no longer need it (either brands who have excess stock or players who no longer have use for their clothing and equipment) to those who have needs. Difficulties in importing used clothing into certain countries have caused logistical complexities. There is often a need to support getting shipments through customs and spend time on the accompanying paperwork.

The small team at LTSKR is committed to ensuring that as little cricket and other sports gear and clothing as possible goes to waste and appears to have strong personal motivations to ensure that all usable equipment is reused. If a piece of clothing and/or gear cannot be reused, they will salvage components, e.g., on cricket shoes, they will remove usable spikes so these can be reused on other shoes. It is clear that the team at LTSKR share the values of the scheme and their knowledge, passion and determination to provide kit to those in need is a massive factor in the scheme's success.

### **5.6.2 Cricket Kindness**

Tamara Lowe originally founded the Cricket Kindness project in Australia in 2016. Now established in the UK in 2021, the organisation is self-funded and managed by Tamara. The organisation has donated over 9000 cricket shirts<sup>57</sup> to the Caribbean so far and has received donations from several UK clubs; the details of how they collect and distribute equipment are detailed in the below graphic.

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<sup>57</sup> Some organisations measured quantities in Kg while others quantified by garment pieces



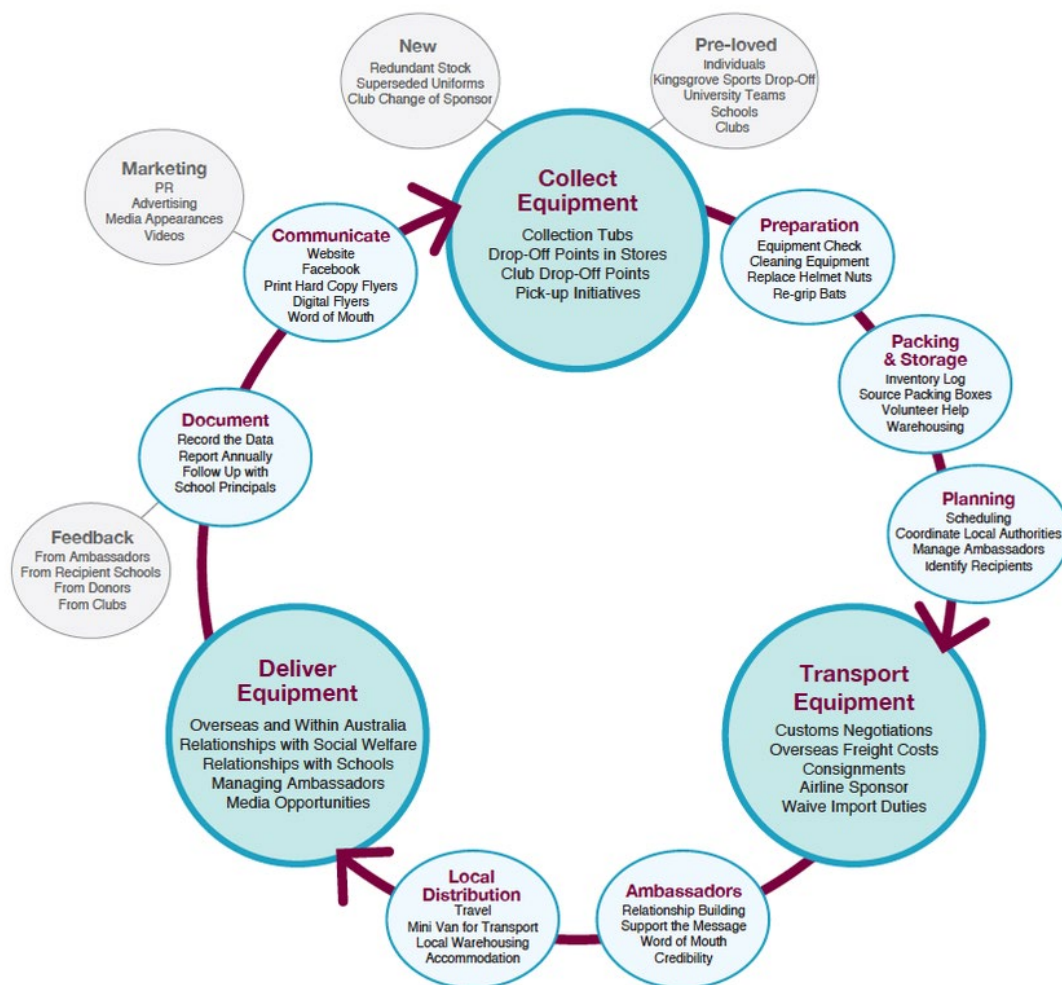


Figure 12 Image showing the process of Cricket Kindness collection and reuse<sup>58</sup>.

Their Kit Recycling Programme collects;

- Quality cricket gear from clubs, schools and families
- Surplus cricket kit from manufacturers, which is excess inventory

All equipment donated must be in good condition. Guidelines relating to the condition of donation are also listed online. However, these mainly refer to equipment, not clothing, such as no holes in gloves or pads and no broken helmets or bats. The organisation has collection hubs in London, Warrington, Newcastle, Nottingham and Hertfordshire.

Most donations are sent abroad, mainly to the Caribbean, including Antigua & Barbuda, Barbados, Trinidad, Nevis, Guyana, Sri Lanka, Fiji, The Solomon Islands, Nepal, Sierra Leone and Australia, giving access to players to participate in sport. Donations are not provided to individual players but to clubs or schools so that all players can share items. This avoids jealousy as each player can access the kit rather than being owned by a particular player. This is reminiscent of the communal kit bag that used to be shared in cricket clubs in the UK.

<sup>58</sup> Image subject to copyright. <https://www.cricketcharity.org/2017-junior-cricket-gear-appeal/>

The impact of the scheme has been significant. In Antigua, the programme has made donations to every primary and secondary school, and in Barbados, donations have been made to 100% of secondary schools and 85% of primary schools.

From an interview with Tamara, it is clear that Cricket Kindness is built on purpose (see section 5.13) and her desire to do good. She is personally invested financially and emotionally and travels with the shipments to ensure they are received and distributed fairly.

### **5.6.3 Bat for a Chance**

Bat for a chance was set up to support underprivileged children enjoy the joy of cricket. Their website states they have donated over 1000 items across ten deliveries to overseas countries including Lebanon, Sri Lanka, Trinidad, Uganda and Bosnia. They also donate within the UK, partnering with England Deaf and the MCC Foundation. They have 25 collection points, with 12 donation hubs in the South East and 1 in Trinidad and Tobago.

### **5.6.4 Play it Again Sport**

While not explicitly focused on cricket, Play it Again Sport is an example of how reuse schemes can have a powerful impact on local areas and be a catalyst for other sustainable initiatives.

Play it Again Sport, based in Wales, reuse sports items donated within their local area and focus on supporting communities which may be unable to access sports clothing and equipment due to affordability. Play it Again Sport also provide access to play sports, from putting on sports activities to driving people to sports activities in their electric car. This removes barriers to sport both financially and practically.

Part of the reuse scheme's goal is to divert clothing from landfills and reduce the number of microfibers released. This means that novel ways of using the garments received are considered, such as using race t-shirts (which have little to no resale value) to be turned into shopping bags for the zero-waste shop. They also use damaged equipment for demonstration purposes rather than throwing it away.

### **5.6.5 Issues with donations**

In all the reuse examples, stakeholders commented on the issue of the condition of goods received. For example, one scheme received a large donation of trainers; however, the trainers had been covered in mud and left for many months, so there was time and labour needed to clean products and get them into a condition that could be reused. Some shared stories of receiving donations which were not sports clothing which their scheme could not use.

There was also a suggestion that there can be a tendency for people to think that if they donate a garment, it's better than throwing it away even if the item is not usable or has low reuse potential. There was a feeling from multiple stakeholders interviewed that donation could be a method of shifting the responsibility, as many of the items received may not be able to be used again due to their condition and donating them made disposal someone else's task.

Some stakeholders spoke of donations being offered with caveats. Such as private schools offering donations but stating they would only send the sports clothing if the reuse organisation took their unwanted uniforms too. This puts reuse organisations in a difficult position, grateful for the sports clothing but having to accept items for which they have no reuse opportunity. Suggestions include charging large organisations for taking the items and reusing them responsibly. As discussed in section 3.7, Extended Producer Responsibility could become a significant issue for brands to manage and reuse organisations may have a role in handling garments when players have finished with them.

#### **5.6.6 Networks**

Stakeholders commented that it would be helpful if reuse schemes could be set up in different regions, allowing for sports equipment, including cricket clothing and gear that was more needed in a particular area to be shared. For example, a stakeholder shared that they had been given several wetsuits that may have been more relevant to a location with good access to water sports. They had also received a large donation of hockey sticks of limited use in their region. Having multiple collection points in different regions enables donation opportunities to spread.

Anonymisation is important in some small local areas, a stakeholder shared there can be a stigma in resharing donations as it was clear who had previously owned the items, and they were second-hand. In some areas, it could be important for individuals to look like they had new clothing and equipment so that it was evident they could afford it to others within their peer group. Sharing clothing and equipment nationally would allow for an increased level of anonymity. However, as mentioned previously, local club logos and sponsors of the clothing and gear are likely to create challenges in that respect.

Collection hub networks are vital, allowing players to donate items locally that could be consolidated and sent to a central location for processing. 'Buy in' from local councils was necessary for an organization who placed donation bins in public venues such as leisure centres. In contrast, willingness and volunteers from cricket clubs was key for others. Having access to numerous points where players can quickly drop off garments is fundamental to the success of all these schemes.

#### **5.6.7 Social value**

The social value created by the reuse schemes is an important factor. All reuse schemes interviewed shared numerous examples of how the accessibility of the kit has supported increasing the self-esteem of the person who had received it. Providing access to cricket clothing and sports activities added the most social value, primarily where schemes such as training programmes, coaching opportunities or future employment existed. Freddie Flintoff recently highlighted the social value that participation in cricket can bring in a BBC documentary 'Freddie Flintoff's Field of Dreams'<sup>59</sup>. Making the sport accessible (especially in areas of high deprivation) by providing clothing and gear at grassroots level enables a greater level of player diversity to access the game, and opens up opportunities to new players.

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<sup>59</sup> <https://www.bbc.co.uk/programmes/m00190pb>



### **5.6.8 Funding**

The success of the cricket clothing and gear reuse initiatives has been driven by individual purpose and determination. A small number of schemes have been identified and broader stakeholder support is needed to ensure these schemes have the resources they need to continue. External financing had to be sought by the majority of the schemes interviewed. Stakeholders shared that they regularly pitch for funding, as funding received is often timebound, and the lack of reliable funding over the long term to support the continuity and growth of these schemes is a challenge. Some schemes are self-funded by the founders, raising questions over the role of individuals, local-level policy, global brands' and ECB responsibilities for the wider health of the game.

### **5.6.9 Purpose-driven**

Having interviewed key staff at LTSKR, Cricket Kindness and Play It Again Sport, the common theme was that they are all purpose-driven. Some do not take a salary, some have to pitch for funding for their salary, and some have to regularly quantify the scheme's impacts to others as part of funding requirements. Some shared that many initiatives had a reliance on volunteers and that relying on the goodwill of volunteer workers should not be a replacement for paid staff.

All those interviewed who worked in reuse schemes went above and beyond any job description and were all driven to add social value to do good and support others. This leads to fragility in the reuse system for cricket clothing and gear, as it depends on a minimal number of organisations and people whose knowledge, connections and willingness cannot easily be replaced. Since these schemes have taken a voluntary responsibility to create reuse infrastructure it is important these organizations are supported with the necessary resources so that lessons can be learnt to either grow the schemes or for other organisations to enter the reuse market.

## **5.7 Resale**

Resale opportunities for cricket clothing are limited, due to the nature of the game, used garments are often stained and can look visibly worn, especially white clothing.

### **5.7.1 Position in the UK**

There is a limited opportunity for resale. Sites like eBay, Facebook marketplaces, Vinted and Depop offer consumer-to-consumer sales platforms in broader clothing and fashion markets. Although Play it Again Sport is technically a resale platform, its primary motivation is to promote reuse, which is reflected in the prices they charge for the goods on their website<sup>60</sup>; hence, they have been included in the section on reuse rather than resale. One stakeholder shared that in their experience within the UK, it was essential to acknowledge the need to put a small cost on the goods - for example, a pair of trainers which may cost 40-50GBP would be sold for 3GBP, but by allowing the goods to be bought rather than given away, allowed the customer to retain self-esteem and a sense of pride, rather than it being viewed as charity.

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<sup>60</sup> <https://www.playitagainsport.wales/shop/>

Charity online shops such as Oxfam allow customers to filter by keywords and search for cricket clothing<sup>61</sup>. At the time of writing, no white cricket gear appeared in the search. Visits to a local charity shop in Greater Manchester identified that cricket gear was being donated but not clothing and that the items' condition varied, with some being heavily used.



Figure 13 Image shows condition of cricket equipment for sale in a Bolton Hospice charity shop on May 29<sup>th</sup>, 2022.

What happens to clothing that cannot be reused or sold in charity shops warrants further research. The Salvation Army, an international charity organisation, states on their website

*Any items that we are not able to sell in our shops are sold for reuse overseas. This means we are acting responsibly with all donations to raise essential funds for The Salvation Army and to avoid unnecessary waste going to landfill by encouraging reuse and recycling. The need for pre-owned clothing in less affluent countries than the UK is significant. There are many people who can't afford new clothes, which makes second-hand Western fashions popular. It also gives charities a route to provide affordable clothing to those that need it and raise funds for good causes<sup>62</sup>.*

Lack of transparency from charity organisations who collect garments and where they end up means consumers have little knowledge of what happens to their garments when donated.

The resale opportunity for cricket clothing does appear limited. It is assumed much of the clothing is thrown away in landfills or becomes long-term stored waste. Many of these clothing items are still in usable condition; it would be beneficial to understand if there is another way to utilise them.

<sup>61</sup><https://onlineshop.oxfam.org.uk/searchresults?N=&No=0&Rdm=669&Nr=product.active:1&type=search&Nf=&Ns=null&Nrpp=30&Ntt=cricket%20clothing>

<sup>62</sup><https://www.salvationarmytrading.org.uk/donating/what-happens-to-your-donations#:~:text=Any%20items%20that%20we%20are,by%20encouraging%20reuse%20and%20recycling.>

### 5.7.2 Resale and disposal in overseas markets

It is believed that cricket clothing is not explicitly separated from other clothing and may be treated similarly. Many clothes are sent abroad to locations such as Ghana, where large second-hand clothing markets exist. An example is Kantamanto market which receives 15 million items per week; upon receipt, 40% of these are considered waste. While second-hand clothing has been an essential part of their economy, the quantity of clothing donations overall is overwhelming. These markets may be used as dumping ground for unwanted clothing sent from the West. It is unknown to what level cricket clothing specifically contributes to this issue.

### 5.8 Garment to Garment Recycling

Only 1% of all used clothing is made into new clothing. At the time of writing, no closed-loop recycling programme for cricket clothing could be found. Puma has been testing an initiative called Re:jersey<sup>63</sup>, a garment-to-garment recycling programme for football shirts which offers a case study for the cricket sector. Puma states on its website that the garments are chemically broken down into their main components (depolymerisation) in the recycling process. Colours are then filtered out, and the material is chemically put back together to create a yarn (repolymerization) with the same performance characteristics as virgin polyester. The resulting football shirts are made from 75% recycled football jerseys. The remaining 25% comes from Seaqual<sup>®</sup> Marine Plastic<sup>1</sup>.

### 5.9 Disposal

No data has been found on what happens to cricket clothing at the disposal phase. There is speculation that like other clothing and fashion garments much ends up in third countries. Images from Chile show tonnes of clothes dumped in the desert to avoid paying any tariffs on the goods. At the same time, images from Ghana show clothes buried in sand, contaminating beaches or landfills already over capacity.



guardian • Following  
Atacama Desert

guardian The dangerously high environmental cost of fast fashion is impossible to ignore in these images.

They show at least 39,000 tonnes of discarded clothes dumped in Chile's Atacama desert. That's equal in weight to about 85,000 grand pianos.

The items are largely leftovers from the fast fashion industry, according to the news agency AFP, which published these images from September this week.

It found that about 59,000 tons of clothing end up at the port in Chile every year. Of that, at least 39,000 tons was moved into landfills in the desert.

"This clothing arrives from all over the world," said Alex Carreno, a former employee in the port's import area.

He said that as no one paid the necessary tariffs to take it away, "what is not sold to Santiago nor sent to other countries stays in the free zone".

Figure 14 Image shows clothes dumped in Chile's Atacama Desert, image from the Guardian Instagram page.

<sup>63</sup> <https://about.puma.com/en/newsroom/corporate-news/2022/03-23-2022-rejersey>





Figure 15 Clothes buried in the sand in Ghana<sup>64</sup>

At the disposal stage, cricket clothing is not independent of the wider clothing industry. Many disposal options such as landfills or burning clothing for waste to energy will be applied to cricket clothing, with their associated impacts.

### 5.10 Summary

There is a lack of data on the use, reuse and disposal phases of cricket clothing. Quantitative data is needed to measure the impacts and understand the issues limiting first-life use and inhibiting reuse, such as sponsorship or staining. Reuse schemes play a vital role in extending the use phase of cricket clothing but are very under-developed and potentially quite fragile; these are often purpose-driven and underfunded. Donations to overseas markets such as Ghana are likely to include cricket clothing, passing the responsibility for what happens to the garments to another location. Potential EPR legislation in the UK, if implemented will increase recycling and may lead to more reuse and repair, but new infrastructure will be needed for clothing and textiles. This and other drivers may catalyse greater transparency into the 'end

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<sup>64</sup> <https://www.youtube.com/watch?v=YnKEJprS3xM>

of life' of cricket clothing. Garment to garment recycling examples such as Re:Jersey (Section 5.8) offers potential for cricket clothing, and more examples may emerge as there is more certainty over EPR policy.

## **Section 6 Conclusions and Recommendations**

This report is part of The Centre for Sustainable Design<sup>®</sup> (CfSD) investigation into sustainable cricket gear and clothing. This document focused on cricket clothing, specifically cricket shirts, sweaters, trousers and caps/sunhats. It is a final report based on desk research, stakeholder interviews and site visits. The prime focus of the report is primarily on England and Wales and the amateur game.

### **6.1 Research Gaps**

From the research conducted to date, multiple research gaps exist. Limited data is available in the public domain on the size of the cricket clothing market, the frequency of purchase by players, and how cricket clothing is managed once no longer needed.

### **6.2 Overall Findings**

- There is a lack of data on the size of the cricket clothing market in the UK.
- Supply chains are very opaque, and transparency around where and how goods are made has been difficult to find.
- Growth in world participation will increase demand for cricket clothing.
- Cricket 'whites' have traditionally been the norm for the majority of amateur cricket.
- The volume of coloured cricket clothing worn in amateur and professional games is increasing compared to cricket whites.
- There is a lack of data on what happens to cricket clothing when a player has finished with it, e.g., at the end of the (1<sup>st</sup>) use of the lifecycle.
- Technical and performance barriers regarding material and regulations within the game can inhibit sustainability efforts.

#### **6.2.1 Materials**

- Most cricket clothing is made from virgin polyester on an amateur level or polyester and elastane on a professional level.
- Printing limitations and performance demands limit the materials from which cricket clothing can be made.
- Innovation within material choice has been limited. However, Warwickshire County Cricket Club trialled a bamboo polyester mix cricket shirt, and cricket shirts made from recycled polyester have been worn on an ad hoc basis at a professional level in some countries.
- Coloured clothing requires sublimation printing, which needs a high percentage of polyester to print on successfully.

#### **6.2.2 Production**

- Two types of production strategies have been identified,
  1. Stock production: mainly manufactured in Asia, generally large quantities committed to in advance, primarily white polyester cricket clothing.

2. On-demand production tends to be more locally sourced, coloured clothing, with some production in the UK and additional finishing such as printing, and embroidery done locally.
- China, Bangladesh, and India have been identified as countries for stock production. In comparison, the UK and Pakistan have been identified as manufacturing on-demand production.

### **6.2.3 Factors influencing sustainability in cricket**

- The ECB and ICC have regulations governing cricket clothing.
- The repercussions for violating the regulations can be expensive, creating a barrier to some types of innovation, particularly regarding using coloured waste materials.
- Sponsorship can mean clothing has to be changed more frequently than needed and can be a barrier to reuse.
- Affordability issues within cricket predominantly refer to equipment rather than clothing, as entry price point clothes exist.
- Female players are not catered for in the same way as male ones.

### **6.2.4 Use phase**

- No data has been found on the impacts in the use phase of cricket clothing.
- It is unknown how long players usually use their cricket clothing and the reasons for disposal.
- Changes in sponsorship and players require teams to update clothing more frequently within the professional game.
- There is little guidance on how to care for, extend use, and sustainably dispose of cricket clothing. This information would benefit amateur players and consumers.

### **6.2.5 Reuse**

- A limited number of reuse schemes exist. Four programmes have been identified, the most well-known being the Lord's Taverners Sports Kit Recycling Scheme.
- Donations to these reuse schemes are a mix of excess stock<sup>65</sup> from brands and also clothing that players have used and are now finished with.
- There appears to be little re-use of excess stock or end of (1<sup>st</sup>) life cricket clothing in England and Wales, with a lot of items being sent overseas.
- Excess stock may need to be sent abroad due to contractual obligations agreed with sports brands or demands from overseas players.
- The condition of used clothing donated varies with some items visibility heavily used. This can affect reuse opportunities, especially if players have a preference for nearly new clothing.
- Sponsorship and club logos create a barrier to reuse by other clubs
- Informal hand-me-down sharing exists; however, this is difficult to quantify.

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<sup>65</sup> Excess stock is usually unsold inventory that has never been worn. It may still have all packaging and labelling intact.

- There has been an increasing demand for personal ownership of cricket gear and clothing over the past 20 years. Previously a shared club kitbag may have provided items for players to use while playing at the club.

### 6.2.6 Disposal

- No research has been found on the disposal of cricket clothing.
- It is assumed that cricket clothing is either disposed of within domestic waste, given to textile recycling banks, donated to charity shops or donated to one of the reuse programmes identified.
- It is unlikely cricket clothing is sorted specifically from other clothing, and therefore it is likely to follow a similar disposal route as all other clothing.
- Generally, a high percentage of clothing is sent to 3<sup>rd</sup> markets for second-hand sale. Some of these markets are at capacity, and a significant portion of clothing is considered waste and sent to landfills.
- Some initial indications are that good quality cricket and other sports clothing may be re-used in 3<sup>rd</sup> markets as leisure wear.

### 6.3 Conclusions

- With over 300 million people estimated to play cricket worldwide and 300,000 in England and Wales, cricket has a significant impact and multiple potential sustainable opportunities exist.
- The game of cricket is going through significant change, and the 'white format' is bringing in more coloured clothing in the professional game. There are indications that more coloured clothing is starting to be worn in amateur men's and women's games.
- As identified in the BASIS (British Association for Sustainable in Sport) Hit for Six report<sup>66</sup> cricket will be one of the sports most affected by climate change, and sustainability is becoming increasingly important to many stakeholders. Much of the focus has been on stadia, and further investigation is needed into how to increase sustainability in cricket clothing and other gear.
- There are significant gaps in research related to the development, use, reuse, repair, recycling and disposal of cricket clothing.
- There has been limited innovation in the materials used to make cricket clothing, with virgin polyester as the dominant fibre.
- The minimal reuse infrastructure seems to be geared to distribute clothing and other gear overseas, with limited reuse within England and Wales.
- A lack of transparency within the supply chain creates a barrier to a greater understanding of the social and environmental impacts of cricket clothing production.
- There is a significant lack of knowledge over what happens to the end of (1<sup>st</sup>) use clothing. There are indications that some of it is reused through the limited number of reuse schemes.

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<sup>66</sup> <https://basis.org.uk/resource/hit-for-six/>

- With only 1% of clothing (generally) being recycled, it can be assumed that only a tiny fraction of cricket clothing is recycled.

#### **6.4 Recommendations**

- Establish a stakeholder working group to focus on sustainability (and within it circularity) of cricket clothing that aims to clearly understand data gaps and barriers to reuse, repair, and recycling. Stakeholders to be briefed to produce a roadmap that aim to increase sustainability considerations in cricket clothing. This might be aligned with DEFRA policy activities related to the potential introduction of Extended Producer Responsibility (EPR) and eco-design for the clothing and textiles sectors.
- Set up a forum to understand the sustainability (and within it circularity) of clothing across sports sectors to determine good practices and barriers that might be transferred between sports in cricket.
- Cricket brands to commit to greater transparency concerning their supply chains by publishing country of origin for their garments (and where possible, details of the manufacturing units used) on their websites.
- Sports clothing stakeholders to collaborate, sharing best practice e.g. FIFA Pledge to support the cricket sector develop and build on existing sustainability frameworks.
- Conduct additional research into the research gaps identified within this report, to develop greater understanding and deeper investigate opportunities identified.
- Accelerate material innovation and recycling infrastructure development related to cricket clothing.
- Develop alternative ways to show sponsorship and cricket clothing to give it a longer usable life could reduce the volume of discarded clothing.
- Explore sustainable innovation and R&D happening in clothing, fashion and sectors, with a view to knowledge transfer to cricket clothing. For example, technologies and processes related to removing badges, printed logos ad sponsorship on cricket clothing.



## Appendix 1: Green Claims Code

On the UK HM Government Competition and Markets Authority (CMA) website<sup>67</sup>, the following questions are listed to support companies when making sustainable statements.

When making a green claim, the Competition and Markets Authority states a business should be able to answer 'yes' or agree to each of the following statements:

- 1. The claim is accurate and clear for all to understand*
- 2. There's up-to-date, credible evidence to show that the green claim is true*
- 3. The claim clearly tells the whole story of a product or service; or relates to one part of the product or service without misleading people about the other parts or the overall impact on the environment*
- 4. The claim doesn't contain partially correct or incorrect aspects or conditions that apply*
- 5. Where general claims (eco-friendly, green or sustainable for example) are being made, the claim reflects the whole life cycle of the brand, product, business or service and is justified by the evidence*
- 6. If conditions (or caveats) apply to the claim, they're clearly set out and can be understood by all*
- 7. The claim won't mislead customers or other suppliers*
- 8. The claim doesn't exaggerate its positive environmental impact, or contain anything untrue – whether clearly stated or implied*
- 9. Durability or disposability information is clearly explained and labelled*
- 10. The claim doesn't miss out or hide information about the environmental impact that people need to make informed choices*
- 11. Information that really can't fit into the claim can be easily accessed by customers in another way (QR code, website, etc.)*
- 12. Features or benefits that are necessary standard features or legal requirements of that product or service type aren't claimed as environmental benefits.*
- 13. If a comparison is being used, the basis of it is fair and accurate and is clear for all to understand*

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<sup>67</sup> <https://greenclaims.campaign.gov.uk/>

## Appendix 2: Images - Various

### Images from Decathlon site visit



Figure 16 Junior cricket kit in Decathlon store



Figure 17 Adults cricket kit in Decathlon store



Figure 18 Kookaburra Care label



Figure 19 Gunn and Moore Care label




Figure 20 FLX Care Label



Figure 21 Decathlon's own brand junior shirt



Figure 22 Gunn and Moore junior shirt



**The carbon footprint of this product is:**  
**4.44 kg CO<sub>2</sub>e**

1 kg of CO<sub>2</sub>e represents 5km in a petrol car (according to the Base Carbone® of ADEME)

[Find out more](#)

The image shows a group of people hiking in a mountainous landscape. Below the image is a text box containing the carbon footprint information for the product.

Figure 23 Shows the carbon footprint for the FLX Decathlon shirt as shown on its online store.

### **Appendix 3: PASIC (Platform for Accelerating Sustainable Innovation Cricket)**

The Centre for Sustainable Design ® (CfSD)<sup>68</sup> have partnered with British Association for Sustainable Sports (BASIS)<sup>69</sup> to launch a new initiative to open discussions around sustainability, innovation, cricket equipment, clothing, and apparel. PASIC (Platform for Accelerating Sustainable Innovation in Cricket)<sup>70</sup> is an online platform that aims to stimulate discussions, facilitate connections/networking and complete R&D projects related to sustainable innovation in cricket equipment, clothing and apparel. PASIC is a neutral, research-based platform that focuses specifically on cricket.

CfSD is based at the University of Creative Arts' (UCA)<sup>71</sup>, Business School for the Creative Industries (BSCI)<sup>72</sup> and was established in 1995. CfSD focuses on research and knowledge transfer related to sustainable innovation and product circularity and completes research, training, and consultancy projects worldwide. The Centre has organised over a thousand conferences, workshops and webinars for businesses, policymakers and academia and participated in numerous UK and European funded projects. Further details of research, projects and events can be found on the Research and Projects pages of the CfSD website.

BASIS exists to help develop best practice strategies and integrate sustainability into the sports sector primarily focused on venues, facilities, and grounds. Its membership spans a variety of sports including cricket and members including MCC, ECB and county cricket clubs. Through webinars, workshops, and forums, BASIS encourage an open dialogue between leading academics, sustainability professionals and professional sports people, with the aim of inspiring systematic sustainable change within their organisations.

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<sup>68</sup> [www.cfsd.org.uk](http://www.cfsd.org.uk)

<sup>69</sup> <https://basis.org.uk/>

<sup>70</sup> [www.cfsd.org.uk/projects/cricket](http://www.cfsd.org.uk/projects/cricket)

<sup>71</sup> [www.uca.ac.uk](http://www.uca.ac.uk)

<sup>72</sup> [www.uca.ac.uk/business-school](http://www.uca.ac.uk/business-school)