



**Business School
for the
Creative Industries**



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and Innovation**

White Paper

Findings, Learning and Implications for Policymakers and Other Stakeholders related to Sustainability and Cricket Gear

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1. Introduction

Sustainable development is defined as ‘development that meets the needs of the present without compromising the ability of future generation to meet their own needs’.¹ Sustainability applies to all sports and cricket is no exception. However, the environmental component of sustainability is often more widely discussed in the context of society and sports. In cricket, the world’s 2nd largest sport, the two-way relationship between the game and the environment is increasingly being highlighted in studies, for example how the climate and pollution crises are affecting the sport.² In the UK, cricket’s response to sustainability is at an early stage: the England and Wales Cricket Board (ECB) have employed a sustainability manager; and a few county teams have also recruited sustainability managers and made positive steps to reduce the environmental impact of their operations.³ However, the sustainability impact of cricket gear has not been comprehensively covered and acted upon by relevant stakeholders, despite this industry producing an estimated 1,624 tonnes of cricket kit waste per annum in the UK (Table 1).

Table 1 - Annualised summary of waste items and weights based on 2022 data (gloves and pads are paired)

Cricket Gear type	Number of items (000s)	Annual waste (tonnes)
Bats	364	410
Balls	1,805	280
Batting gloves – pairs	496	170
Wicket-keeping gloves – pairs	50	57
Pads (batting and wicket-keeping) – pairs	351	522
Helmets	319	185
Total	3,385	1624

Source: Sustainability, Cricket Gear, Clothing and Apparel: Report on Cricket Gear (July 2022)⁴

In addition to environmental issues, there are wider social and economic issues related to the development, commercialisation and use of cricket gear. The Independent Commission for Equity in Cricket (ICEC) discovered a significant number of social and economic barriers to

¹ Brundtland, G. (1987). Report of the World Commission on Environment and Development: Our Common Future. United Nations General Assembly Document A/42/427

² Hit for Six: The Impact of Climate Change on Cricket. Available at: <https://basis.org.uk/wp-content/uploads/2021/09/Hit-for-Six-The-Impact-of-Climate-Change-on-Cr.pdf>

³ For example, see: Lord Taverners (<https://www.lords.org/lords/match-day/plan-your-day/sustainability>), Warwickshire County Cricket Club (<https://edgbaston.com/news/sustainability-impact-2021/#:~:text=Warwickshire%20players%20wear%20a%20kit,red%20ucing%20the%20overall%20carbon%20footp rint>) and Surrey County Cricket Club (<https://www.kiaoval.com/netzeropledge/>).

⁴ Charter, M., & Clark, T., (2022). Sustainability, Cricket Gear, Clothing and Apparel: Report on Cricket Gear. Available at: https://cfsd.org.uk/wp-content/uploads/2023/06/Sustainability_Cricket-Gear-Final-July-2022-Updated-June-2023-1.pdf

playing cricket in the UK. ⁵ Access to cricket kit is an element of this, with the ICEC report highlighting that standard cricket gear is far more expensive than other sports and there is inequity in the availability of equipment for women and girls. ⁶ Furthermore, the cost of the gear has made it difficult for state-funded primary and secondary schools to provide cricket to their students, leading to only a small percentage being able to participate in the game. ⁷ Therefore, addressing environmental, social and economic issues associated with cricket gear is an integral component in ensuring cricket flourishes for future generations. The Golden Triangle developed by Charter and Czutkowna highlights this and explores the relationship between cricket gear reuse (environmental), participation (social) and cost of living issues (economic).⁸

The Platform for the Acceleration of Sustainable Innovation in Cricket (PASIC) was founded by The Centre for Sustainable Design® (CfSD) ⁹ at the University for the Creative Arts (UCA)¹⁰ in 2021 as an online platform to disseminate information and research on sustainability issues associated with cricket gear. The motivation to develop PASIC came from CfSD identifying a gap in research and information that covered the sustainability of cricket gear.

Feeding into PASIC are several research projects completed by CfSD including the Circular Cricket Gear (CCG)¹¹ project (2022-2023) that explores the feasibility of incorporating circular design principles¹² into cricket gear. CCG is led by CfSD in collaboration with the Centre for Natural Material Innovation (CNMI) at the University of Cambridge and has completed a series of reports, webinars and experiments. CCG built on the findings and learnings from the Vegan Leather Cricket Gear (VLCG)¹³ project (2022-2023) which investigated the potential use of plant based and other vegan leathers in the development of cricket gear and a range of other research related to sustainability and cricket gear that can be downloaded from the PASIC website.¹⁴

This White Paper outlines findings and learning for stakeholders in the cricket industry resulting from the CCG project and other related research completed by CfSD and CNMI. It discusses the implications of findings and learning and provides recommendations for

⁵ ICEC (2023), Final Report press release. Available at: <https://theicec.com/wp-content/uploads/2023/07/ICEC-Press-Release-Report-Published-27.06.23.pdf>

⁶ ICEC (2023). Holding up a Mirror to Cricket: A Report by the Independent Commission for Equity in Cricket. Available at: <https://theicec.com/wp-content/uploads/2023/07/HOLDING-UP-A-MIRROR-TO-CRICKET-REPORT-ICEC-2023.pdf>

⁷ [State of play: Why is cricket struggling to make its voice heard in state secondary schools? \(thecricketer.com\)](https://www.thecricketer.com)

⁸ Czutkowna, J., & Charter, M., (2023). 3Rs: Reuse, Repair, Refurbishment and Resale Report on Cricket Gear. Available at: https://cfsd.org.uk/wp-content/uploads/2023/06/3Rs_Cricket-Gear-Final-June-2023-1.pdf

⁹ <https://cfsd.org.uk>

¹⁰ <https://www.uca.ac.uk>

¹¹ [Circular Cricket Gear project. See: https://cfsd.org.uk/projects/ccg/](https://cfsd.org.uk/projects/ccg/)

¹² Designing a product while considering how elements can be recovered and reused in subsequent products <https://www.taylorfrancis.com/books/edit/10.4324/9781315113067/designing-circular-economy-martin-charter>

¹³ <https://cfsd.org.uk/projects/vlcv/>

¹⁴ <https://cfsd.org.uk/projects/cricket/research/>

relevant stakeholders in the cricket gear sector, from policymakers to clubs, players, and manufacturers.

2. Stakeholder Analysis

There are a range of stakeholders engaged in cricket and the direct or indirect specification and use of cricket gear. This includes stakeholders involved in governing and developing the game, each of whom has a direct or indirect relationship to cricket gear:

- Governing bodies: ICC, MCC, England and Wales Cricket Board (ECB) and County Boards
- Financial backers: Investors, sponsors, broadcasters
- Organisations with an interest in promoting sport activity e.g. DCMS/Sport England, local government, schools and junior sport organisations.
- Followers of the game, including club members and supporters

Stakeholders with interest and influence over the design and development of cricket gear include the following:

- Marylebone Cricket Club (MCC) – make the laws of the game that include restrictions around material for some items used in cricket.
 - Cricket kit brands, manufacturers, and suppliers – Manufacture and sell products used by cricket players, could be a driver of innovation.
 - Standards organisations – set amount of protection and testing required.
 - Customers¹⁵
 - Professional players and coaches
 - Recreational players
 - Clubs
 - Schools
- } These all include users of cricket gear e.g. players

The Appendix includes a detailed analysis of the key stakeholders involved in the development and commercialisation of cricket gear. The involvement of these stakeholders is integral to driving innovation in the cricket gear sector, with cooperation and communication between stakeholders vital.

3. Sustainability and Cricket Gear: Summary of Findings and Learning

The key findings from the CCG project and related research include:

- Sustainability appears to be a low priority to cricket manufacturers in the UK: further research is needed to understand the level of knowledge and awareness around sustainability in cricket brands in the UK and globally. ¹⁶

¹⁵ Customers may not necessary be cricket gear users e.g. parents who buy cricket gear for young people and/or other bodies e.g. ECB that procure cricket gear for youth programmes, etc

¹⁶ Carruthers, R., Charter, M., & Sanchez Moreno, L., (2023). A Review of Cricket Gear Manufacturers & Suppliers. Available at: <https://cfsd.org.uk/wp-content/uploads/2023/07/A-Review-of-Cricket-Gear-Manufacturers-Suppliers-July-2023.pdf>

- There is a vast amount of cricket and other clothing that is currently stored as waste or exported overseas, therefore infrastructure that facilitates second-life opportunities needs to be developed.^{17 18}
- Most of the cricket gear in the UK is produced overseas (particularly in India and Pakistan), which produces a large, embodied carbon footprint when imported to the UK.
- Economic factors such as buying new cricket gear, particularly given the current cost-of-living crisis, are impacting the ability of players from disadvantaged backgrounds from participating in cricket.¹⁹
- Second-life cricket gear is not widely available in the UK. Lord's Taverners²⁰ is the main collector and distributor of donated equipment, but ships an estimated 95% overseas, which adds to the carbon footprint of re-used kit and overlooks the needs of lower-income cricket players in the UK. The reasons why a higher proportion of re-usable cricket gear is not utilised in the UK needs further investigation.
- Resale of second-life gear is generally through large online platforms (e.g. eBay and Vinted)²¹
- There are no examples of services that have been identified to repair and refurbish 'soft' cricket gear²² (gloves and pads) in England and Wales; but isolated examples have been found for helmets and wicketkeeper gloves. The existing model of repair and refurbishment of cricket bats should be considered for 'soft' cricket gear. However, cricket kit brands, suppliers and manufacturers appear to be concerned that product life extension models may have a detrimental impact on profitability, ignoring the opportunities including retaining enhanced brand reputation.²³
- There is a lack of sustainability-driven innovation within the cricket gear industry and existing regulations and laws may be acting as a barrier to innovation. For example, there are opportunities to substitute some of the materials used in 'soft' cricket gear (gloves

¹⁷ Charter, M., & Czutkowna, J., (2022). Sustainability, Cricket Gear, Clothing and Apparel: Report on Cricket Clothing. Available at: https://cfsd.org.uk/wp-content/uploads/2022/07/Sustainability_Cricket-Clothing-Final-28-7-22.pdf

¹⁸ Charter M., Pan B., & Black S (2023)., Accelerating Sustainability in Fashion, Clothing and Textiles <https://www.routledge.com/Accelerating-Sustainability-in-Fashion-Clothing-and-Textiles/Charter-Pan-Black/p/book/9781032225173>

¹⁹ Czutkowna J., & Charter M., (2023). Yorkshire Cricket Foundation Cric-Kit Reuse Report. Available at: <https://cfsd.org.uk/wp-content/uploads/2023/09/Cric-Kit-Case-Study-July-2023-Updated-August-2023.pdf> and 'How to set up a Cricket gear Reuse Scheme. Available at: <https://cfsd.org.uk/wp-content/uploads/2023/07/How-to-Guide-25.07.23.pdf>

²⁰ Lords Taverners Cricket Gear Recycling <http://www.lordstaverners.org/how-we-help/charitable-programmes/sports-kit-recycling/>

²¹ Ibid.

²² 'Soft' cricket gear or 'softs' refers to cricket pads, thigh pads and gloves.

²³ Czutkowna J., & Charter M., (2023). 3Rs: Reuse, Repair, Refurbishment and Resale Report on Cricket Gear. Available at: https://cfsd.org.uk/wp-content/uploads/2023/06/3Rs_Cricket-Gear-Final-June-2023.pdf

and pads) e.g. high-density foam (HDF) and synthetic rubber (oil-derived polymers²⁴ with a high carbon footprint) for lower impact materials.²⁵

- Leather is extensively used for cricket balls, and batting and wicket-keeping gloves. Alternative plant-based vegan leathers (PBVL) are potential replacements but at present have not been applied to cricket gear. Further R&D is required into use of PBVL in cricket gear.^{26 27}
- A Product Sustainability Framework (PSF)²⁸ study²⁹ was completed on a batting glove using traditional bovine leather for the palm compared to a glove made from a PBVL - Piñatex - by Ananas Anam. The findings indicated that while the overall performance of the product in the *use* phase in a PBVL scenario appears to be reduced when compared to the use of bovine leather, the product's overall 'provenance in the supply chain' is substantially improved. Additionally, when using Piñatex, there appears to be an improvement in the product's legacy, specifically in relation to the material's carbon footprint and overall waste from production.³⁰
- Since gloves are often replaced due to odour or holes, and other issues primarily with the palm, the research indicates that the internal foam in the thumb/fingers and thumb protector could potentially be reused.³¹
- Moreover, a batting glove refurbishment exercise indicated that it is possible to repair and/or refurbish the palm which presents the most product failures. The refurbishment

²⁴ Wetherfield, M., Charter, M., Shah, D., & Whitaker, C., (2022). Sustainability, Cricket Gear, Clothing and Apparel: Report on Components, Materials, and Innovation Opportunities. Available at: https://cfsd.org.uk/wp-content/uploads/2022/07/Sustainability_Cricket-Gear_Materials-Final-28-7-22.pdf

²⁵ Shah, D., (2023) Materials in cricket balls, gloves and pads, and their sustainable alternatives <https://cfsd.org.uk/wp-content/uploads/2023/06/Materials-in-cricket-balls-gloves-and-pads-and-their-sustainable-alternatives-June-2023.pdf>

²⁶ Taylor, B., Shah, D., (2023). Application of Vegan Leathers for Cricket Balls and Gloves <https://cfsd.org.uk/wp-content/uploads/2023/07/Application-of-Vegan-Leathers-for-Cricket-Balls-and-Gloves-July-2023.pdf>

²⁷ Sanchez Moreno, L., & Charter, M., (2023). Refurbishing a 'Right-hand' Cricket Batting Glove using a 'Vegan' Chamois Leather <https://cfsd.org.uk/wp-content/uploads/2023/07/Refurbishing-a-%E2%80%98Right-hand-Cricket-Batting-Glove-using-a-%E2%80%98Vegan-Chamois-Leather-July-2023.pdf>

²⁸ The development of the PSF has evolved from the British Standards Institute's SCP/1 Product Sustainability Framework Working Group

²⁹ Sanchez Moreno, L., & Charter, M., (2023). Product Sustainability Framework: A Qualitative Scenario Based Analysis to Assess the Feasibility of Replacing the Bovine Leather Palm in Cricket Batting Gloves with a Plant Based Vegan Leather. Available at: <https://cfsd.org.uk/wp-content/uploads/2023/09/Product-Sustainability-Framework-Cricket-Batting-Gloves-Palm-July-2023.pdf>

³⁰ Compared to the majority of PBVL companies, Ananas Anam, the company that produces Piñatex appears to be open to sharing data regarding their products' environmental and social impact. While complexities exist for quantifying Piñatex's carbon footprint for example, to accurately compare it to bovine leather, Ananas Anam's website indicates that Piñatex does not require additional environmental resources for raw material> the reason for this is that Piñatex is already produced from agricultural waste. Furthermore, it does not use chemicals on the cradle2cradle list of banned substances within its production and claims to have a reduced water usage compared to that of bovine leather. For further details, see: <https://www.ananas-anam.com/responsibility/> For full list of C2C banned list of chemicals, see: http://www.c2c-centre.com/sites/default/files/C2CCertified_Banned_Lists_V3_121113.pdf

³¹ Sanchez Moreno L., & Charter, M., (2023). Refurbishing a 'Right-hand' Cricket Batting Glove using a 'Vegan' Chamois Leather. Available at: <https://cfsd.org.uk/wp-content/uploads/2023/07/Refurbishing-a-'Right-hand-Cricket-Batting-Glove-using-a-'Vegan-Chamois-Leather-July-2023.pdf>

process is relatively simple, but time-consuming process. Therefore, further research is required to explore ways to reduce refurbishment times through for example, designing for disassembly to facilitate the removal and assembly of the palm.

- A survey of players with 42 respondents indicated that 71.4% would consider using cricket gear made from a PBVL alternative. However, the gear would need to match existing products' durability, quality, and performance. Likewise, players would consider affordability as a key factor for transitioning to PBVL cricket gear.³² Therefore, further research is required to advance the technical and functional properties of PBVL for their use within a performance context e.g. in the cricket gear industry specifically, and more widely, in the sporting goods industry.
- Additionally, the survey highlighted that 86% of respondents would consider the use of repair services for cricket gear on the basis that such services were cost effective.³³
- Cricket pads are complex items with multiple components, some of which could be replaced with more sustainable alternatives or reused after other elements of the pad have deteriorated. High-Density Foam (HDF) component has the highest contribution to overall environmental impact and carbon footprint. This component could be replaced with a biobased alternative or reused when other factors have made the item unusable.³⁴
- The player survey highlighted that the main product failures for cricket batting pads were:
 - i) Failures related to the straps e.g. straps tearing off, breaking and/or becoming loose and the Velcro on the straps no longer attaching properly.
 - ii) Issues related to the exterior material e.g. material easily ripping or splits that cause the internal padding to become exposed.
 - iii) Padding related issues e.g. signs of mould due to sweat and storage conditions.³⁵
- Based on the main product failures identified from the survey, a design brief for five prototypes was developed. Due to time, technical and economic constraints, only four design innovations were implemented:
 - i) Innovation #1 consisted in developing the exterior case of a batting pad using a PBVL (Piñatex Light) to replace existing PU Leather.
 - ii) Innovation #2 focused on the reuse of the internal padding of an end-of-life cricket batting pad to reduce the waste generated from end-of-life cricket gear.
 - iii) Innovation #3 demonstrated the successful replacement of worn-out Velcro on existing straps, to extend the life of the product.
 - iv) Innovation #4 focused on developing 3D printed kneecaps using a polylactic acid filament (PLA) and Nylon 6 (Fishy Filament) to replace existing kneecaps made from polystyrene.

³² Sanchez-Moreno, L., & Charter, M., (2023). Final Report: Specific Findings from a Survey of Cricket Players related to Cricket Gear and Plant-based/'Vegan' Leather Alternatives. Available at: https://cfsd.org.uk/wp-content/uploads/2023/04/Final_Players_Vegan_Cricket_Gear-27-04-23.pdf

³³ Ibid.

³⁴ Sanchez Moreno, L., & Charter, M., (2023). Streamlined Life Cycle Assessment: Pair of Cricket Batting Pads. Available at: https://cfsd.org.uk/wp-content/uploads/2023/05/Final-Streamlined-LCA_batting-pads.pdf

³⁵ Sanchez Moreno, L., & Charter, M., (2023). Full Report: Findings from Online Survey: Cricket Gear Users/Players. Available at: https://cfsd.org.uk/wp-content/uploads/2023/09/Survey-of-Cricket-Gear-Users_Players_August-2023.pdf

- Findings from the development of a circular cricket batting pad prototype indicate that:
 - i) Parts and components that remain in good condition such as the internal HDF foam and kneecaps could be reused.
 - ii) Worn-out Velcro and straps can be replaced to extend the life of the overall product.
 - iii) The use of a new PBVL, Piñatex Light, for the external casing of the cricket pad performed well under manufacturing/assembly conditions e.g. the material did not show signs of tearing and was overall easy to stitch using a standard industrial sewing machine. Further research is required to test the PBVL batting pads under standard game conditions.
 - iv) The internal batting pad kneecap was 3D printed using a polylactic acid filament (PLA) and also using nylon filament derived from fishing gear (Fishy Filaments)³⁶. Both prototypes visually matched existing kneecaps, and a simple in-house compression test³⁷ indicated that they are fit for purpose.
- Finding the relevant skills to produce the batting pad prototype represented a challenge as manufacturing of cricket gear is primarily overseas. The lack of skills for batting pads and gloves also affects the availability of repair services for cricket gear. This indicates the need for local upskilling if local production and repair is to be expanded.³⁸
- Manufacturers may be hesitant to support reuse, repair and refurbishment of batting pads and gloves due fears about cannibalisation of sales and third-party reuse, repair and refurbishment due to concerns over health and safety (H&S) implications related to PPE and brand image.

4. Conclusion

Considering the increase of Circular Economy discussion by policymakers, industry, and academia over the last decade, it is surprising that there has been a lack of consideration of circularity and innovation related cricket gear. An exception is the production and commercialised upcycled batting gloves produced by Gray Nicholls.³⁹ Moreover, there is a lack of data on broader sustainability considerations and impacts related to cricket gear across the lifecycle, which indicates that more research needs to be conducted. Research completed by CfSD and partners via CCG and other related projects has highlighted that there are a variety of considerations and opportunities for stakeholders to take action to reduce the environmental impact of cricket gear. These include but are not limited to:

- i) Raising sustainability awareness amongst stakeholders including cricket gear manufacturers and governing bodies.
- ii) Increasing access to second-life cricket gear through re-use within the UK.

³⁶ <https://fishyfilaments.com>

³⁷ Compression resistance was tested by adding manual force to various points across the kneecap to assess the component's integrity. Further testing is required to assess whether it meets existing Personal Protective Equipment (PPE) standards.

³⁸ Sanchez Moreno, L., & Charter M., (2023). Final Report: Circular Cricket Batting Pads: Prototype Development. Available at: <https://cfsd.org.uk/projects/ccg/research/>

³⁹ <https://www.gray-nicolls.co.uk/pages/off-cuts-collection>

- iii) Addressing barriers to product innovation e.g., existing regulations and industry and consumer perceptions to facilitate the implementation of circular design principles within cricket gear; and
- iv) Conduct further research into sustainable materials to replace existing cricket gear parts and/or components.

On a broader level, strides should be taken to make cricket more inclusive, creating a positive social impact. Increasing access to affordable cricket gear is essential and was highlighted in recent findings in the ICEC report. There is a need for further research into the relationship between cricket gear reuse (environmental), participation (social) and cost of living issues (economic). Mechanisms to improve cooperation and communication between stakeholders in cricket is also vital to encourage progress, increase access and affordability, reduce environmental impacts, and ensure cricket flourishes for future generations.

5. Stakeholder Recommendations

The section below highlights key recommendations related to sustainability and in particular circularity of cricket gear, and the relevant stakeholders.

5.1 Design and development: Key stakeholders: Cricket gear brands, manufacturers, and suppliers, MCC and ECB. Other stakeholders with interest and indirect influence: players (all levels), schools and clubs.

- Sustainability needs to be considered more urgently and thoroughly by all brands. Research has highlighted that consumers have begun to demand sustainability in other sectors, particularly amongst younger generations⁴⁰. There is also evidence to show cricketers understand the sustainability impacts of the cricket gear they purchase, use and dispose of, and that some players are interested in cricket gear with lower environmental impact.⁴¹
- There is a need for more research into the environmental impacts of cricket gear and the opportunities to incorporate strategies to increase circularity and reduce embodied carbon in design and development.
- There are numerous simple changes that can be made to cricket gear, including replacing high environmental impact materials with less impactful alternatives. The use of recycled and reconstituted leather should also be considered.
- Reusing components in batting pads and gloves should be considered as structural integrity is likely to remain intact. This could lead to a reduction in cost and environmental impact of items.
- There is an opportunity for a brand to take leadership on sustainability as, as of yet, no brand has stepped up on these issues.

⁴⁰ Forbes (2023). Consumers Demand Sustainable Products and Shopping Formats. Available at: <https://www.forbes.com/sites/gregpetro/2022/03/11/consumers-demand-sustainable-products-and-shopping-formats/?sh=6d83cff96a06>

⁴¹ Sanchez Moreno, L., & Charter, M., (2023). Specific Findings from a Survey of Cricket Players related to Cricket Gear and Plant-based/Vegan 'Leather Alternatives. Available at: https://cfsd.org.uk/wp-content/uploads/2023/04/Final_Players_Vegan_Cricket_Gear-27-04-23.pdf

- Brands could consider bringing the manufacturing of ‘soft’ cricket gear back to the UK or Europe to have more control over the process and reduce the embodied carbon associated with importing from Asia. The challenges to be tackled include: the regeneration of the relevant ‘making’ skills for cricket gear in the UK; and the relative costs of production/assembly costs in UK compared to Asia. Additionally, local production of raw materials would also need to be addressed to reduce the embedded carbon given that existing materials (e.g., PU, PE, etc) are also currently produced outside the UK.

5.2 Reuse: Key stakeholders: *ECB, Lord’s Taverners, First Class Counties (and their foundations/community departments), National Counties, Clubs, and Schools.*

- The cost of cricket kit has been identified as a barrier to participation in the UK. Cooperation between key stakeholders is required to give more people in the UK access to second-hand equipment through re-use schemes. An estimated 95% of gear collected by the Lord’s Taverners reuse scheme is distributed overseas
- Stakeholders should consider supporting the facilitation of reuse, moving old cricket gear that has been stored in attics, garages, and wardrobes back into *use*. This is unlikely to impact on sales of first life products as reused gear is likely to go to players who cannot afford first life gear. Brands should view sustainability as an opportunity, not a threat.
- Players (particularly young cricketers) in the UK should have priority access second life gear to increase the level of uptake and the number of players continuing to play cricket through their teenage years and into adulthood. Reuse schemes for cricket gear targeted at young players in State schools is a particular opportunity.
- Key stakeholders should investigate the possibility of community reuse schemes for cricket clothing and equipment.
- There is an opportunity for First-class and National counties to encourage inclusion by developing a system of recovering clothing that doesn’t fit older pathway cricketers and providing it to younger players.
- There is a need for further research into the relationship between cricket gear reuse, participation and cost of living issues.

5.3 Repair and refurbishment - Key stakeholders: *Cricket gear brands, manufacturers and suppliers, ECB, Lord’s Taverners, First Class Counties (and their foundations/community departments), National Counties, Clubs and Schools.*

- The logistics of developing a repair and refurbishment network in England and Wales should be explored as the recent survey mentioned above indicated that players would be interested in such a service ²⁰.
- The annual cost of clothing for young players was identified in the ICEC report as a barrier to participation by parents of cricketers in county pathways⁴². Therefore, methods to

⁴² ICEC (2023). Holding up a Mirror to Cricket: A Report by the Independent Commission for Equity in Cricket. Available at: <https://theicec.com/wp-content/uploads/2023/07/HOLDING-UP-A-MIRROR-TO-CRICKET-REPORT-ICEC-2023.pdf>

repair and patch over logos and sponsors should be explored by key stakeholders. This would reduce the need for new clothing and reduce costs for cricketers.

- To increase the engagement and inclusion of pathway players and local communities, counties should consider developing a way to help players repair and refurbish their old cricket gear.
- Repair and refurbishment of damaged soft cricket kit e.g. cricket gloves and pads should be further explored with relevant stakeholders. The process of restitching gloves with alternative or 'vegan' leather is relatively simple and should be more widely considered.
- There is a need to establish a national upskilling campaign to foster local repairing, refurbishment and making skills for cricket gear.

5.4 Standards, Guidance and Support - Key stakeholders: *ECB, MCC, ICC, BSI, cricket gear brands, manufacturers, and suppliers, testing laboratories.*

- Governing bodies should consider working with other stakeholders, including cricket gear brands, to produce a set of sustainability standards, guidance, and advice for companies. This would help drive change and encourage innovation.
- The current British Standards for cricket gear should be reviewed.
- The MCC laws should be reviewed to ensure that they are not stifling opportunities for innovation within cricket gear, for example enabling the development and use of bamboo cricket bats.
- There should be consideration of the establishment of a trade association amongst the 250+ ⁴³ cricket gear brands, distributors, and manufacturers in the UK. For example, this would enable those companies to gain a common understanding related to, for example: 1) tackling the new personal protective equipment (PPE) requirements that has and will impact the industry; 2) consideration of sustainability impacts of cricket gear throughout the lifecycle; 3) reuse of cricket gear for young players, state schools and disadvantaged groups; and 4) opportunities related to repair and refurbishment of cricket gear.

6. More Information

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⁴³ Number provided by an industry expert in informal conversation; previously a manufacturer had estimated 200 suppliers of cricket gear in the UK.

Appendix

The below lays out a map of stakeholders related to cricket gear and the major issues and concerns.

Figure 1 - Stakeholder map⁴⁴

● Specific interest in cricket gear ○ General interest in cricket

Stakeholders	Main concerns, issues relevant to gear	Bats	Balls	Gloves	Pads	Helmets
GOVERNANCE AND GENERAL DEVELOPMENT						
Governing bodies						
ICC	Overall promotion and development of the world game	●	●	●	●	●
MCC	Laws of the game	●	●	●	●	●
ECB	Overall promotion and development of the E&W game	●	●	●	●	●
NCCA	Development of the National Counties game	●	●	●	●	●
County Cricket Boards	All aspects of the game in their counties	●	●	●	●	●
Government/regulatory						
DCMS/Sport England	Interest in promoting sport Interest in effective use of Lottery and other support for development; good governance. Promoting and implementing sustainability policy. Health & safety regulation	○	○	○	○	○
Local government	Interest in promoting sport and activity Provision of grounds and facilities Supporting local clubs Waste management Health & safety regulation	○	○	○	○	○
Standards organisations						
BSI	Product standards	●	●	●	●	●
BSIF	Standards and testing of PPE	●	●	●	●	●
Professional organisations						
PCA	Professional standards, gear performance, player safety	●	●	●	●	●
Support organisations						
Club Conferences	All interests of cricket clubs	●	●	●	●	●
Financial support						
TV, broadcasting	General commercial interests	○	○	○	○	○
Sponsors	Use of gear for advertising	●	●	●	●	●
Individual and other backers	General support for their clubs/the game	○	○	○	○	○
CRICKET GEAR SUPPLIERS						
Cricket gear manufacturers						
Major UK cricket specialists	All applicable business and technical issues	●	●	●	●	●
Small UK specialists	All applicable business and technical issues	●	●	●	●	●
Major sporting goods suppliers	All applicable business and technical issues	●	●	●	●	●
Raw materials suppliers	Impacts on business	●	●	●	●	●
Intermediaries and distributors						
Retailers	All applicable business and technical issues	●	●	●	●	●
Importers	All applicable business and technical issues	●	●	●	●	●
Other distributors	All applicable business and technical issues	●	●	●	●	●
CRICKET GEAR CUSTOMERS						
The professional game						
ECB	Procurement for national teams/international games	●	●	●	●	●
First Class Counties/other clubs	Procurement for teams and games	●	●	●	●	●
Professional players – men and women	Purchasing/sponsorship	●	●	●	●	●
National County cricket						
NCCA and National County Clubs	Procurement for teams and games	●	●	●	●	●
National County players -men and women	Purchasing (sponsorship?)	●	●	●	●	●
Club cricket						
ECB Premier, county and district league clubs	Procurement for teams and games	●	●	●	●	●
Non-ECB clubs	Procurement for teams and games	●	●	●	●	●
Club players	Purchasing	●	●	●	●	●
Leisure/friendly/social cricket						
Sunday league/other clubs	Procurement for teams and games	●	●	●	●	●
Individuals – adults, juniors	Purchasing	●	●	●	●	●
Schools	Procurement for teams and games	●	●	●	●	●

The below lays out a map of stakeholders related to cricket gear and lifecycle interests.

Figure 2 – Streamlined stakeholder groups – divided by life stage/product journey.

⁴⁴ Charter, M., & Clark, T., (2022). Sustainability, Cricket Gear, Clothing and Apparel: Report on Cricket Gear. Available at: https://cfsd.org.uk/wp-content/uploads/2023/06/Sustainability_Cricket-Gear-Final-July-2022-Updated-June-2023-1.pdf

Key Stakeholders

England and Wales Cricket Board (EWCB) – decision maker within cricket carrying a larger influence over other stakeholders below.

Marylebone Cricket Club (MCC) – Law makers and important voice in cricket.

Government – DEFRA (policies on Extended Producer Responsibility and Eco-design) and Department for Digital, Culture, Media, and Sport.

Manufacturing

Cricket kit brands (mostly SMEs)

Kit manufacturers – primarily located in Asia for soft cricket gear.

Sale

Cricket kit brands

Large Cricket stores and online cricket stores (e.g. Cricket Direct)

Use

First class Counties

National Counties

Professional Players

Participation level players

Clubs

Schools (private and state-funded)

Reuse/disposal

Charity groups - Lord's Taverners, Cric-kit (Yorkshire Cricket foundation)

Online Second-hand retailers (e.g. eBay)

Kit brands

Kit manufacturers