

Case Study: The Cotton Bud Project

Fidra has worked to tackle plastic stemmed cotton bud pollution since 2013. This case study has been developed to share the Cotton Bud Project approach with others working on similar issues.



The Evidence

After noticing plastic cotton bud stems amongst other debris on our local beaches, Fidra undertook an extensive evidence review to examine the [problem](#) of, and [solutions to](#), cotton bud pollution. This revealed that cotton buds consistently contribute to marine plastic pollution and are found at an average of 21.2 cotton buds per 100 metres in UK beach cleans¹. Key findings are summarised in Appendix 1. This evidence was used to raise public awareness and to engage industry and policy makers on the issue.



Figure 1: 21,000 cotton buds collected by beach clean organisation Mar de Fabula, Spain.

After reviewing the evidence, The Cotton Bud Project focussed on promoting a design change of plastic stems to biodegradable alternatives, such as rolled paper. Recognising the unintended consequences of alternatives and the potential for regrettable substitution, a need for sustainability and responsible sourcing of such alternatives was communicated throughout the project. For example, where the alternative is paper it should be certified as FSC.

Using the Evidence: Industry Engagement

Industry engagement was central to the success of the cotton bud project². Fidra identified the product leader, Johnson & Johnson, and in 2013 began a conversation, encouraging a change from plastic to paper. This patient long term engagement led to Johnson & Johnson Ltd becoming the first major manufacturer to agree to replace



Figure 2: Paper stemmed cotton buds from Johnson & Johnson.

their brand-defining blue plastic cotton bud stems with fully biodegradable paper stemmed cotton buds. This was closely followed by Waitrose making the same commitment.

Meanwhile, from 2014, Fidra initiated constructive discussions with major UK retailers, including Tesco, Sainsbury's, Asda, Aldi, Lidl, Morrisons, Superdrug and Boots UK using our strong evidence base to present a solution in the form of biodegradable alternatives. The public announcement by Johnson & Johnson Ltd in March 2016, to transition to paper stemmed cotton buds across Europe, Middle East and Africa, was a significant milestone in the project.

These changes were reported widely in the press, giving the companies who made this proactive decision positive coverage whilst also encouraging others to follow suit. By 2018, all major retailers in the UK had phased out plastic stemmed cotton buds, replacing them with paper.

Public Awareness

Although most industry dialogue occurred behind the scenes, Fidra used its evidence review to create a [website](#) and infographics (Appendix 1) to inform stakeholders of the issue. The homepage featured a Good Buddy list of companies who already sold, or had committed to a timescale to transition to, paper. This approach was supported by ongoing efforts from other NGOs working on the issue; extra public pressure from the 150,000 signatures to a 38 degrees petition (organised by City to Sea) brought industry commitments from some remaining retailers forward.



Government Engagement

Fidra used the evidence base and constructive industry engagement to contribute towards Scottish Government's 2014 Marine Litter Strategy³ in which cotton bud design changes were highlighted as a key action. The commitment by Johnson & Johnson Ltd, and Waitrose, which was followed by other leading retailers, indicated change was possible. To ensure a level market and to prevent further plastic pollution from cotton buds still being sold by those who had not made voluntary commitments, legislation was explored.

In 2018, with plastics very much on the public's agenda, our work, together with the support of our partners and all the retailers who already made the change, led the Scottish Government to announce plans to introduce legislation banning the manufacture and sale of plastic stemmed cotton buds in Scotland⁴. This announcement was made at a joint press conference between Fidra and the Environment Secretary Roseanna Cunningham.

Fidra encouraged the public, partners and industry to respond to the subsequent Scottish public consultation. Over 830 responses were received with 99.4% in favour of banning the sale and manufacture of plastic stemmed cotton buds; including responses from leading cotton bud retailers, Waitrose and Boots UK. Fidra has subsequently responded to a UK consultation on plastic stemmed cotton buds and hope that with confirmation of these bans, the publication of draft Scottish legislation and the agreement and adoption of the European Union Single Use Plastics Directive, that there will be ban on plastic stemmed cotton buds from 2021.

Summary

The Cotton Bud Project was one of the first successful single use plastic actions in the UK. A strong evidence base enabled constructive dialogue with government and market leaders. This engagement was key to understanding barriers and resulted in voluntary commitments to change. Ongoing engagement continues, focussing on the wider global supply chains of these large manufacturers and retailers. Public awareness of plastic pollution has changed dramatically during recent years. However, the Cotton Bud Project paved the way to addressing marine plastics pollution prior to this public plastic awakening; a welcome result of the 'Blue Planet Effect'. Alongside securing voluntary commitments, Fidra contributed to discussions and consultations resulting in draft legislation in Scotland, confirmation of a ban in England and the agreement and adoption of the European Single Use Plastic Directive, which will lead to an EU wide ban on plastic stemmed cotton buds from 2021.

Thanks

Fidra would like to thank the Marine Conservation Society and their volunteers for the use of their excellent cotton bud data; Keep Scotland Beautiful; Scottish Wildlife Trust; Fauna and Flora International; Scottish Government and the many volunteers, researchers, policy makers, and leaders in sustainability that supported this project and helped to make it a success.

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Figure 4: Roseanna Cunningham announcing the proposed ban on plastic stemmed cotton buds alongside Gullane Beavers, Gullane, Scotland.

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2. Cavers, C., Berg, M. & Gait, R. Cotton buds—corporate change leads the way in the UK and Europe. *Oryx* 52, 195 (2018).
3. Marine Scotland. *A Marine Litter Strategy for Scotland*. 1–34 (2014).
4. Keane, K. Scotland ban announced for plastic cotton buds. *BBC* (2018). Available at: <https://www.bbc.co.uk/news/uk-scotland-42640680>.



Appendix

1: Evidence Base for The Cotton Bud Project

The Problem: Key Findings

- Cotton buds are a top 10 item found on UK beach cleans¹.
- Cotton bud pollution is reported globally^{1,5-7}.
- 1.8 billion, mostly single-use plastic-stemmed, cotton buds are used each year⁸ in England.
- Widespread [incorrect disposal](#) (flushing cotton buds down the toilet instead of putting them in the bin) has meant cotton buds are well documented constituents of sewage related debris, entering the oceans via combined sewer overflows (CSOs)⁹. When entering sewage systems, the plastic stems do not settle with organics and their buoyancy and narrow diameter means they are not retained by most screens in place at waste water treatment works or CSOs.
- Plastic cotton buds, like other plastics, persist in the marine environment.
- Cotton bud stems and their [broken fragments](#) [harm wildlife](#)^{10,11} and have been found in turtles and seabirds.
- Like other plastics, in the marine environment cotton buds plastic stems can [accumulate chemical contaminants](#) from surrounding seawater, including flame retardants, pesticides and heavy metals¹², and provide a surface for the colonisation of biofilms.
- Sewage related debris presents a risk to public health through physical contact. *Escherichia coli* were present on another common beach debris item, plastic resin pellets (or nurdles)¹³

The Solution: Key Findings

- Small size, composition and hygiene issues restrict reuse or recycling of plastic stemmed cotton buds.
- Engagement with Scottish Water and other water companies in the UK, indicated that infrastructure changes to sewerage, to filter out cotton buds, would be costly and logistically unfeasible. In addition, the ubiquitous presence of buds on beaches across Europe and further afield shows that even where different infrastructures exist, similar problems are still present^{14,15}.
- Public awareness campaigns (such as Don't Flush It messages) are vital to addressing sewage related debris, however effectiveness may be limited to active campaigns¹⁶.
- Legislators³ and researchers¹⁷ recommended a change in design of cotton bud stems
- Paper stemmed cotton buds were in use before plastic, with some brands (such as Q-tips¹⁸) and retailers (such as the Co-operative) already providing market alternatives prior to the project.

A selection of photos showing cotton buds found on beaches around the world. More can be found [here](#).

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