**All-Party Parliamentary Group on Microplastics**

**Minutes   
APPG on Microplastics Introductory Stakeholder Roundtable   
11th November 2020**

**In attendance**

Alberto Costa MP  
Harriet Main  
Fiona Thomas, The Women’s Institute   
Alexandra Barker, The Women’s Institute   
Tobias Arno, The Women’s Institute   
Chad Male, Parliamentary Assistant to Liz Twist MP   
Lord Brennan

Professor Richard Thompson, University of Plymouth  
Dr Priscilla Carrillo Barragán, University of Newcastle  
Dr Natalie Welden, University of Glasgow  
Christian Cullinane, Commercial Director of Xeros Technology Group  
Leah Riley-Brown, Sustainability Policy Advisor, British Retail Consortium  
Amy Slack, Head of Campaigns and Policy, Surfers Against Sewage  
Henry Swithinbank, Policy Officer, Surfers Against Sewage  
Dr Laura Foster, Head of Clean Seas at the Marine Conservation Society  
Professor Andrej KRŽAN, PlanetCare  
Sophie Mather, Executive Director of The Microfibre Consortium  
Richard McIlwain, Deputy Director of Keep Britain Tidy  
Rachael Miller, Cora Ball and the Rozalia Project  
Camilla Zerr, Friends of the Earth.

**Apologies for absence**

Alistair Carmichael MP

**Meeting minutes**

As the APPG Chair, Alberto Costa MP informed all meeting participants that the APPG Secretariat would be recording the APPG, and their continued presence on the call would mean that they consent to be recorded.

The Chair invited Harriet Main, Alberto Costa MP’s parliamentary assistant, to introduce the stakeholders.

Harriet Main thanked the stakeholders for attending the meeting and welcomed the stakeholders to the meeting.

Harriet Main introduced Professor Richard Thompson, University of Plymouth; Dr Priscilla Carrillo Barragán, University of Newcastle; Dr Natalie Welden, University of Glasgow; Christian Cullinane, the Commercial Director of Xeros Technology Group; Leah Riley-Brown, a Sustainability Policy Advisor from the British Retail Consortium; Amy Slack, Head of Campaigns and Policy, and Henry Swithinbank, Policy Officer, from Surfers Against Sewage; Dr Laura Foster, Head of Clean Seas at the Marine Conservation Society; Sophie Mather, Executive Director of The Microfibre Consortium;, Professor Andrej KRŽAN from PlanetCare; Richard McIlwain, the Deputy Director of Keep Britain Tidy; and Rachael Miller, the founder of the Cora Ball and the Rozalia Project; and Camilla Zerr, Friends of the Earth.

Harriet Main outlined that the Microfibre Consortium works to facilitate the development of practical solutions for the textile industry to minimise fibre fragmentation into the environment, and Xeros Technology Group is a company which has worked to develop microfibre filtration technology for washing machines.

The Chair thanked Harriet for the introductions and welcomed MPs and Peers to the roundtable.

The Chair invited stakeholders to give their comments on microplastic fibres and the sorts of problems with microplastic fibres on which they felt that the All-Party Parliamentary Group on Microplastics could focus their attentions.

Dr Natalie Welden outlined the work of the University of Glasgow on microplastics.   
Natalie stated that the University of Glasgow are focusing on observing microplastics of all kinds in the environment, but particularly from industries in the marine sphere and increasingly in the terrestrial realm that may be effected by plastic pollution. Natalie outlined her own background comes from looking at the uptake of microplastics, predominantly microfibers, in organisms that are targeted by our fisheries or are an important source of revenue for aquaculture. Natalie stated that she had also been looking increasingly at microfibres in farming environments.

Dr Natalie Welden outlined that one of the things that the University of Glasgow is very proud of is working alongside organisations like Beko, Arçelik and Inheriting Earth in looking at solutions to the microfibre issue, such as washing machine filters. .  
Dr Natalie Welden stated that waste water treatment works do a great job in filtering out microplastic fibres, and so the microplastic fibre sector should be working on the amount of microplastic fibres that get to that point and appropriately handing the amount of microplastic fibres that are released into the system or in sewage sludge.

The Chair thanked Dr Natalie Welden, and mentioned that he had come across Dr Welden’s work in the University of Glasgow’s alumna magazine, ‘Avenue.’ The Chair invited Professor Richard Thompson to introduce his research to the APPG and outline what he would like to achieve through the APPG.

Professor Richard Thompson outlined that he and the University of Plymouth have been working on microplastics and microplastic fibres in the marine environment for nearly a quarter of a century. Professor Richard Thompson outlined that it was a paper by the University of Plymouth that first used the term ‘microplastics.’ Professor Thompson and his team have been working on culmination in the marine space, and looking at solutions. Professor Richard Thompson outlined that through research, he and his team have found microplastic fibres in Arctic ice; in fish; and in our seas. Whilst there are other forms of microfibre plastics from other sources, including tyre pollution, it is clear that microplastic fibre pollution from textiles was very abundant. Professor Richard Thompson outlined that as this is a largely unnecessary form of plastic pollution, that it is vital that we do all that we can to reduce it.

Professor Richard Thompson outlined that there would be three approaches to combatting microplastic fibre pollution. The first would be to try and screen microfibres out in waste water treatment, but Professor Thompson outlined that there would then be a challenge with what to do with the resultant sludge. Professor Richard Thompson explained often solid sludge is returned to the land as a fertiliser, returning the captured microplastic fibres back into the environment. Professor Richard Thompson noted that there are also lots of places around the world that are not connected to sewage systems as in the UK.

Professor Richard Thompson outlined that the second approach would be to fit filters to washing machines to capture microplastic fibres at home. This may prove tricky as consumers may not use these filters, or may use them incorrectly, and there is a still a resultant problem of what to do with captured microfibres.

Professor Richard Thompson outlined that the third approach would be to assess and review the design stage of textile fibres and products. Studies by the University of Plymouth have shown that there is up to a five-fold difference between identical looking garments bought from the same shop shed during laundry. Professor Richard Thompson suggested that the key opportunity would be to assess the design stage of textile products. Whilst filters and assessing waste water treatment works are part of the picture, Professor Richard Thompson stated that should society be able to reduce microplastic fibre emission from clothes by up to 80% by looking at their design, it would make our clothes last longer and be more fashion sustainable and significantly reduce the rate of microplastic fibre emission.

Professor Richard Thompson believed that there was more investment from UK research on waste water treatment, and more industrial investment in devices for washing machines than on textile fibres.

The Chair thanked Professor Thompson, and outlined that until recently he was unaware of the concept of tackling the microplastic fibre problem at source or at the production of clothing. The Chair invited Dr Priscilla Carrillo Barragán to give her comments.

Dr Priscilla Carrillo Barragán outlined the work of the Dove Marine Laboratory in evidencing the accumulation of microplastics and microfibres. Dr Priscilla Carrillo Barragán discussed her belief that further toxicology evidence is needed on the environmental impacts of microplastics and microfibres. This evidence could include: the extent of the microplastic pollution; the comparative environmental effects of each type of plastic; whether or not microplastics are being accumulated or biodegraded; and potential products from biodegradation. Dr Priscilla Carrillo Barragán reiterated that this work could help to establish set standards and hazards from microplastic fibre waste. It was suggested that plankton could be used to monitor the levels of microplastics in the sea as there is already an accepted standard on how to collect plankton from the oceans and in fisheries.

The Chair thanked Dr Priscilla Carrillo Barragán and invited Christian Cullinane from Xeros Technology to let the group know about the work of Xeros to combat microplastic fibres.

Christian Cullinane outlined that Xeros Technology is predominately a water saving technology Company, but as a result of their recognition of the problem of microplastics in water Xeros Technology developed ‘XFiltra’- a microplastic fibre filter for washing machines. Christian Cullinane outlined that as that the filter was designed to be incorporated into the design of a washing machine, it wouldn’t pass on disproportionate costs to consumers, nor risk any improper use of the filter by consumers. It was discussed that whilst Xeros focuses on microplastic fibre filtration, Xeros believe that the microplastic fibre problem required a holistic approach with short, medium and long-term solutions. Christian Cullinane outlined that the XFiltra was tested by the [University of Plymouth](https://www.sciencedirect.com/science/article/abs/pii/S0048969720339346), and performed extremely well.

The Chair thanked Christian Cullinane and invited Leah Riley Brown, Sustainability Advisor at the British Retail Consortium to give her comments.

Leah Riley-Brown outlined that the British Retail Consortium represents around 5,000 retailers, including a lot of fashion retailers and supermarkets selling clothing.   
Leah Riley-Brown highlighted that stakeholders in this sector need to listen to the science. The British Retail Consortium is a firm supporter of The Microfibre Consortium’s work in this space and agree that the textile industry needs an available standardised test method for microfibre loss and shedding that can be applicable throughout the fashion industry in order to provide an equal comparative base for manufacturers and consumers.   
Leah Riley-Brown discussed that available consumer products for microfibres were not a complete solution as a high-volume of pre-consumer shedding occurs within the textile industry, in addition to wet treatments applied to garments throughout the processing.   
Leah Riley-Brown agreed with Christian Cullinane that a holistic approach to the problem is required, and was pleased that the All-Party Parliamentary Group on Microplastics is bringing together academics and scientists to explore policy solutions to the microplastic fibre problem. Leah Riley-Brown concluded that more information would be needed about the environmental effects of microfibres before the implementation of any legislation on this.

The Chair thanked Leah Riley-Brown and asked Amy Slack, Head of Campaigns and Policy and Henry Swithinbank, Policy Officer, at Surfers Against Sewage to discuss what they would like to achieve from the APPG.

Amy Slack thanked the Chair for the invitation and the Women’s Institute for providing Secretariat support to the APPG.

Amy Slack outlined the origins of Surfers Against Sewage, and how over the last 10 years the organisation has become increasingly active on plastic pollution, mobilising thousands of volunteers to organise and participate in beach cleans and citizens science projects across the UK. Amy Slack outlined that there were a number of sources of microplastics, including anti-foul on boats, and it was consequently extremely hard to clean up the problem. This was especially true in the case of microplastics as they are incredibly hard to see. Amy Slack suggested that policy makers and stakeholders need to consider the waste hierarchy and how to reduce and eventually eliminate microplastic emissions into the environment.   
Amy Slack outlined the problem of waste water treatment plants capturing microplastic fibres, but then the resultant sludge at waste water treatments being applied back into the land, waterways or seas through surface water run-off, water systems and agriculture.   
Amy Slack suggested that the APPG could consider the principles of redesign and reduction and how policy could be created that would enable the necessary changes to be made in the system. Amy Slack concluded by stating that microplastics are emerging environmental threats, and microplastics could provide the roots or become a vector for the transmission in transboundary diseases.

Henry Swithinbank reiterated that as the effects of microplastics on human health are not quite yet understood, it would be better for policy makers and interested stakeholders to take the precautionary principle and act quickly to protect water users across the UK.

The Chair thanked Amy Slack and Henry Swithinbank for their contributions and invited Dr Laura Foster, the Head of Clean Seas at the Marine Conservation Society, to give her contributions.

Dr Laura Foster explained that the Marine Conservation Society are particularly focusing on the problems of microplastic fibres. The Marine Conservation Society are campaigning for stopping the microplastic fibre problem at source. Dr Laura Foster reiterated that whilst the waste water treatment capture rate of microplastic fibres is around 98-99%, the microfibres end up in resultant sludge. Dr Laura Foster explained that sludge is often a viable good product that farmers use for fertiliser and agricultural purposes, so policy makers need to be looking much further up the system to stop microplastic fibre pollution at source.

Dr Laura Foster suggested that the APPG could explore two intervention points; working with the textile industry; and fitting filters onto washing machines. Dr Laura Foster outlined that the textile industry has an important role, and raised concerns around the use of chemical treatments by the textile industry to reduce microplastic fibre loss. This could generate a dual environmental problem, as both chemicals and delayed microplastic fibres could be emitted into the environment. Dr Laura Foster outlined the importance of a publicly available test for the textile industry to use to transparently measure microplastic fibre emittance, which should be peer-reviewed and available to academics and organisations to use.

Dr Laura Foster outlined that the Marine Conservation Society were especially focusing on the use of washing machine filters as people are still going to be owning and washing their acrylic clothes for years to come. Dr Laura Foster suggested that a lack of rapid action taken on microplastic fibres would only exacerbate the microplastic fibre problem, and so applying any available interventions would help stem the tide of microplastic fibres. Dr Laura Foster indicated that a universally applicable PAS standard for washing machine filters would allow designers and manufacturers to work to produce the filters rapidly. Dr Laura Foster discussed the legislative developments in France, and outlined that this could be an opportunity for policy makers in the UK to push ahead on this issue.

The Chair thanked Dr Laura Foster and invited Sophie Mather, Executive Director at The Microfibre Consortium, to give her contributions.

Sophie Mather outlined the work of The Microfibre Consortium, who directly represents fashion brands and retailers, and on the impact change consumers and manufacturers can directly make on the microplastic fibre problem.

Sophie Mather asked the Chair and the APPG Secretariat if The Microfibre Consortium could recommend further stakeholders to join the All-Party Parliamentary Group on Microplastics.

Sophie Mather echoed the point raised by Dr Natalie Welden, and outlined the test method that The Microfibre Consortium has been developing for brands and retailers to use to test microfibre shedding.

Sophie Mather outlined that The Microfibre Consortium were in the early stages of releasing a microplastic fibre database to their members. The database will bring in testing data underpinned by very detailed fabric and yarn specifications, and the intention of the database is to support change at the brand, retailer and supplier level. Sophie Mather outlined that there were over 230 different materials listed in the database. The Microfibre Consortium hopes that this information will allow textile scientists and manufacturers to explore on a deeper level how a particular yarn or textile finishing impacts on the volume of emitted microfibres. Sophie Mather stated that this database is seen very favourably by the European Union when developing textile policy and is hoped to support EU policy developments on textiles.

Sophie Mather stated that as over fifty brands and retailers are members of The Microfibre Consortium, with their own supply bases, supply-chains and supplier research members, they have global facilities to work with very closely with to understand and implement policy level product change.

The Chair thanked Sophie Mather, and noted the comments on potential invitees for future meetings. The Chair invited Professor Andrej KRŽAN to provide his comments on behalf of the organisation PlanetCare.

Professor Andrej KRŽAN thanked the Chair and noted the prior work of the Women’s Institute on microplastic fibres. Professor Andrej Kazan outlined the origins and work of PlanetCare on microplastic fibre pollution and their particular focus on washing machine filters.   
Professor Andrej KRŽAN agreed that the microplastic fibre problem must be approached in a holistic way, looking at how textiles can be changed, the washing process, and at the waste water treatment level. Professor Andrej KRŽAN suggested unlike other sources of pollution, it is understood where the microplastic fibre pollution comes from, so stakeholders are able to work collectively to make an impact on the preventable microplastic fibre pollution.

Professor Andrej KRŽAN outlined the work of PlanetCare on add-on retrofit washing machine filters available for consumer use, and echoed the points of Dr Laura Foster, outlining that it is better to move quickly to eliminate some microplastic fibres as opposed to waiting for more research to take action on the issue. Professor Andrej KRŽAN suggested that the APPG could discuss the viability and implementation of an Extended Producer Responsibility scheme on textiles; voluntary and regulatory interventions; and implementing scientific transparency.

The Chair thanked Professor Andrej KRŽAN and asked Rachael Miller of the Rozalia Project and the Cora Ball for her comments.

Rachael Miller thanked the Chair and stated that she would like to echo the comments of the previous speakers. Rachael Miller outlined the work of the Cora Ball and Rozalia Project on dryer emissions, and explained that a recent study found that electric clothes dryers that are vented outside are directly contributing microplastic fibres into the environment.   
Rachael Miller outlined that that use of dryers is growing globally as more people move into the middle-class, so increasing amounts of microplastic fibre emissions are being directly expelled into the environment. Rachael Miller outlined that she would like to see continued support of multiple strategies and the encouragement of practices that are immediately available including use of the Cora Ball and good washing behaviour practices.   
Rachael Miller encouraged the development of in-line washing machine filters, and a further exploration into electric dryers and dryer innovations like lint traps and vents.   
Rachael Miller stated that the Rozalia Project and Cora Ball are continuing to support the work of The Microfibre Consortium on their database to understand the differences between textiles and materials, and to make the clothes we wear more resilient.

The Chair thanked Rachael Miller and outlined that he thought certain types of washing behaviour were not feasible for parents when looking after their children. The Chair invited Richard McIlwain from Keep Britain Tidy to give his comments.

Richard McIlwain outlined that Keep Britain Tidy had been active for a number of years on litter, waste and plastics. Richard McIlwain outlined the work of Keep Britain Tidy on cigarette filters, and outlined that tobacco filters are contributing to the microplastic fibre issue. Richard McIlwain explained that Keep Britain Tidy hase been researching how to get upstream to affect the choice of materials and textiles by the fashion industry, and outlined that his belief that some natural fibres would be a better choice than artificial fibres.

Richard McIlwain outlined the waste hierarchy, and explained that the most sustainable clothes are those already in your wardrobe. Richard McIlwain encouraged the APPG to assess how we can encourage positive reuse and repair clothing care behaviours.

Richard McIlwain outlined that in addition to the French legislation on microplastic fibre filters in washing machines by 2025, France have the only global extended producer responsibility scheme, and suggested there was an opportunity for the UK Government to implement a textiles extended producer responsibility scheme. Richard McIlwain suggested that an EPR scheme would encourage manufacturers to re-assess their textile fibre choices, and encourage companies to recover textile waste as opposed to using virgin textile materials. Richard McIlwain also noted that there was already an APPG on Sustainable Fashion, and it would be beneficial for both APPGs to undertake some joint work on this issue.

The Chair thanked Richard McIlwain and invited Camilla Zerr, Friends of the Earth, to comment.

Camilla Zerr thanked the Chair and outlined that Friends of the Earth have been looking at parliamentary solutions to the plastics problem, and had been working to influence the Environment Bill to ensure that plastics pollution reduction targets were part of the Bill. Camilla Zerr outlined that microfibres and microplastics are areas that Friends of the Earth were considering focusing on in the future.

The Chair thanked Camilla Zerr and outlined the that the role of the APPG was that it provides a forum for the various stakeholders involved in microplastics and microplastic fibres to share their views and thoughts on the best way forward on the microplastic fibre problem. The Chair outlined that the APPG was also a forum for parliamentarians to learn about microplastic fibres and encourage them to take on board questions raised by stakeholders and potential solutions.

The Chair recalled that the group had mentioned a number of times that a solution lies at source at the design stage of a garment.

The Chair stated that we all have a role in society to do positive climate behaviours, and politicians have a principle role in doing this through legislation, guidance and parliamentary rules. The Chair outlined that by altering behaviour it should not mean going back to a time where we wash clothes less as washing clothes more frequently is due to historically high levels of hygiene. The Chair outlined that his primary concern is how to mitigate against damage to the environment by ensuring the clothes that his children wear in the first instance minimise any damage done to the environment. The Chair noted that in order to attract consumers on board, microplastic fibre stakeholders need to ensure that any changes made do not ask consumers to make substantial lifestyle changes. The Chair highlighted the recent shift to LED lighting as an example of this, and encouraged the use of microplastic fibre filters. The Chair also referenced the parliamentary work on the legislation for a plastic bag levy.

The Chair then invited stakeholders to give further comments.

Dr Natalie Welden outlined the work the Women’s Institute had done on championing good washing practices and raising awareness of microplastic fibre formation. Dr Natalie Welden outlined that a large proportion of the UK population believe that clothes need washing if a garment has been worn once. Dr Natalie Welden explained that Government and civil society have an ongoing role to encourage more sustainable washing practices.

Dr Natalie Welden outlined that unlike other pollutants, the solution to microplastic fibre pollutants will be made in gradual steps across a number of sectors. Dr Natalie Welden reflected that there were a lot of different organisations present during the APPG session that could help the public manage their clothes properly and encourage sustainable washing practices.

The Chair thanked Dr Welden and invited Christian Cullinane from Xeros Technology to give further comments.

Christian Cullinane stated that around 35% of primary microplastics entering seas are from textile microfibres. Christian Cullinane set out that the solution to the microplastic fibre problem required a holistic approach, and that solutions are available today which could be implemented as early as next year should manufacturers wish to do this, and many manufacturers are already working on this issue. Christian Cullinane outlined that rapid action now would allow a ‘buffer’ to be created which would allow microplastic fibre campaigners to focus on improving textile production and selection practices.

Christian Cullinane left the meeting due to internet connectivity problems.

The Chair thanked Christian Cullinane and asked Sophie Mather from The Microfibre Consortium to give contributions.

Sophie Mather outlined that different microplastic fibre stakeholders had been moving away from the term ‘microfibre’ as it was a very specific technical term used mainly in industry. Sophie Mather explained that they had found that the term ‘microfibre’ had been alienating people as it’s a misunderstood and misrepresented issue, and has been off-putting to potentially relevant stakeholders who feel they have little to contribute when the conversation has been framed around ‘microfibres.’ Sophie Mather explained that the term fibre fragmentation was now increasingly being used instead of microfibre, especially in America.

Sophie Mather explained that most microplastic fibres being emitted into the air were cellulosic natural fibres. Sophie Mather underlined that it was especially important to align with European and American counterparts on synthetic fibres, and recommended enhanced consumer education on quicker, fuller washes to make an immediate different to the microplastic fibre problem.

Christian Cullinane returned to the meeting. .

The Chair thanked Sophie Mather and invited Henry Swithinbank from Surfers Against Sewage to speak.

Henry Swithinbank asked the Chair what policy changes the Chair thinks would be able to drive action on this issue, and whether the Chair thought there would be scope for setting targets in the Environment Bill to reduce microplastics?

The Chair thanked Henry Swithinbank and stated that the APPG would return to this question. The Chair invited Dr Laura Foster from the Marine Conservation Society to speak.

Dr Laura Foster outlined that there could be multiple intervention points in this issue.   
Dr Laura Foster welcomed a transparent standard that textile manufacturers can work to, and for the tests to be made available to parliamentarians and civil society. Dr Laura Foster outlined that consumers were not aware of the issue of microplastic fibres, and whilst it was commendable that some retailers are getting on board and testing products, greater transparency would help consumers make informed choices. Dr Laura Foster informed the group that the Marine Conservation Society had been informed that some clothing manufacturers were adding additional chemicals to their clothing in order to postpone microfibre loss, but this results in the dual environmental impacts of chemical pollution and delayed microfibre loss. Dr Laura Foster stated the use of standardised measuring and testing would result in fairness across the fashion industry and for consumers.

The Chair thanked Dr Laura Foster and invited Professor Andrej KRŽAN from Planetcare to speak.

Professor Andrej KRŽAN outlined that all stakeholders needed to make consumers aware of the problems of microplastic fibres, and their associated challenges in that once we release microplastics into the environment there are currently no solutions to the problem or method to recapture them. Professor Andrej KRŽAN asked the Chair how stakeholders could help the legislative and policy process deliver results to eliminate microplastic fibre pollution.

The Chair thanked Professor Andrej KRŽAN for his contributions.

The Chair stated that as a parliamentarian, an important factor to assess before making political and legislative decisions is whether not legislation would have an economic impact, and whether or not the decision is sustainable. The Chair stated that decision-makers often assess whether or not the loss of a particular industry could be made up in new opportunities elsewhere.

The Chair outlined that behaviour changes like reducing the amount of washing done would reduce the amount of washing detergents used and would prolong the life of washing machines, which could potentially impact negatively on jobs and on national gross domestic product. The Chair reflected on the possibilities of tackling one problem, and then having other problems created elsewhere in the system. The Chair believed that in the instance of microplastic fibres, should the textile industry move away from textiles with a high microplastic fibre shed-load to more sustainable materials, it is not necessarily the case that jobs would be lost as jobs would be created in a sister industry to the washing industry.   
The Chair felt that job creation in a parallel industry would be more attractive to policy makers as opposed to legislation that would purely ban a problem area.

The Chair asked Professor Richard Thompson to comment.

Professor Richard Thompson stated that he hoped that there was a wider view on the sustainable use of the world’s resources than the view the Chair articulated.   
Professor Richard Thompson stated that there was a wider challenge of a rapidly growing human population and suggested that taking more of a circular economy view would be necessary for the future.

Professor Richard Thompson suggested that a piece of work attaching all the different work streams and points of view on microplastic fibres was needed to help guide policy and informed choices. Professor Richard Thompson reminded the group that 40% of plastic waste was unsustainable plastic waste, and it is necessary for producers to start thinking from the design stage on sustainability. Professor Richard Thompson also suggested that guidance on how to ‘trade-off’ between policy solutions would be welcome.

The Chair thanked Professor Richard Thompson and invited Dr Natalie Welden to speak.

Dr Natalie Welden explained that there was increasing evidence that researchers are finding natural fibres in the seas and Arctic in addition to synthetic fibres.   
Dr Natalie Welden suggested that the design process would need to be examined to see how far eco-design can be taken before a garment is created that is either not wearable or purchasable. Dr Natalie Welden outlined that there are already designers working on this problem, but could be a future area that would require further focus.

The Chair thanked Dr Natalie Welden and invited Sophie Mather to speak.

Sophie Mather outlined that the textile industry is very complex with multiple levels.   
Sophie Mather stated that starting with design is one way to approach the microplastic fibre problem, and the database that The Microfibre Consortium has designed would provide a good starting point for the issue. Sophie Mather explained that as a membership organisation, The Microfibre Consortium has no public funding to date which would be necessary to scale the database to the level that microplastic stakeholders would like.

The Chair thanked Sophie Mather and asked Professor Richard Thompson to discuss and compare the effect of both natural fibres and synthetic fibres on the environment.

Professor Richard Thompson outlined that as there were an immense range of sustainability issues with natural fibres, it was not as simple as synthetic fibres were negative and natural fibres were positive. Professor Richard Thompson stated that more evidence was needed to guide this issue as it is clear that there are both end of life and production problems with synthetic fibres, all factors need to be weighed up.

The Chair asked Professor Richard Thompson about how microfibres can have a beneficial impact on the environment.

Professor Richard Thompson outlined that this was to do with the ‘substitution effect.’ Professor Richard Thompson reflected on the land and water use needed to grow cotton as compared to synthetic fibres, and the associated sustainability problems with growing crops and agriculture. Professor Richard Thompson suggested that whilst natural fibres are likely to degrade more quickly than artificial fibres, the University of Plymouth have been finding part-natural fibres like Rayon persistently in the deep sea.

Professor Richard Thompson reflected on the fact that it was very difficult to expect a product to do its service and then the moment it becomes waste it automatically disappears, and it would be necessary to bring together the polymer scientists, economists, physical scientists, biological scientists and the social scientists to come together to look as some of these challenges. Professor Richard Thompson outlined that solutions in a country with good waste management and waste water treatment systems may not be appropriate in developing nations.

The Chair thanked Professor Richard Thompson and invited Rachael Miller to contribute.

Rachael Miller outlined that the Cora Ball had been designed as an ‘equal opportunity fibre catcher.’ Rachael Miller outlined that the Cora Ball and the Rozalia Project were not anti-plastic clothing, as the world could not be clothed from solely agricultural processes. Rachael Miller suggested that there is a clear need for smart and resilient synthetic materials. Rachael Miller outlined that in two expeditions to assess the amount of microplastic fibres in the Hudson River, cotton has been near 50% of the fibres found in the water. Rachael Miller suggested that it was unlikely that populations near the Hudson River were wearing 50% textiles, so it perhaps indicated that there’s some persistence happening in cotton fibres for them to found in the water.

The Chair thanked Rachael Miller and invited Dr Laura Foster to contribute.

Dr Laura Foster referenced a point made by Sophie Mather on financial pressures, and suggested that the call for 1p per garment in the Environmental Audit Committee’s report on fast fashion could be paid by businesses in proportion to the size of the company, and could promote transparency in the textile industry.

The Chair thanked Dr Laura Foster and invited Christian Cullinane to contribute.

Christian Cullinane stated that there was great scope for additional understanding of the microplastic fibre problem. Christian Cullinane reflected that as the microplastic fibre problem has got worse since the start of the call that it is necessary to start action on this problem sooner rather than later.

The Chair thanked Professor Richard Thompson and invited Dr Natalie Welden to contribute.

Dr Natalie Welden asked the group to consider what would a measureable long-term impact on the microplastic fibre problem. Dr Natalie Welden suggested that should the APPG pursue policy driven initiatives, then the group would have to consider policy outputs and assess the usefulness of the proposed interventions. Dr Natalie Welden suggested that this could be points during water sampling, waste water treatment, and would require having a set standard which the group can recommend to textiles and stakeholders as best practice.

The Chair thanked all participants for their support and engagement in the APPG, and appreciated the different opinions and perspectives present.   
The Chair suggested that a next step for the All-Party Parliamentary Group would be to further explore washing machine filtration systems.

The Chair proposed establishing a ‘WhatsApp’ group with all APPG stakeholders and attendees to continue the dialogue on microplastic fibres in between APPG meetings.   
The Chair reiterated that the APPG Secretariat and Harriet Main would be in touch with Sophie Mather to ask for recommendations of further interested stakeholders to invite to the APPG. The Chair noted that the easiest thing for a parliamentarian to do was to suggest a cost-neutral solution to a problem, or one that could help create further economic opportunities.

The Chair thanked all participants and closed the meeting.