



MANAGEMENT COMMITTEE – 13 JUNE 2018

A REPORT INTO THE USE OF PLASTICS IN ESPO'S SUPPLY CHAIN

REPORT OF THE DIRECTOR

Purpose of Report

1. The purpose of this report is to provide information to the Management Committee on the use of plastics at ESPO following previous discussion at the Management Committee.

Introduction

2. This report sets out the position on the use of plastics at ESPO and within ESPO's supply chain. The issue of plastic waste has been very much in the spotlight recently, many were disturbed by images of the damage done to the world's oceans shown in David Attenborough's Blue Planet II TV series. The government's recent interest in alignment with public concern is certainly welcome, which opens up opportunities for industry to help combat the problem.
3. In April 2018 Theresa May announced that the government will commit the UK to eliminating all avoidable plastic waste by 2042, at the launch of the environmental plan for the next 25-years
4. Under the pledge, waste such as the carrier bags, food packaging and disposable plastic straws that litter the country and pollute the seas would be abolished. The announcement followed recent news that a ban on imports of millions of tonnes of plastic waste by the Chinese government is causing a build-up of rubbish at recycling plants around the UK, which is likely to bring chaos for local councils in the coming months.
5. It is clearly therefore a good time for organisations, such as ESPO, to be thinking about their plastic waste. The government announced in the Autumn Budget that it will investigate the introduction of a tax on single-use plastics to tackle pollution. With over eight million tonnes of plastic entering the marine environment every year, supporters of a tax hope that it would have the same effect on the environment as the 5p plastic bag levy introduced in England in October 2015, which saw the amount of plastic bags issued by the seven main retailers (Asda, M&S, Sainsbury's, Tesco, The Co-operative group, Waitrose and Morrisons) fall by 61 per cent in the six months after its introduction.

6. The potential introduction of a tax, multiple external pressures from public concern, turmoil in recycling markets and new regulations certainly creates a 'perfect storm'. In response, companies need to be proactive about their use of plastics. There is also a growing movement towards enhanced producer responsibility, which is likely to place costs of recycling on waste producing industries. Therefore, a balance needs to be found between the advantages that plastics offer in many applications, and the challenges of end-of-life issues.
7. With several industries continuing to generate huge quantities of plastic waste, there needs to be a whole-life approach to product design, taking end-of-life issues into account. Organisations, such as ESPO, need to consider how to facilitate recycling, such as looking at whether composite materials make packaging unrecyclable at end-of-life. Engaging with the supply chain and challenging suppliers that provide materials which generate plastic waste when used is a good first step. New technologies for recovering value from plastics should also be considered, such as those for converting plastic to liquid fuels or chemical feedstocks. These steps are important for businesses as they show that they are taking an enterprise-wide view of how materials are used, recycled and disposed of, demonstrating strong leadership.

Background Information

8. Plastics play a significant role in modern supply chains. Plastics are light, durable and versatile and therefore have been increasingly used to make packaging, stationery, building, electronic and electrical products. Most plastics are produced from petrochemicals. This involves the extraction and refinery of crude oil. It is estimated that up to 4% of the world's annual oil production is used to produce and manufacture plastic products. The oil refinery process produces derivatives for producing plastics in 'fluff' and then 'pellets' forms. These pellets are shipped to customers such as converter and plastics moulder who then produce different types of plastics materials such as packaging materials, window frames, plastics for electrical and electronics apparatus, etc.
9. Plastics are primarily used to make packaging material for commercial and industrial purposes. The packaging sector is the largest consumer of plastics. Plastics feature in ESPO's supply chains either as a primary source, such as a product featured in the catalogue (or raw material such as plastic pellets used in the manufacture of products), or as a secondary source such as packaging materials.
10. Excessive packaging used in almost all parts of the economy is a reality that has been faced by packaging designers and manufacturers for many years. Finding the strategy needed to solve the increasing volumes of packaging waste produced is on the agendas of many companies.

Types of plastic

11. There is a way to identify the type of plastic in many everyday products, especially food storage containers and packaging. Many, but not all, such plastic products have a number – the "resin identification code" – surrounded by a chasing arrows symbol and moulded, formed or imprinted in or on the container, often on the bottom. Use of the word "resin" is synonymous with "polymer" or "plastic type."
12. The seven plastic resin identification codes are laid out in Appendix 1 with added information describing characteristics of each plastic type, typical products it is found in, its toxicity and safety (including whether or not to avoid it), its estimated recycling rate and recycled products made from it, and suggestions for alternatives you can use to replace it in everyday life.

Recycling

13. Thermoplastics can be re-melted and reused, and thermoset plastics can be ground up and used as filler, although the purity of the material tends to degrade with each reuse cycle. There are methods by which plastics can be broken down to a feedstock state.
14. The greatest challenge to the recycling of plastics is the difficulty of automating the sorting of plastic wastes, making it labour-intensive. Typically, workers sort the plastic by looking at the resin identification code, although common containers like drinks bottles can be sorted from memory. Typically, the caps for PETE bottles are made from a different kind of plastic which is not recyclable, which presents additional problems for the sorting process. Other recyclable materials such as metals are easier to process mechanically. However, new processes of mechanical sorting are being developed to increase the capacity and efficiency of plastic recycling.

ESPO Situation Analysis

15. Plastics feature in ESPO's supply chains either as a primary source, such as a product featured in the catalogue (or raw material such as plastic pellets used in the manufacture of products), or as a secondary source such as packaging materials.
16. ESPO does not currently have a specific policy position on plastic, and generally specifies products, or packaging (where appropriate) in line with customer requirements and taking account of developments (including environmental considerations) within each supply market, with the aim of providing customers with choice and a commercial offer that suits a range of budgets, environmental and other factors. This will typically be undertaken at the time of procurement and in line with supply contract renewals; although in some cases there may be scope for variations to requirements during contract terms.
17. Recent environmental concerns relate particularly to micro plastics; small plastic particles that persist in the environment, and specifically in aquatic and

marine ecosystems. They come from a variety of sources, including cosmetics, clothing, and industrial processes and fall into two classifications – micro plastics manufactured and a direct result of human material and product use, and plastic fragments derived from the breakdown of larger plastic debris.

18. The presence of micro plastics as a primary source within ESPO's catalogue product range is relatively limited, as cosmetics do not feature and clothing barely features in the catalogue. The arts and crafts range of classroom materials does, however, include glitter, which has recently featured quite prominently in the media and although one organisation is reported to have banned its use, it's unclear yet whether such a ban would be entirely necessary ("that would possibly be a little bit draconian," according to Sue Kingsley, Senior Pollution Policy Officer at the Marine Conservation Society). This includes glitter paper, paint and glue products. The sales value of glitter products in 2017 was £156,000. Over the last 12 months 32 lines with glitter content were sold to 8,597 customers. This equates to sales of £96,910. Whilst demand may reduce, therefore, in the absence of a substitute it is anticipated customers will continue to wish to be supplied with this product.
19. As with all product ranges (including associated packaging materials), customers and suppliers will continue to be consulted in the light of product, market and environmental developments to consider the optimum solution on a case-by-case basis.

Analysis of Packaging Handled by ESPO

20. Through a compliance scheme run by ERP UK ESPO pay to recycle a percentage of the packaging used in its supply chain. Companies with an annual turnover of £2m are legally obligated to report the amount of packaging used. We need to make annual data submissions declaring the amount and type of packaging our business handled.
21. In the submission for 2017 ESPO reported the following throughput of packaging:

Packaging Supplied	Paper	Glass	Aluminum	Steel	Plastic	Wood
Manufacturing Packing/Filling	219.150				35.520	31.101
Selling	603.378	0.225	3.261	2.351	152.239	31.101
Case Sales						
Primary	-30.317		-0.716	-1.840	-41.207	
Secondary	-39.058			-0.001	- 0.422	
Packfill	-219.150				-35.520	
Pallets						31.010
Unit Sales						
Primary	314.853	0.225	0.225	0.511	75.090	
Imports						
Conversion Packing/Filling						

Selling	9.251				0.506	
Primary	9.251				0.506	
Discarded Packaging Transit	1.326			0.001	0.000	
Secondary	1.326			0.001	0.000	
*tonnes						

Table. Amount by Type of Packaging used in ESPO's Supply Chain

ESPO Warehouse operational processes to avoid over packaging

22. ESPO is conscious of the packaging it uses in despatching ordered products to its customers. This comprises cardboard cartons, polythene bags, bubble-wrap and tape. The cartons containing products pass through many hands when they leave the ESPO warehouse and customers expect to receive their products in a good condition. At the packing stage the cartons are cut down to remove surplus space and the carton is folded to create a flat surface. Where there is an uneven distribution of products of differing size in the carton bubble-wrap is used to fill the void. Warehouse staff, including agency, are trained in the correct way to pack products. This is aimed at reducing excess or unnecessary packaging. ESPO recycles cardboard, plastics and wood through workplace collection points.

23. Plastics film is put through a bailer machine which compresses the plastics into large bales. These are tied and bound to secure the load and removed to a dedicated stillage in the goods yards. The stillage is removed to a waste management company processing plant where it is recycled for further use. The wood is separated and taken away to be processed by the waste management company. ESPO utilise used cardboard in its storage and replenishment process. Unusable cardboard is separated and taken away to be processed by the waste management company.

24. ESPO also provides recycling bins at its staff entrance to facilitate the collection and segregation of different types of waste products. This includes:

- Plastic bottles
- Rigid plastics
- Paper/Poly cups
- Paper
- Polythene film

25. These bins are collected by our waste management company each month and are recycled through their waste management process. 100% of this product is recycled with zero to land fill.

ESPO Catalogue Range

26. The bulk of plastics used in ESPO's catalogue are durable products which have a relatively long life. This includes products such as glue sticks, pens, markers, computer peripherals, janitorial products, site management equipment, arts & crafts, document wallets and toys. ESPO has minimised the amount of re-packaging in its supply chain through 'up-packing' of products. This means selling the products in pack sizes rather than as single items. These packs reduce the amount of further packaging required for transporting the products to the customer.
27. In terms of single-use plastics, which is the focus of many commentators' concerns ESPO has sourced a paper straw which is biodegradable to replace plastic straws. This is available now via the ESPO web site and will be featured in the 2019 catalogue.
28. In its procurement process ESPO requires existing and potential suppliers to provide evidence of its environmental policies. Further analysis has been conducted into ESPO's supplier's policies on the use of plastics which is shown below.

ESPO Supply Chain Audit

29. ESPO has conducted a survey into its supplier base to establish if they have any policies on the use of plastics; the plastic content of products supplied and the type of plastic used; the type of packaging used in transit; how much of the plastic and packaging are recyclable; does the supplier have an ongoing programme for the reduction of plastics; can ESPO help to alleviate any plastic waste.

Plastics Policy

30. The audit results are shown in summary in the appendices. Whilst many of the suppliers (48%) had an environmental policy relatively few (12%) had a specific policy on plastics. Of these it is clear that companies are still assessing the options available to them on single use plastics used in packaging. More positively, many of the companies are showing enthusiasm and commitment to addressing their environmental responsibilities. This is evidenced through policies aimed at minimising harmful waste products and in an increased focus on recyclability.

Plastic Content of Products

31. ESPO's survey of their supplier's plastic content in the products supplied showed a wide range of plastics being used in the manufacturing process.
32. The primary focus of interest is in single use plastics rather than in consumer durable products with a long life-span. However ESPO can work with product suppliers to ensure that suppliers are mindful of the environmental impact of the products and of the manufacturing process.

Type of Plastic Packaging Used

33. Suppliers were asked to provide details of any plastics used in the packaging of the products. These included Polyolefin, low micron polypropylene bags, recyclable expanded polythene, high density polythene (HDPE), PVC, linear low density polythene (LLPDE), polypropylene tape.
34. Most of the stretch wrap packaging is recyclable and is collected by ESPO in the warehouse operation and condensed into bails. These are then sent to our waste management company for recycling. Please see the analysis of waste table. Some packaging materials such as polypropylene tape are difficult to recycle and may be sent to landfill by the waste management provider.

Ongoing Policy for the Reduction of Plastics

35. Circa 50% of suppliers said that either had or were looking at a strategy for reducing the amount of plastics used. This ranged from specific policies to an overall general ambition. Most were looking at using recyclable packaging rather than at the product component level. A general impression is that suppliers are mindful of public concern in this area and are looking to see what policies emerge either from government or from industry bodies.

Can ESPO Help to Alleviate Plastics Waste?

36. Those suppliers that answered were keen for ESPO to recycle the packaging that found its way into the supply chain. Others have pointed out the environmental benefits of ESPO ordering in pack sizes rather than individual lines. This point forms part of the Catalogue team's future agenda.
37. It is clear from the response rate that ESPO's suppliers are interested in the area of plastics both from a product and from a packaging perspective. There seems to be a desire to want to improve where this is practicable. ESPO should now be able to play a role in guiding suppliers by sharing best practice policies, thus providing a helping hand to suppliers who are still a bit behind the curve.

Conclusions and consideration of the range of potential responses

38. Increasing on-the-go consumption of food and drink is fuelling the growth of 'single-use plastics' and the problem is therefore expected to grow. Where waste management is sub-optimal, even plastic waste that has been collected can find its way into the environment.
39. Curbing plastic waste and pollution is a complex problem, given its diffuse nature and the link with social trends and individual behaviour. There is no clear incentive for consumers and producers to switch to solutions that would generate less waste or litter.
40. Today, producers of plastic articles and packaging have little or no incentive to take into account the needs of recycling or reuse when they design their products. Plastics are made from a range of polymers and are highly

customised, with specific additives to meet each manufacturer's functional and/or aesthetic requirements. This diversity can complicate the recycling process, make it more costly, and affect the quality and value of recycled plastic. Specific design choices, some of which are driven by marketing considerations (e.g. the use of very dark colours) can also negatively affect the value of recyclates.

41. More and better plastic recycling is also held back by insufficient volumes and quality of separate collection and sorting. The latter is also essential to avoid introducing contaminants in the recycling streams and retain high safety standards for recycled materials. National, regional and local authorities, in cooperation with waste management operators, have a key role to play in raising public awareness and ensure high-quality separate collection.
42. Many commentators are anticipating additional measures at national government levels will be developed to reduce the unnecessary generation of plastic waste, especially waste from single-use items or over-packaging, and to encourage the reuse of packaging. Analytical work, including the launch of a public consultation, has already started to determine the scope of a legislative initiative on single-use plastics in the EU, following the approach used for light-weight plastic bags and examining relevant evidence from behavioural science.
43. Plastics packaging is a priority area when it comes to design for recyclability. Today it accounts for about 60% of post-consumer plastic waste in the UK, and product design is one of the keys to improve recycling levels. It has been calculated that design improvements could halve the cost of recycling plastic packaging waste.
44. ESPO is guided by Leicestershire County Council's environmental strategy focuses on the environmental impacts of Leicestershire County Council in delivering services. A copy of the council's policy is attached in Appendix 4. It is understood that this policy is currently being reviewed.
45. ESPO's environmental policy specifies that it will involve management, stakeholders and will take account of the views of its customers, in the identification of potential environmental impacts of our processes that will work to:
 - reduce our impact on the environment
 - reduce the waste we generate
 - recycle unavoidable waste wherever possible
 - use materials that are recycled, recyclable or biodegradable whenever possible
 - ensure our employees are aware of their use of plastics that impacts the environment
 - meet all necessary current UK legislative requirements and regulations
46. In essence the overarching objective is to keep plastics in the economy but out of the environment. This can best be achieved by making plastics easy to recycle through working with original manufacturers.

47. Clearly there are a range of options that ESPO could pursue to respond to the environmental concerns surrounding the use of plastics in the supply chain. These need to be carefully considered to ensure that they are viable and achievable. ESPO has an opportunity to guide and influence its suppliers in the best practice techniques for using plastics and also to use this knowledge to similarly help its customers. It is suggested that this is discussed by ESPO's stakeholders and an appropriate response is agreed.
48. The initial range of options is set out below:
- a. To create greater awareness within ESPO's customer base of the content of products that are supplied through the catalogue and best practice methods in recycling. This could be introduced through Awareness Campaigns through the sales and marketing team and communicated through their regular engagement in schools.
 - b. To encourage ESPO's suppliers to consider their policies on the use of plastics within their products and in the transit packaging and to share best practice ideas. To encourage design for recycling. This could be introduced as a question in our tenders for products and services. ESPO already ask for a copy of the potential supplier's environmental policy.
 - c. To include within the scope of the job description of ESPO's Health, Safety and Wellbeing Advisor the responsibility for coordinating and implementing the organisation's policies on environmental issues, including the use of plastics and on recycling.
 - d. For ESPO to seek accreditation with ISO 14001:2015 "Continually improving environmental performance" This will help to formalise how we identify and establish the significance of our environmental impacts. It will enable us to implement effective operational controls to manage our environment and to be cognisant of our legal requirements. It is also a sign to customers and suppliers that environmental impacts are a priority.
 - e. Expand and improve the separate collection of plastic waste, to ensure quality inputs to the recycling.
 - f. To utilise packaging in the ESPO warehouse operation that is manufactured from recycled materials.
 - g. To encourage suppliers to utilise packaging that is sourced from recycled materials or is bio degradable.
49. ESPO is aware of the environmental effects of non-recyclable plastics. It will continue to work with its suppliers to look for organic alternatives to plastic where this is practicable. Also to look for suppliers to reduce the amount of packaging that they use in the distribution of products. Finally it will continue to ensure that the use of packaging is minimized in its own operation through staff training and sourcing of recyclable packaging products.

Resources Implications

50. None arising directly from this report.

Recommendation

Members are asked to note and support the contents of this report

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Appendices

Appendix 1: Types of plastics

Appendix 2: Full list of plastics used

Appendix 3: Summarised information spreadsheet– April 2018

Appendix 4: Environment Strategy 2011-2021

Appendix 5: ISO client environmental guide

Appendix 6: ERP membership certificate

Appendix 7: Industry best practices

Appendix 8: UK Plastics Industry Guidelines

Appendix 9: On-pack recycling label system

Appendix 10: EU Strategy for plastics in a circular economy

Appendix 11: Current developments in the UK