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## **SYMPHONY ENVIRONMENTAL TECHNOLOGIES PLC**

("Symphony" or the "Company")

### **Oxo-biodegradable Technology Statement The Plastic Issue**

Symphony Environmental Technologies Plc (AIM:SYM), a global specialist in technologies that has responded to the global challenge to reduce and “make plastics smarter”. The Company’s products include d2w controlled-life plastic technology, a process internationally described as oxo-biodegradation which ultimately makes most types of plastics biodegradable by pre-treatment during the manufacturing process.

#### The global debate

All plastics will fragment when exposed in the open environment, but the problem with ordinary plastics is that their fragments will lie or float around for decades before becoming biodegradable and will persist and accumulate as a problem for future generations. During that time, they break down into microplastics and may attract and carry toxins.

The global debate and concerns surrounding the urgent need to eliminate plastic pollution on land, in rivers and in oceans has become a major part of our communications strategy as an increasing number of governments are adopting and enforcing legislation to cut down on harmful plastic waste.

This is positive for the Company as it increases our visibility as a viable, proven and efficient solution. However, considerable confusion as to the best options have been created by misleading media coverage and insufficient information being available which results in making the problem of pollution, food protection, health and the ability to recycle much worse. Guidance can be found through the Oxo-biodegradable Plastic Association website “Rethinking the future of plastics” at <http://www.biodeg.org/page32.html>. This paper has been endorsed by numerous top plastic scientists across the world.

### Symphony's d2w solution

d2w oxo-biodegradable additive technology is proven science, a drop-in process, simple to use, low cost solution that importantly does not affect the plastics original and beneficial purpose (for example, of protecting, containing or transporting other products). It has been scientifically proven to help reduce dwell-time of plastic that escapes recycling and ends up in the open environment. The increasing adoption of d2w is supported by more legislation for oxo-biodegradable solutions and also for business use, a positive Life Cycle Assessment showing it as the best environmental option. Symphony's d2w technology has been awarded an Eco-label (certified by ABNT), several international forums and leading plastic scientists have confirmed plastics made with d2w are biodegradable, non-toxic and recyclable.

Whilst Symphony would welcome selling increased volumes of d2w in both the UK and continental Europe, approximately 90% of the Company's sales are currently generated outside the European Union into growing economies that have little to no recycling, composting or collection systems.

Some of these countries initially considered restrictions on or even banning plastics but due to the considerable benefits that plastic materials provide, this proved impractical and many have subsequently chosen a d2w oxo-biodegradable type option to address their plastic pollution problems.

Whilst Europe has established, comprehensive and effective waste management and recycling systems, plastic materials still escape collection. Further, it is estimated that 90% of ocean waste is generated from 10 of the largest water networks in the world of which 7 are in Asia and 3 in Africa; but none in Europe. This represents approximately 8 million tons of plastics being deposited in the oceans each year. Combined with the fact that approximately 50% of the world's population does not have access to a collection system for waste, the issue is therefore global, and Symphony has d2w products in nearly 100 countries for use in all sorts of products including drinking straws, coffee capsules, cutlery and crop growing films etc.



### d2w's compliance with legislation

The European Committee for Standardisations has a definition for oxo-biodegradable technology in CEN/TR 15351. This defines it as a process of oxidation and cell-mediated phenomena either simultaneously or successively. This definition is supported by several standards which defines the acceptable criteria for passing degradation, biodegradation and eco-toxicity. The International Standard commonly used by governments to support legislation is ASTM 6954 and Symphony's d2w technology has been proven to comply with this standard.

Symphony has more than 20 years of data and evidence that plastics made with d2w technology do not produce persistent micro-plastics like other normal plastic product.

Symphony's CEO, Michael Laurier said: "The global market of plastic production is estimated at 320 million tons per annum and growing. These global realities, combined with our scientifically proven d2w and other smart plastic technologies, will continue to open up new market opportunities as the world looks at innovative products and change."

**-ENDS-**

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### Notes to Editor

Symphony has developed a range of additives, concentrates and master-batches marketed as \* d2p which can be incorporated in a wide variety of plastic and non-plastic products and applications so as to give them protection against many different types of



bacteria, fungi, algae, mold and insects. The developing technology range extends into odour adsorbers, corrosion inhibitors and flame retardants.

In addition Symphony has developed controlled-life plastic technology which turns ordinary plastic at the end of its service-life into biodegradable materials. It is then no longer a plastic and can be bioassimilated in the open environment in the same way as a leaf. The technology is branded d2w® and appears as a droplet logo on many thousands of tonnes of plastic packaging and other plastic products around the world. In some countries oxo-biodegradable plastic is mandatory. For a video of d2w® plastic degrading see <http://degradable.net/play-videos/4>.

In addition Symphony has developed the d2Detector®, a portable device which analyses plastics and detects counterfeit products. Symphony's d2t tagging and tracer technology is also available for further security. See [www.d2t.net](http://www.d2t.net)

Symphony has a diverse and growing customer-base and has established itself as an international business with 74 distributors around the world. Products made with Symphony's plastic technologies are now available in 97 countries and in many different product applications. Symphony is certified to ISO9001 and ISO14001.