



Oxfordshire based business, Tumblebug, look to the unsung recycling hero of the natural world, the dung beetle, for a regenerative solution for efficient and effective management of organic waste. Tumblebug have created a business that meets the urgent and complex challenges faced by our food production system. Working with livestock farmers, food waste producers, arboriculturists, tree surgeons and country estates they facilitate efficient capture and concentration of the value in manure and food waste, to return nutrients and carbon efficiently to the soil through production of carbon negative soil conditioners, organic fertilisers, and peat-free growing mediums.

Founder, Sylvie Verinder, tells us how their incredible story began. "I grew up in mixed arable farming, so I've always been extremely passionate about circular economy and protecting the climate. My entire career has been focused on the environment. I've been a landfill scientist, worked in regulation and in waste operations including recycling, composting, AD and energy from waste. I then became an environmental teacher and writer and I was part of the Viridor team delivering the build of the energy recovery facility in Oxfordshire. I eventually took the bold leap to become a circular economy consultant, working largely with ocean plastic and micro plastics projects worldwide. Then Covid hit, which impacted my contracts."

THE TUMBLEBUG SOLUTION

Sylvie explains how Tumblebug was founded in a lightbulb moment in lockdown 2020 while clearing alpaca paddocks of poo – a daily routine for many of the 1500 UK alpaca breeders who have to break the pathogen cycle for good animal husbandry. "In 2020 I set up Paca Pots. Alpaca manure is rich in nutrients, so the idea was to make nutrient infused compostable plant pots. It worked brilliantly and we have patented the concept. We realised however that this business had limited scalability. We needed a new plan. And, as the Government had committed to end the retail sale of peat in horticulture from 2024, to protect our vulnerable peatlands and help the climate, we saw an opportunity. This is when we turned to the dung beetle for inspiration.

The dung beetle rotates dung balls as well as the nutrients and carbon within it. They exploit this material and in doing so improve our soils and bury carbon – having a regenerative impact. They see the

value in all organic waste. We wanted to emulate what the dung beetle does. We used our proprietary technology to rotate, dry, sanitise and homogenise organic materials. Partnered with biochar pyrolysis producers, we combined the two technologies to facilitate the production of a growing medium which avoided and captured carbon, resulting in a peat-free and regenerative product. Tumblebug was born."



OXLEP HELPS GUIDE TUMBLEBUG IN THE RIGHT DIRECTION

Sylvie initially engaged with OxLEP Business when she went self employed as a consultant. She tells us how valuable their support has been since the very start "I first got to know OxLEP when I went self-employed. I was a single mum, and it was a scary time setting up a business on my own. I contacted OxLEP and attended their start-up Bootcamp in 2018. It was a great experience.

It was when Tumblebug was launched that we really leaned on OxLEP for support. We had one-to-one mentoring and attended webinars which helped shape our business ideas and plans. Their advice was invaluable. They would talk to us about where we were and pick out our needs, then go away and come back with a solution to support it. They also connected us with other helpful organisations too. It was through all this we realised that we did not want to become growing medium producers.

Our focus was to support the move a economy by enabling farmers, country estates, compost makers and growers to produce carbon negative, peat-free growing medium or fertiliser to meet their own needs and make cost savings and generate revenue from their own branded products.

So, we then undertook lengthy growth trials with NIAB, putting our new ingredients into an algorithm we built, and we created over 10,000 potential formulae. We filtered those down to 10 by looking at which were the most commercially viable and who our audiences were and who might want to make them."

OXLEP GRANT FUNDING ENABLES GROWTH TRIALS

Tumblebug won a Go-Create grant through OxLEP's Innovation Support for Business programme (ISfB). Sylvie elaborates on how important this funding was for Tumblebug. "We were put forward for the Go-Create grant which we wanted to use to identify the most promising and commercially viable peat-free, growing medium mix out of the 10 we had selected. Luckily, we were successful so could move forward with our professional growth trials.

The process of the grant was much more straight forward than others we have applied for. The team are always there to help if you needed it. I also have to add, they were also there for me on a personal level too. I was diagnosed with breast cancer at the same time as the grant was being processed. I didn't think I would be able to carry on with it, but the OxLEP team were amazing. They really did stick by me without showing any favouritism. They were massively supportive, and I can't thank them enough for that.

So, we started the trials and they finished just a few weeks ago and I'm delighted to say we now have a carbon negative commercially viable, and scalable product. We can facilitate production for growers, country estates and even garden centres to produce at the scale they wish because we offer different sized machines which process daily batches of materials from 25 kilos to 2 tonnes and pyrolysis technologies to suit the scale of operations too."

“ It really is with massive thanks to OxLEP & the support they have offered us through their mentoring, workshops & funding that we are in the position we are in. ”



TUMBLEBUG IS ON A ROLL

Sylvie shares exciting news about Tumblebug's future "Things are looking great for us. We've entered into multiple discussions with several companies who want to explore our solution, including a large supermarket chain and a global contract catering company. We also have a prestigious, professional grower trialling our product, who may wish to build their own plant and produce their own growing medium. We are engaged with the Small Farm AD working group to discuss supporting agriculture in reducing its emissions through our solution.

We're supporting consumers and businesses to gain a greater understanding of how we can regenerate our soils and climate. It will bring hope that we can reverse climate change and protect our soils through changing how we perceive and manage organic materials. Our ultimate goal is to use the product for education and engage people in growing their own food and understanding more about food security, soil and planetary health and their part in it.

It really is with massive thanks to OxLEP and the support they have offered us through their mentoring, workshops and funding that we are in the position we are in. I feel safe working in Oxfordshire knowing there is a backup there and a team who genuinely wants us to succeed"

FOR MORE INFORMATION ON TUMBLEBUG PLEASE VISIT: [TUMBLEBUG.CO.UK](https://tumblebug.co.uk)



Find out more about OxLEP's Innovation Support for Business (ISfB) programme:

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