

ECO TROPHELIA^{UK} 2024

eco
innovation

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IFST

Institute of Food Science and Technology (IFST) is the UK's leading professional body for those involved in all aspects of food science and technology. We are an internationally respected independent membership body, supporting food professionals through knowledge sharing and professional recognition.

Our membership comprises individuals from a wide range of backgrounds, from students to experts, working across a wide range of disciplines within the sector

www.ifst.org

Campden BRI

Campden BRI provides scientific, technical and regulatory support and research to the food and drinks industry worldwide. We offer a comprehensive "farm to fork" range of services covering agri-food production, analysis and testing, processing and manufacturing, safety, training and technical information services. Our members and clients benefit from industry-leading facilities for analysis, product and process development, and sensory and consumer studies.

www.campdenbri.co.uk

ÉCOTROPHÉLIA^{UK}

2024 FOOD INNOVATION STUDENT AWARDS

It has been 12 years since the first UK heat of this Europe-wide competition, jointly organised by the Institute of Food Science & Technology (IFST) and Campden BRI. Ecotrophelia gives students a taste of new product development from idea generation through to final packaged product.

The UK competition was launched in 2013 to foster UK competitiveness in R&D, innovation, and sustainability in the food sector. It continues to develop the next generation of food industry leaders and acts as an incubator of eco-innovative ideas. Every year the winners of the UK competition go on to represent the UK in the European Final.

In the last 12 years Ecotrophelia UK has received over 120 entries (involving over 500 students) from 24 different universities across the UK and generated some great support and interest from across the industry and government agencies. You can see the list of previous finalists and winners on pages 14 to 17.

The first stage of the competition is a preliminary judging based on their product dossiers. Once the 7 top products are chosen, the teams get the opportunity to pitch their ideas to judges from top names in the food and drink industry including Nestlé, M&S, Mondelez, Coca-Cola, Ella's Kitchen, Tesco, Warburtons, Sainsbury's, Unilever, Food Manufacture, IFST and Campden BRI.

We are looking forward to the UK final at Nestlé Product Technology Centre in York on 5 June 2024.

Learn more about Ecotrophelia UK by visiting www.ifst.org/ecotrophelia and join the conversation on social media with the hashtag #EcotropheliaUK24

The shortlisted products

BoozyBalls
University of Surrey

Fidelites
Manchester Metropolitan University

NoDoh
Queens University Belfast

Notti Bites
University of Nottingham

Missing M&lk
University of Reading

Marble
Nottingham Trent University

Tastry
University of Reading

The seven finalist teams will present to the Dragons at the Ecotrophelia UK final on 5 June 2024.



The competition

Ecotrophelia is a 'Dragons Den' style competition that challenges student teams to create a new eco-innovative food product. Teams have to consider all aspects of product development such as food safety, HACCP, marketing and packaging. It provides students with a rare opportunity to present to some of the biggest names in the food sector and helps them to develop their teamwork and presentation skills.

Scan the QR code to watch a short video about the competition.



“The food industry faces fundamental challenges including reducing our environmental impact, meeting growing global demand for food, producing more from less as pressure increases on resources, and reformulating

and creating new products to meet diet and health requirements. Using science and innovation effectively will be critical to survival and competitive advantage. We must support efforts to unlock, nurture and drive innovation in the industry that helps us to meet these challenges. Ecotrophelia is a fantastic platform and source of innovation and inspiration for the industry capitalising on the creativity and energy of our brightest and most enterprising food students supported by the best academic institutions.”

**Bertrand Emond, Membership Ambassador
Professional Development and Culture
Excellence Lead at Campden BRI**

EIT FOOD training

EIT FOOD training, named 'Inspire 4 Ecotrophelia', is a pilot programme new to the 2024 competition. Developed in conjunction with Ecotrophelia, the training helps students to advance their business proposition in preparation for the pitch events.

The programme focuses on entrepreneurship elements, with approximately 12 hours of content to work through on the learning platform. Example modules include team building, sustainability, marketing, negotiation, finance, Intellectual Property (IP) and scaling. A short assignment at the end of the programme allows the students to crystallise their business proposal - they will receive feedback and also the EIT Food Inspire for Ecotrophelia Certificate.

Students did not have to complete this training to enter the competition. However, if teams are successful with the shortlisting of their products, the training becomes compulsory to enter the final.



Ecotrophelia UK prizes

Three prizes and one award will be awarded to the winning teams as follows:

Food Safety Award
Sponsored by Unilever
£250

Gold
Ecotrophelia UK Certificate
£2,000
1 year IFST membership (each team member)

Silver
Certificate
£1,000
1 year IFST membership (each team member)

Bronze
Certificate
£500
1 year IFST membership (each team member)

2024 cash prizes are sponsored by Campden BRI & IFST. All shortlisted team members will receive a certificate of participation



Ecotrophelia Europe Grand Final

The winning team will be able to take their product to the European finals in Europe and compete against Gold winners from across the whole of Europe for the chance to win one of the three Grand Final prizes. This year ECOTROPHELIA Europe will be part of SIAL 2024 in Paris on 20-21 October.

Gold € 4,000
Silver € 3,000
Bronze € 2,000



How to enter

For further information, visit www.ecotrophelia-uk.org
If you are interested in entering a team for next year's competition, send your expression of interest to ecotropheliauk@ifst.org.



The dragons

The industry experts, who will be judging this year's competition are:

Verena Schwick Scientific & Regulatory Affairs Senior Manager UK & Ireland, Coca-Cola

Verena has over 15 years' experience in Scientific and Regulatory Affairs in leading food companies including Kraft Foods, Mondelez and Pladis. As a Senior Manager for Scientific & Regulatory Affairs at the Coca-Cola company, her responsibilities include ensuring compliance of formulations, ingredients, products, packages, labels, claims, and communications for the UK, Ireland and European Innovation. Verena is also supporting regulatory advocacy initiatives.

Ash Stretton Food Regulatory Affairs Manager, Marks and Spencer

Ash has been in the food industry for 15+ years, working across production, operations, process, quality, technical, regulatory affairs and legal in manufacturing and retail. Ash is responsible for all things regulatory and compliance related in the food-side of M&S, previously chair of the IFST Regulatory Group, a Fellow of the Institute, a Registered Food Safety Principal and Chartered Scientist.

Gemma Giles Head of Innovation, Sainsbury's

Gemma is a product development specialist and leader with over 10 years' experience in the food industry. Currently working as Head of Innovation at Sainsbury's, Gemma is responsible for the Dairy and Food to Order categories. As Head of Innovation she looks after the Product Development team who manage the concept to launch process. Gemma has vast experience in the fresh food sector having launched over 1700 products across 45 suppliers. This includes Wicked Kitchen, Tesco Firepit and Sainsbury's Ready Meal range.

Imran Afzal R&D Open Innovation Europe, Mondelez

Imran leads R&D open innovation for Mondelez across Europe. In that role, he works on solving problems leveraging the expertise of external partners. He is a food scientist that has held roles in retail and consumer packaged goods companies

Stuart Jones Head Of Flour Ingredients and Gluten Free Quality, Warburtons Ltd.

Stuart has 35 years as a quality lead in the food industry, he has both operational technical management and is an experienced innovator with a track record of bringing key new product developments to market.

Stuart is a food scientist who brings practical solutions through knowledge of ingredients and raw material, working across the supply chain to make quality leading bakery products.

Martin Macfarlane R&D Director, Unilever

Martin has worked for Unilever for 20 years. He originally focussed on ensuring the safety of products and manufacturing for consumers, employees and the environment for various products across Personal Care and Foods. He then moved to Ice Cream Design, developing recipes and technologies to give new consumer benefits and experiences. After 4 years as Head of R&D for the Europe, AMESAA and NASEA regions in the Pepsi Lipton Joint Venture, Martin has now returned to Ice Cream where he leads the Global Formulation Team.

Patricia Bally Science & Technology Lead for Confectionery, Nestle Product Technology Centre

Patricia has over sixteen years of experience in Nestlé R&D, where she has held various positions across Nestlé's out of home, Breakfast Cereals, and Confectionery businesses. Currently, she is the Science & Technology Lead for Confectionery at Nestlé Product Technology Centre in York. In this role, she plays a

crucial role in shaping the future of confectionery products by harnessing scientific breakthroughs. 19 years ago, Patricia participated as a student in the EcoTrophelia competition in France and she is honoured to be one of the judges at the 2024 UK EcoTrophelia competition in June.

Sally Luckraft Senior Product Development Manager, Ella's Kitchen

Sally has over 16 years of experience working on innovation, and product development from conception to product implementation. She has a passion for entrepreneurship starting work at Ella's kitchen when it was a small team of 4 working around the founder's kitchen table and prior to this setting up her FMCG company.

Bethan Grylls Editor, Food Manufacture

Bethan Grylls is the Editor of Food Manufacture, which commands the largest audience of any online platform dedicated solely to readers working in the UK food and drink manufacturing industry. Prior to joining Food Manufacture (part of the William Reed group), she led New Food Magazine's content team. She has been working as a professional writer for more than a decade and was responsible for organising one of the world's largest virtual, scientific food and beverage conferences in 2021.

Francine Dorrian Lead Technical Manager, Tesco

Francine is a Lead Technical Manager at Tesco, responsible for the Dairy category. She is responsible for a team managing supplier strategy, food quality & safety as well as close links to sustainability and agriculture. During 10 years at Tesco she has held a broad range of Technical roles across Fresh & Packaged Foods. These include working in the Produce, Chilled, Frozen, Meat & Grocery categories. In addition, Francine has worked in the Sustainability team on the Food Waste programme.

Chris Gilbert-Wood IFST Judge

Chris is a professional Food Technologist with 40 years' experience in retail and manufacturing, having managed quality, food safety and sustainability in both own label and branded supply chains. Much of this time was spent working at the interface between agriculture and the primary processors. A Fellow of the Institute of Food Science and Technology and a Registered Food Safety Principal, Chris is currently working as a consultant in the food industry, using experience and expertise to help others meet their objectives.

Liz Ashton Marketing and Sales Director, Campden BRI

Liz's career spans 30 years in the food and media industries. Within food her focus has been on marketing and R & D in the manufacturing and retail space. Latterly Liz started a global company in digital media working for the BBC, TED Talks, the FT etc. She has a commercial pragmatic approach to doing business and understands

the issues faced by a start-up or a large company. Her time at Campden BRI has been spent focused on corporate reputation, looking to deliver various initiatives across the business and ensuring we serve our clients and members in the best way possible. Liz is also a food scientist.

Judging criteria

Each area will be marked out of a maximum score of 10 points:

- How innovative is the proposal? (10 marks)**
- How eco-innovative is the proposal? (10 marks)**
- Industrial feasibility (10 marks)**
- Market credibility (10 marks)**
- Nutritional characteristics (10 marks)**
- Food safety and conformity to European regulatory rules (10 marks)**
- Taste, sensory qualities (10 marks)**
- Marketing and communication plans (10 marks)**
- Packaging (10 marks)**
- General presentation (10 marks)**
- Entrepreneurship (10 marks)**
- TOTAL /110 MARKS**

Preliminary judges

All entries were carefully reviewed and then shortlisted by a panel of judges with expertise in new product development:

- Vince Craig** Managing Director, Meadowbrae Technical Services
- Simon Chattock** Head of Vendor Assurance, Compass Group UK & Ireland Ltd
- Julian Cooper** Owner/Director, 342 Consulting Ltd
- Carol Philips** Retired Professor
- Kelvin Thomson** Consultant & Workplace Assessor/Trainer, Pinnacle Food & Drink Services
- Steve Timms** Commercial Development Manager, Food & Nutrition, Brenttag UK & Ireland



Ecotrophelia dragons, from left to right: Verena Schwick, Ash Stretton, Gemma Giles, Imran Afzal, Stuart Jones, Martin Macfarlane, Patricia Bally, Sally Luckraft, Bethan Grylls, Francine Dorrian, Chris Gilbert-Wood, Liz Ashton.

Finalist

PRODUCT NAME:

Mango Passion BoozyBalls

DESCRIPTION:

BoozyBalls are alcoholic boba pearls, created from food waste, for use in cocktails, bubble tea and for use at home. We utilise fresh fruit waste to flavour our base spirit. We plan to brew and distil our own spirit utilising stale bakery items (bread), wonky potatoes and other vegetables.

The product we are pitching to you will be our Mango Passion flavoured BoozyBalls which utilises discarded orange peels from fresh orange juice machines in supermarkets. At the initial stage, spirits will be distilled by a third party company. Our future product range will include several flavours including "Extreme Espresso" (used coffee grounds), "Citrus Zing" (discarded citrus peels), "Very Berry" (wonky berries) and "Zesty Lime" (discarded lime peels). Our target audience includes Millennials and Gen Z (18-35 year olds), students, environmentally conscious consumers and fans of both bubble tea and alcohol.

Our primary packaging will be composed of recyclable PET plastic, a more sustainable alternative to traditional plastics. Our labels will be fully recyclable paper labels to ensure our packaging has minimal impact on the environment.

CATEGORY:

Alcoholic food & beverage

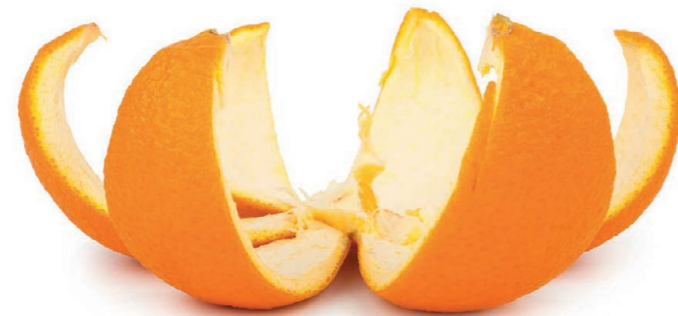
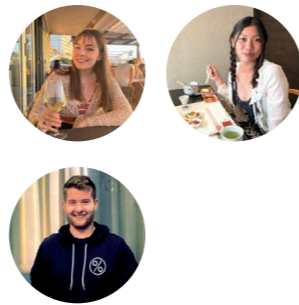
TEAM:

BoozyBalls

University of Surrey

TEAM MEMBERS:

Tom Goble
Hannah Al-Memar
Sze Ting (Hayley) Dai



Finalist

PRODUCT NAME:

Fidelites

DESCRIPTION:

Fidelites are vegetable fat Viennese biscuits, high in fibre with 60% less sugar than average UK Viennese biscuits. They contain no artificial colours or flavours, no hydrogenated vegetable oil, and no palm oil. The biscuits come in 2 different flavours; 'ginger and lemon' and 'cocoa husk'. Brewer's spent grain, wheat bran, cocoa bean husk, lemon peel and ginger peel are food industry by-products used in the formulations. The biscuits are packed in recyclable material, a cardboard box and a biodegradable PLA bag. The product is carbon neutral.

CATEGORY:

Biscuit

TEAM:

Fidelites

Manchester Metropolitan University

TEAM MEMBERS:

Kassey Wate
Mehrnaz Rezvannezhad
Samuel Baafi
Shamika Gavali
Megha Jain
Laura Pilnikovaite



Finalist

PRODUCT NAME:

Marble

DESCRIPTION:

Marble is a vegan oat-based luxury ice cream, with a strawberry and mint swirl. It utilises sustainable ingredients throughout the process. We collaborate with a fruit and vegetable company to incorporate fruit waste and rescued fruit into our product. The product also utilises waste products from oat milk production. This allows for the ice cream to be zero waste. The oat base and strawberry component allows for the product to be high in fibre in line with Regulation (EC) No 1924/2006 of the European parliament.



CATEGORY:

Ice cream & Sorbet

TEAM:

Marble

Nottingham Trent University

TEAM MEMBERS:

Christine Mumby
Evie Dearman



Finalist

PRODUCT NAME:

Missing Młlk

DESCRIPTION:

Missing Młlk is a plant based, high protein oat milk made from gluten free oats. This product aims to shake up the saturated oat milk market by increasing the nutritional health benefits of our product compared to others. Not only does Missing Młlk provide high amounts of protein, but it also boasts a high fibre claim, no added sugar, and source of vitamins B12 and calcium.

Our product is aimed at health-conscious millennials (25-34), looking to get a quick and convenient source of protein, fibre, and vitamins in a free-from drink. Missing Młlk works great in a bowl of cereal, in your morning cup of tea or coffee (it doesn't separate in hot drinks!) as a dairy milk replacement in cooking (tried and tested in pancakes!), or just in a glass by itself! Missing Młlk also comes in a sweetened and chocolate flavour.

Our packaging is made in combination with recycled oats which are a waste product from our manufacturing process. This 'oat paper' is both an eco-innovation and a unique branding and selling point.



CATEGORY:

Drink

TEAM:

Missing Młlk

University of Reading

TEAM MEMBERS:

Solomon Aveyard
Kate Beall
Sarah Turner
Grace Sanguinetti



Finalist

PRODUCT NAME:

NoDoh Cookie Dough

DESCRIPTION:

NoDoh Cookie Dough is an indulgent, nostalgic and sustainable addition to the dessert market in the form of a ready to eat or bake cookie dough. The product utilises a valuable by-product from the beer brewing process, Brewer's Spent Grain (BSG) into the recipe. This otherwise goes to waste, commonly being sent as animal feed or to landfill. We have created two products – our Premium Chocolate Chunk Cookie Dough which provides a classic, nostalgic treat to our customers and our Vanilla Cookie Dough which is fully customisable, and fillings can be added to personalise the NoDoh experience.

Our target market is the eco conscious Generation Z and we appeal to a wide customer base as we are vegan and free from all allergens except gluten. We rival competitors as we are giving our customers an indulgent treat without using artificial flavours, colours or preservatives.

Our packaging is fully compostable, and we will also use BSG as a biofuel to power our production plant. The product is fully compliant with EU regulations and food safety is of great importance to us.

CATEGORY:

Dessert

TEAM:

NoDoh

Queen's University Belfast

TEAM MEMBERS:

Jayne Hanna
Megan Crockard
Sarah Carlisle



Finalist

PRODUCT NAME:

Notti Bites

DESCRIPTION:

Introducing Notti Bites, straight from Nottingham! We understand the importance of those little indulgent moments in life. With a deliciously innovative twist on indulgence, Notti Bites offer the naughty taste you crave while being a little less Notti for both your well-being and the planet. Sustainability is at the forefront of our focus as we created a healthier option for both dessert and snacking categories, high in fibre yet still incredibly indulgent.

Our chocolate cookie dough bite, enrobed in a crisp chocolate coating, epitomises our commitment to superior taste and quality. Our target audience primarily includes Gen Z but extends beyond this demographic, therefore we envision our product being enjoyed conveniently as an on-the-go snack in our smaller tray range or as a thoughtful gift with our larger packet range, offering full versatility.

Unlike traditional products, our cookie dough requires no baking throughout manufacturing and consumption, reducing energy usage, decreasing our carbon footprint. Our standout ingredient is PrimaFi Cocoa. A fair trade certified and EFSA approved fibre derived from the waste cocoa husk from cocoa production. This innovative fibre not only replaces the bulk weight of sugar in chocolate-flavoured applications but also contributes to the sweetness originally lost from removing sugar. Our packaging reflects our eco-conscious values, utilising biodegradable pulp trays in a 'matchbox' design, enhancing the premium feel of our bites.

CATEGORY:

Dessert

TEAM:

Notti Bites

University of Nottingham

TEAM MEMBERS:

Beatrice Godber
Eloise Bolton
Grace Carter
Megan Burrows
Rhedd Harris



Finalist

PRODUCT NAME:

Tastry

DESCRIPTION:

Tastry seek to provide health-conscious consumers the perfect sweet treat. Through market research we found that 51% of consumers would rather have health-boosting nutrients added to products rather than cutting out the 'bad' ones. So, we created our Sea Moss tarts, which have added vitamins, minerals and fibre whilst continuing to be indulgent.

Our tarts contain your daily dose of Sea Moss. They are high in fibre and contain natural ingredients. Sea Moss, also known as Chondrus Crispus, is a natural algae containing 92 out of the 102 vitamins and minerals and has a gel-like consistency. Through our development process we have refined our recipe to ensure the inclusion of Sea Moss goes undetected in the taste and texture of our tarts, resulting in range of decadent chocolate tarts. Our flavour variations are: Chocolate and Raspberry, Chocolate and Orange and Chocolate and date caramel.

CATEGORY:

Dessert

TEAM:

Tastry

University of Reading

TEAM MEMBERS:

Michaela Attfield

Eloise Noble

Hayley Laverick-Johnson

Chloe Clarke

Jess Walkington

Samuil Vladimirov

Ogechi Kema



Runners up

Entering Ecotrophelia takes time, effort and dedication and this was clearly seen in all the entries that were reviewed this year. IFST and Campden BRI would like to thank all teams for entering. The teams that did not make the shortlist this year were:

Boffin's – University of Reading

Boffin's Carrot Cake Compote is designed to elevate breakfast. It is rich in flavour and nutrients essential for older adult's wellbeing.

DATFFEE – University of Surrey

A caffeine-free beverage made from date seed waste enhanced with L-theanine. An exciting alternative for tea and coffee.

Fria – University of Surrey

An iced dessert made from sustainably sourced and upcycled ingredients (e.g. cacao husks and grape seed oil). The product is free from allergens, plant-based and a healthier alternative to dairy ice-cream.

Husk-Its – Manchester Metropolitan University

Plant-based sandwich biscuits flavoured with vanilla and cocoa husk. The product is made using oat-pulp (an oat milk industry by-product), flour and oats and a combination of sugar and xylitol sweetener to minimise the sugar content.

Peelicious – University of West London

A cookie premix containing banana peel flour, inulin, whole wheat flour, and light brown sugar. The product is low in fat and high in fibre

Pestello – University of Reading

A vegetarian, gluten and nut free ready meal. The product contains hidden vegetables to make vegetable consumption easy and accessible to university students with a busy lifestyle.

QURROS – University of Surrey

These air-fried quinoa churros are an eco-friendly twist on the classic treat. With quinoa flour as the main ingredient, the product is gluten-free, allergen-free and vegan.



2013

GOLD:
Hearty Meal
Harper Adams

SILVER:
Kombu Nations; Chinese-Style Honey, Toasted Sesame & Shiitake Sausages
University of Nottingham

BRONZE:
Vejects
University of Leeds

Shake-n-spice
CAFRE

Frushii
Campden BRI

2014

GOLD:
Cwtch Circles
Cardiff Metropolitan University

SILVER:
Pot Delights
CAFRE

BRONZE:
Thai Fish Rolls
Royal Agricultural University

Beri Bar
Harper Adams University

Beans Concoction
London Metropolitan University

2015

GOLD:
Medeina Bites
PepsiCo

SILVER:
Cauliflower Style Rice
Leeds Trinity University

BRONZE:
Duffles
University of Nottingham

Seafood Linguine
University of Nottingham

KAYS
Cardiff Metropolitan University

2016

GOLD:
Fran Borjan
Nottingham Trent University

SILVER:
El Nacho
CAFRE

BRONZE:
Hemp Milkshakes
Nottingham Trent University

Apeel
London Metropolitan University

Spent N' Gain
University of Nottingham

2017

GOLD:
Yasai caulirice sushi
University of Reading

SILVER:
Lagom Veg
Nottingham Trent University

BRONZE:
Windfall fruit Jelly
London Metropolitan University

Chocolate Strawberry Torte Donut
University of Reading

Colipop
University of West London

2018

GOLD:
Pom Puffs
University of Nottingham

SILVER:
Acheta Bread
Nottingham Trent University

BRONZE:
Vegan Pizza with Seaweed Base
Cardiff Metropolitan University

FabaMallow
London Metropolitan University

OAT-YOG cacao, cherry and almond
University of Reading

FAVA BOMB
University of West London



2019

2020

2021

2022

2023

GOLD:
VENERGY
University of Reading

SILVER:
Caruffle
Nottingham Trent University

BRONZE:
Keesh
University of Reading

Cubiies
University of Nottingham

Rainbow Snack Pot
University of Reading

GOLD:
Re-Dessert
University of Nottingham

SILVER:
PLANT UP
University of West London

BRONZE:
CocoWaffle
University of Nottingham

Betta Banoffee tart
University of Reading

Brewer' Brownies
Liverpool Hope University

GOLD:
Libero
University of Nottingham

SILVER:
Seaweed High-Protein Cracker Crisp
University of Reading

BRONZE:
Dino Dips
University of Reading

Edam and Eve
University of Surrey

Re-Gen
London Metropolitan University

GOLD:
Crack(er)ed it Crackers
University of Nottingham

SILVER:
FiBar
Manchester Metropolitan University

BRONZE:
Granola Infusions Superberry
Nottingham Trent University

Crumble Up
University of Leeds

PEA-ZZA
University of Surrey

GOLD:
PlanEat Protein Poppers
University of Nottingham

SILVER:
Super Seed Pesto
University of Nottingham

BRONZE:
Nature's Bliss
Nottingham Trent University

Avocaduo
University of Surrey

EcoBites
Manchester Metropolitan University

Eco-Co
Nottingham Trent University

Inudle
University of Reading



For more information about past competitions and products visit: www.ifst.org/ecotrophelia/competitions



For further information visit:

www.ifst.org/ecotrophelia

www.eu.ecotrophelia.org

