Research Proposal Summaries 2026

This document contains brief summaries of the Research Proposals submitted to the Research Hub in 2026. The perspectives expressed in these proposals do not necessarily reflect the views of the Research Hub. The full proposals can be read here.

Proposal 2601: Enhancing Quality Assurance and Market Confidence in Certified Compost through Standardised Testing, Traceability, and Farmer Adoption under the Compost Certification Scheme

Project Scope: This project will evaluate the CCS itself, through case studies of CCS-certified sites, laboratories, and stakeholder surveys, with the aim of providing recommendations for improvements to processes.

Objectives:

- Conduct field sampling and laboratory testing, stakeholder surveys, and comparative analysis with non-certified compost
- Recommend improvements to strengthen the CCS and market confidence.

Intended impact/benefit: Increased consumer and producer confidence in the Scheme.

Proposal 2602: Improving Feedstock Quality: Reducing Contamination to Enhance Carbon Retention and System Performance in Composting and AD

Project Scope: Contamination in organic waste streams—particularly plastics, packaging, and incorrectly sorted materials—reduces processing efficiency, increases operational costs, and undermines the quality of compost and digestate outputs.

This project investigates how front-end interventions, including decentralised stabilisation (e.g. fermentation-based pre-treatment), can improve feedstock quality before it reaches composting and anaerobic digestion (AD) facilities.

Objectives:

- Conduct pilot trials at selected households, schools, and commercial sites, introducing pre-treatment fermentation at source.
- Assess pre-treated feedstock to gauge the impact on contaminant levels, stability, odour, and operational efficiency.

Intended impact/benefit: Demonstrate a scalable solution for compost producers and AD operators to take advantage of pre-treatment fermentation, which increases the quality of outputs.

Proposal 2603: Investigating the potential of blending PAS110 certified dewatered solid digestate cake and PAS100 compost as a peat alternative in horticultural applications

Project Scope: With the increase in the anaerobic digestion of food waste there is a need to develop wider uses for certified digestate outputs. Section 7.2 of the ADRF (2025) encourages the blending of certified anaerobic dewatered digestate cake with certified compost.
This research would blend the two materials in different proportions to evaluate their suitability as horticultural growing media, analysing their composition and nutrient availability and measuring the growth of test plants.

Objective: Derive an alternative 'peat free' medium for the horticultural industry by blending low nutrient status green waste compost with potentially higher nutrient status dewatered solid digestate cake, derived from food waste.

Intended impact/benefit: Demonstrate a use case for a digestate output, and provide a peat alternative for the horticultural market.

Proposal 2604: Testing of Biomak Thermal Hydrolysis Technology to treat mixed food waste containing compostables support the production of a digestate meeting PAS 110

Project Scope: The current technology used in UK AD facilities cannot manage compostable items, particularly compostable films such as caddy liners. Therefore, a significant proportion of inputs are de-packaged and sent for disposal at significant cost as well as loss of output.

If this material could be successfully broken down prior to further treatment, a higher proportion of input material could be captured for gas and digestate production.

Objectives:

- This project will investigate whether compostable materials can be successfully treated together with food waste in AD facilities, using Biomak Thermal Hydrolysis.
- Samples of household and commercial food waste, compostables and non-compostable plastics will be tested in the Biomak pilot plant (installed at Cranfield University) at a range of moderate temperatures and pressures.

Intended impact/benefit: Increase confidence in the organics treatment sector by demonstrating that there is a sustainable and commercially viable approach to treating compostable packaging materials, which are widely used at present with few legitimate treatment routes.

Proposal 2605: Review of digestate potentially toxic elements and physical contaminants limits

Project Scope: Current regulatory frameworks (PAS 110, ADRF) for End-of-Waste (EoW) set contaminants limits for digestate on a fresh matter basis linked to nitrogen content. However, contaminant levels and nutrient content are distributed differently for separated liquor (SLD), separated fibre (SFD), and other digestate-derived (DD) products.

This project will assess whether, and how, the consistency of maximum loadings of PTEs, plastics and total physical contaminants (tPCs) to agricultural soils could be improved for the different fractions of digestate, and any DD products brought into scope during the next revision of EoW rules. For each of these product types it will also identify equivalent limits: a) linked to other nutrients and, separately, b) on a dry matter basis when they contain a product-type-typical amount of dry matter.

Objectives:

- Review evidence about typical nutrient, contaminant and dry matter levels in digestates and DD products.
- Research and report options for setting PTEs, plastics and tPCs limits applicable to BCS-certified digestate fractions and any other DD products likely to be included in future EoW rules.
- Present the results and implications to stakeholders involved in reviewing EoW rules.

Intended impact/benefit: Clarity about contaminant loading rates to agricultural soils that receive digestate and DD products, where limits: a) continue to be set on a fresh matter basis, linked to the parameter that limits the product's application rate (for example, total N or total P); or b) may be set on a dry matter basis and so are not linked to the limiting parameter.