



About the Research Hub

Who we are

The Research Hub provides research to support the organics sector and contribute to the development of the Schemes, Standards, and Policy Frameworks.

What we do

We fund research to support the following objectives:

- Maintain and improve the robustness of the Schemes (CCS and BCS) and related Standards (PAS 100 and PAS 110)
- Reinforce confidence in the compost and anaerobic digestion markets; and
- Contribute to development of new markets, including identifying barriers

How it works

Each year, we source research ideas via an open Call for Proposals. CCS and BCS participants are invited to feedback on proposals. Proposals are then evaluated by an appointed 'Research Panel' of organics sector professionals, considering industry feedback. We announce selected projects and appoint a contractor to deliver each project.

Research Hub funding is provided by CCS and BCS participants. Governance is provided by REAL.

New Project Selected

We kicked 2023 off with the annual Call for Proposals from January to March and were delighted to receive six compelling proposals which covered a range of timely and interesting topics.

In May we held a webinar to present the proposals and encouraged Scheme Participants to share their views on the proposals, which would later be considered in the formal evaluation and selection process.

The Research Panel met in June to shortlist the proposals and again in July to decide which of the shortlisted project(s) would be funded. After lively discussion and careful consideration of each proposal, the Research Panel selected the proposal entitled: ***Risk assessments updates for compost and digestate to inform Compost Quality Protocol and AD Quality Protocol revision.***

This project is intended to support the revision of the Environment Agency's End-of-Waste frameworks ('Quality Protocols') for compost and digestate, which is currently ongoing. As a component of the revision process, the EA has specified that the Risk Assessments for compost and digestate (last revised in 2019) shall be reviewed and updated to inform the revision of the Quality Protocol frameworks. The Research Hub will take this project forward in 2024.

Projects Commenced

Alongside the selection of this new project, we commenced work on two new projects selected the previous year (2022):

Developing a carbon accounting methodology for compost and digestate under the Greenhouse Gas Protocol.

We began working with AECOM on this project (formerly titled 'How the benefits of applying compost and digestate to soils can be accounted for under the Greenhouse Gas (GHG) Protocol') in June. The project had two key objectives:

1. To demonstrate to compost producers and AD operators the benefits of engaging with the GHG Protocol as a key step towards understanding their commercial activities within the global imperative to minimise climate-warming emissions
2. To provide guidance to operators on how to account for the production and application of compost and digestate under the GHG Protocol.

Carbon accounting and reporting continues to gain importance as governments, businesses, and consumers seek to understand the climate impacts of the activities they engage in and make efforts to reduce their emissions—but it can be hard to know where to start. The outcome of this project is a methodology designed to enable compost and digestate producers to conduct their own carbon footprint assessment using established carbon accounting principles and frameworks.

To ensure the project would be useful to industry, we ran a series of webinars on this project in November to introduce the project and collect composters' and AD operators' perspectives and questions about carbon accounting. These views and queries were later incorporated into the methodology report. The final methodology will be published in 2024.

Plastic contamination method assessment: Evaluating current mass-based method and possible alternative methods of assessment for plastics in compost and digestate.

We began working with Solidsense on this project in June. The project had three key objectives:

1. To assess the robustness and sensitivity of the current mass-based method for assessing plastic (physical contaminants) under PAS100 and PAS110.
2. To consider whether an area-based method for quantifying film plastics is operationally feasible and robust and whether it would be feasible to implement for PAS100 and PAS110 materials.
3. To investigate the feasibility of implementing microplastic analysis for compost and digestate on a research and development basis.

One key aspect of CCS and BCS is the contribution to soil health and quality, as demonstrated in part by a [2023 report published by the Schemes](#) which found that the vast majority of compost and digestate samples tested for certification purposes contained very little plastic contamination. We undertook this project to verify that the methods used to test for plastic contamination under PAS 100 and PAS 110 are fit-for-purpose and explore other potential methods in order to ensure that certified compost and digestate producers maintain their reputation for supplying high-quality products that continue to enhance soil quality.

The outcome of this project will be a report containing an evaluation of the current PAS-specified methods (which measure plastic fragments by mass) including scope to identify any potential areas for improvement. The report will also explore the potential application of an area-based method for film plastics and will investigate the potential to conduct microplastic analysis on compost and digestate samples. The final report will be published in 2024.

Continuing Projects

In addition to new projects, in 2023 we continued to work on more long-term projects.

- We enjoyed another year working with NNFC and Vital to keep our virtual **Organics Recycling Research Library** up to date with new information. The Research Library was launched in January 2021 and has continued to grow ever since. At the end of 2023, the Research Library contained more than 400 articles on composting and anaerobic digestion.
To access this valuable repository of knowledge and research on organics, please visit www.realresearchlibrary.org.uk.
- We continued working with Aqua Enviro on our project on **Residual Biogas Potential Test Improvements and Alternatives**. This project aimed to understand the cause of test-related failures and invalid results, explore potential improvements to the method, and/or identify suitable alternatives. Aqua Enviro has conducted in-house testing of novel digestate samples as well as historical data analysis, modelling, and desk-based study to assess several potential approaches to mitigate testing-related issues. Work began on this project in May 2022 and the final report will be published in early 2024.
- Our project on **Plant Response Test Interpretation and Comparison** aimed to address challenges related to the Plant Response Test specified under PAS 100. The REAL PRT Working Group met three times in June and July to consider the best approach to deliver this project.
It was determined that a Project Specification should be developed, and an external contractor would manage the delivery of work to REAL's specification. The specification was finalised in December 2023 and the project will be taken forward in 2024.

Research Funds

Funding for the Hub is generated through the Research Fee paid annually by CCS and BCS participants. The Research Fee is calculated according to the annual input tonnage (tpa) The funds are ring-fenced and the effective amount for future projects at the end of 2023 is approximately £250K.

More information about the Hub's operations, objectives, and funding can be found at www.realresearchhub.org.uk/about

To learn more about the Research Hub's work, please visit our website at www.realresearchhub.org.uk. To request access to any of our research resources, or if you have any queries, please email info@realschemes.org.uk.



In 2019 REAL achieved certification of its Quality Management System to the ISO 9001:2015 standard.

The ISO 9001:2015 standard is based on a number of quality management principles including a strong customer focus, the motivation and implication of top management, the process approach and continual improvement. Using ISO 9001 helps ensure that customers get consistent, good-quality products and services, which in turn brings many business benefits.

The seven quality management principles are:

- customer focus
- leadership
- engagement of people
- process approach
- improvement
- evidence-based decision making
- relationship management.



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