

Annual Report 2025



Research
Hub
TO SUPPORT THE
ORGANICS SCHEMES

The logo features the words 'Research' and 'Hub' stacked vertically. 'Research' is in a dark grey sans-serif font. 'Hub' is in a larger, bold, dark grey sans-serif font. To the right of 'Hub' is a small graphic of a horizontal line with a dot at its end, and a vertical line with a dot at its end, intersecting at a central point. Below this graphic are three small colored dots: a yellow one on the left, a red one in the middle, and a blue one on the right. Below the main text, the tagline 'TO SUPPORT THE ORGANICS SCHEMES' is written in a smaller, all-caps, dark grey sans-serif font.

Foreword

This is the first Annual Report of the Research Hub—a landmark moment that celebrates not just what we have built, but the future we are shaping together. From its inception in 2019/2020, it has been incredible to watch this vision take root and flourish into a well-established framework over the past five years. I want to extend my heartfelt thanks to Virginia Graham for her foresight and support in bringing this opportunity to life.

I am also deeply grateful to the Governance Committee members, especially our chair, Michael Chesshire, whose unwavering support has been instrumental in building a robust and resilient system.

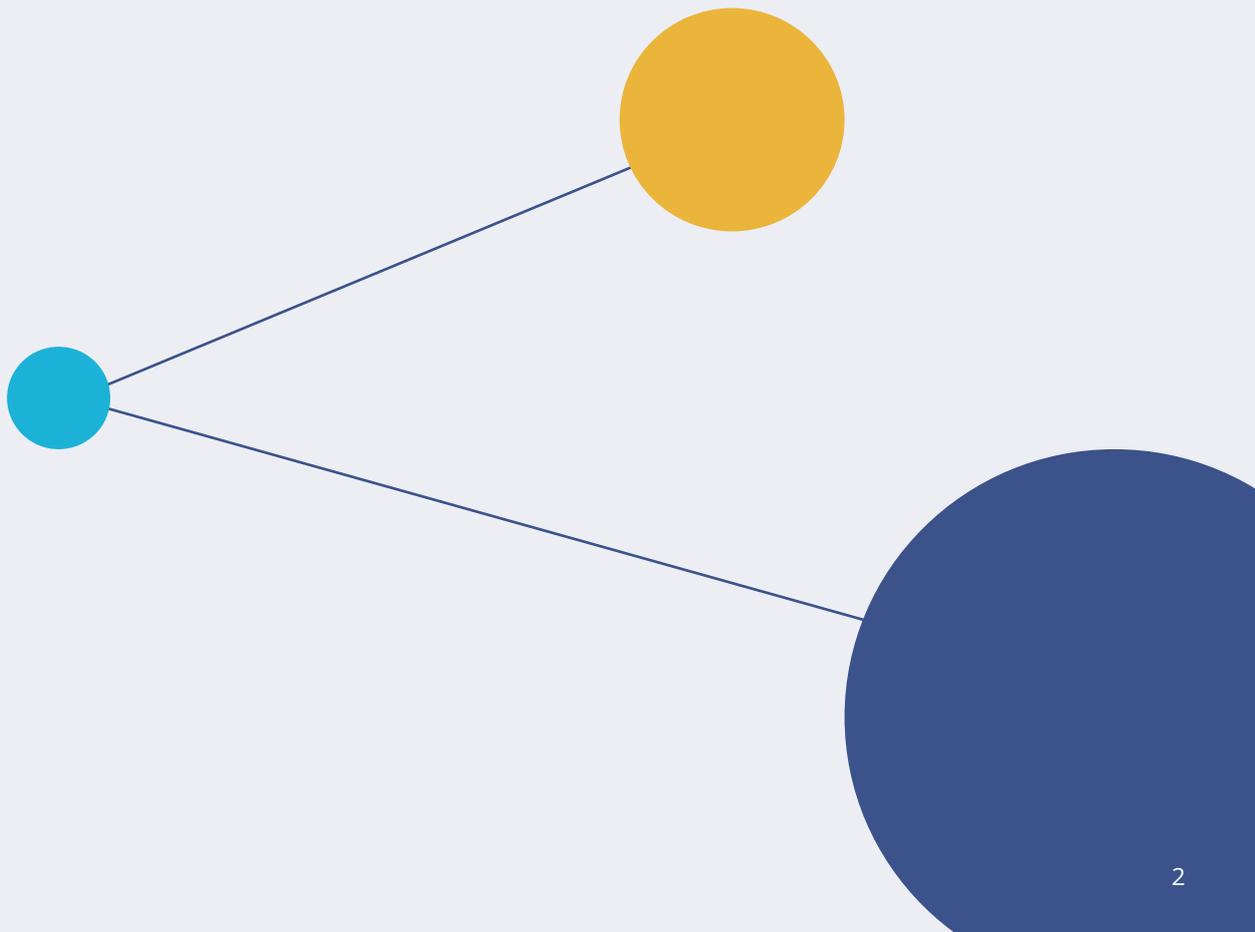
We have contemplated publishing this report for several years, and 2025 provides the perfect moment to share our journey. The Hub's impact on sector development has grown significantly, with key projects such as Risk Assessments for Resource Frameworks Revision and End-of-Waste

Case Information for Digestate-Derived Products. It is particularly rewarding to see these projects directly shaping end-of-waste policies, opening new pathways for compost and digestate-derived products.

At the core of the Hub's mission is enabling progress. We are optimistic that these projects will continue to evolve, delivering clear messages and influencing policy changes that further promote the circularity of organic resources.

We invite you to explore and engage with the Hub's projects, and we hope you find this report both informative and inspiring.

Justyna Staff,
Director of Organic Materials Schemes



About the Research Hub

Who we are

The Research Hub commissions research to support the organics recycling sector – that's food waste, green waste, compost, anaerobic digestion, materials to land – and to contribute to the development of the Schemes, Standards, and End-of-Waste Frameworks. Our purpose is to strengthen the position of compost and digestate within the circular economy, helping to change organic resource management into the social and environmental asset it can really be.

What we do

We help identify and deliver projects 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

The Hub's research is funded through a Research Fee levied on participants of the Compost Certification Scheme (CCS) and Biofertiliser Certification Scheme (BCS). The Schemes are owned and operated by Renewable Energy Assurance Ltd (REAL). The Schemes independently assess and certify compost and anaerobic digestate to PAS 100 and PAS 110 respectively, the CCS and BCS Scheme Rules, and the relevant national End-of-Waste framework: the Compost Resource Framework (CRF) or Anaerobic Digestion Resource Framework (ADRF) for England, the Compost Quality Protocol (CQP) or Anaerobic Digestion Quality Protocol (ADQP) for Wales and Northern Ireland, or the SEPA Position Statements for Scotland.

In meeting the Schemes requirements, compost and digestate reaches End-of-Waste status, meaning it is considered a product and is no longer subject to waste controls.

Each year, the Hub sources research ideas via an open Call for Proposals. CCS and BCS participants are invited to feed back on proposals. Proposals are then evaluated by an appointed Research Panel of organics sector professionals, considering industry feedback. We announce selected projects, which then undergo an open tender process to appoint a contractor.

Research Hub Funding

Funding for the Hub is generated through the Research Fee paid annually by CCS and BCS participants. The Research Fee is calculated based on the annual input tonnage (tpa) of each plant. The Research Fees are ring-fenced.

About the Research Hub

Governance

The Research Hub is managed by REAL. To ensure that the work of the Research Hub is transparent and in line with its objectives, REAL has established the Governance Committee, Research Panel, and Project Steering Group(s). These groups are responsible for different aspects of the Research Hub's governance and operation. The Governance Committee oversees the operation of the Hub, meeting to assess its progress and manage its funding.

The Research Panel recommends research projects for funding and authorises the Steering Group for each newly-selected project. The Research Panel comprises stakeholders from industry, government, and regulation. The Steering Groups provide management support for the Hub's projects. Each Steering Group consists of a REAL representative, members of the Panel and/or external individuals as appropriate and depending on the nature of the project.

Our Vision, Mission and Values

Our vision is:

A sustainable, decarbonised economy, trusted by consumers and built on evidence-based innovation and growth.

Vision

Our mission is to:

Provide trusted, independent assurance that builds confidence across the circular economy and renewable energy sector.

Mission

Our core values are:

- ▶ We are principled and caring
- ▶ We are passionate
- ▶ We are open-minded and inclusive
- ▶ We are professional
- ▶ We pay attention to detail
- ▶ We seek innovative ways to deliver our mission

Values

Hub snapshot 2025

Research projects managed by the Hub: 5

From regulation and risk assessment to peat restoration, the Hub's projects span the breadth of the expanding organics recycling sector.

Research proposals received during the annual call for proposals: 5

Each year, the Hub receives diverse proposal ideas from a variety of stakeholders, both from within the industry and outside it. These proposals are assessed by the Hub's Research Panel, and the Panel selects the proposals which are timely, and likely to be most useful for the CCS and BCS.

Number of laboratories working on Hub-funded projects: 3

Over the years that the Hub has been running, its research projects have drawn on a growing number of contractors, laboratories and technical experts. The Hub is proud to be working with facilities which meet the highest standards of evidence-gathering capability.

Project contracts signed: 4

Each contractor chosen to deliver a Hub project goes through a rigorous tender evaluation process, involving the Hub's project manager and the steering group.

Hub Projects value in 2025: £375k

Funds committed for future Hub projects: £282k

Spotlight on the Hub's Organics Recycling Research Library

The Hub's Research Library was the first project commissioned by the Hub, in 2020. It was developed by Alder BioInsights (then known as NNFCC). Since then, it has provided a plethora of information for Schemes participants, from the latest research articles on compost and AD innovation, to policy documents.

All Schemes participants have free access to the Library. The Library is evolving constantly in response to user searches, as Alder BioInsights continues to add material to the Library every month. For example, in 2025 a user searching for 'Farming Rules for Water' highlighted a gap in the Library, which was responded to with the addition of the policy document 'The Reduction and Prevention of Agricultural Diffuse Pollution (England) Regulations 2018', in the 'Documents' section. In total, 32 articles were added to the Library in 2025. As the organics sector grows and changes, the Library continues to be a valuable record of research and policy developments, as well as providing a platform from which those interested in organics recycling can identify and suggest research 'gaps' which the Hub could commission projects to fill. The Library can be accessed here: <https://www.realresearchlibrary.org.uk/>

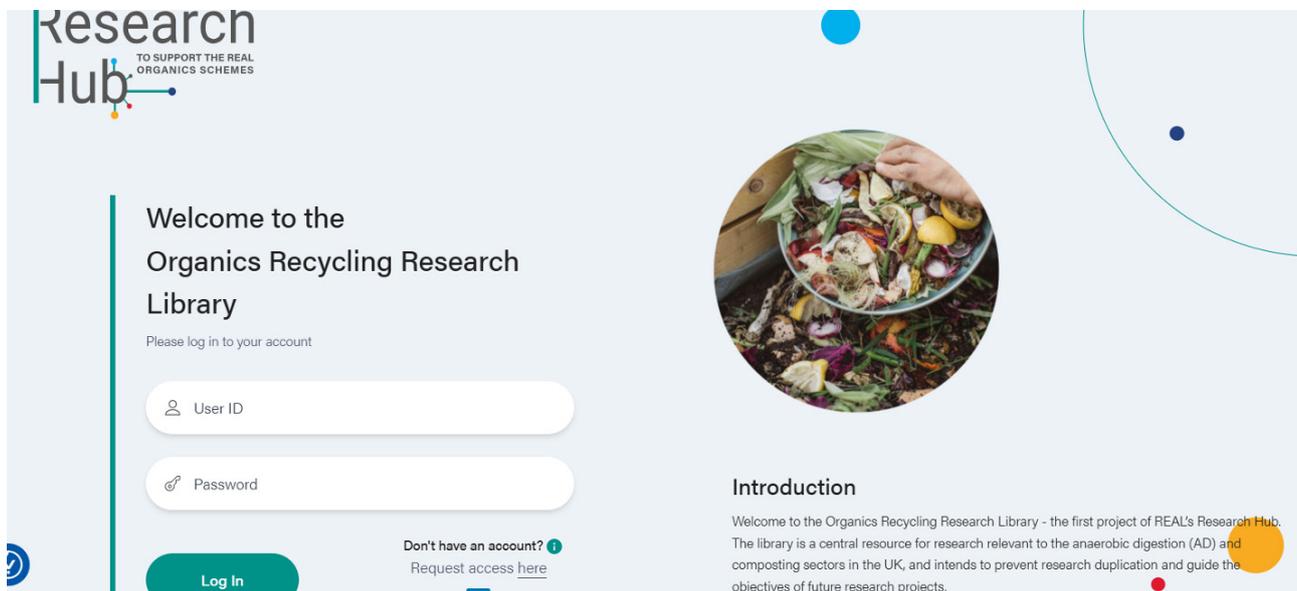


Figure 1: The Research Library's login page

Hub projects spotlight

Aside from the continued growth of the Hub's Research Library, there were four ongoing projects which progressed during 2025.

Project 4: Plant Response Test Interpretation and Comparison

Plant Response Test Interpretation and Comparison: Investigating performance of the UK Tomato Plant Response Test and German Spring Barley Test on CCS Compost

This project aims to address challenges related to the Plant Response Test specified under PAS 100. The project specification was completed in 2023. Phase 2, laboratory testing and technical co-ordination, was taken forward in 2025. Throughout the year, the technical co-ordinator liaised with CCS-approved labs Eurofins and STC to monitor lab testing and collate the data.

The tender process for Phase 3 of the project (data analysis) took place in 2025. The contract was awarded in July to Biomathematics and Statistics Scotland (BioSS), part of James Hutton Ltd. This phase of the project began in December 2025 and is due to run until August 2026. BioSS will use CCS PRT data, based on tomato plant growth, which will be compared with spring barley data gathered by the labs for this project.



Figure 2: Spring barley plants in the lab, June 2025

Project 7: Risk Assessments to Inform Resource Frameworks Revision

Risk assessments updates for compost and digestate to inform Compost Quality Protocol and AD Quality Protocol/ Resource Framework revision

This project is hugely significant for the Hub, because it is a direct response to the UK regulators' changing End-of-Waste positions, and the project timeline has been aligned with the revision window of the Environmental Agency's Resource Frameworks in 2026. After the initial Hazard Analysis review commissioned by the Hub in 2024, global consultancy firm WSP was appointed as the contractor for the remaining phases of the Risk Assessment project in March 2025.

The Hub presented the Risk Assessment project to Schemes participants and the wider sector at several joint webinars held with the EA and the REA, upon the publication of the draft RFs. In December, the Hub consulted with all the UK regulators on the draft project report, seeking to ensure the broader relevance of the project deliverables in the context of new, more complex, End-of-Waste positions across the UK nations.

 **Project 9: EoW for Digestate-Derived Products – in progress**
End-of-waste case information for digestate-derived products

This project aims to enable the inclusion of a broader range of end-products and their designated market scope in the EA's AD Resources Framework.

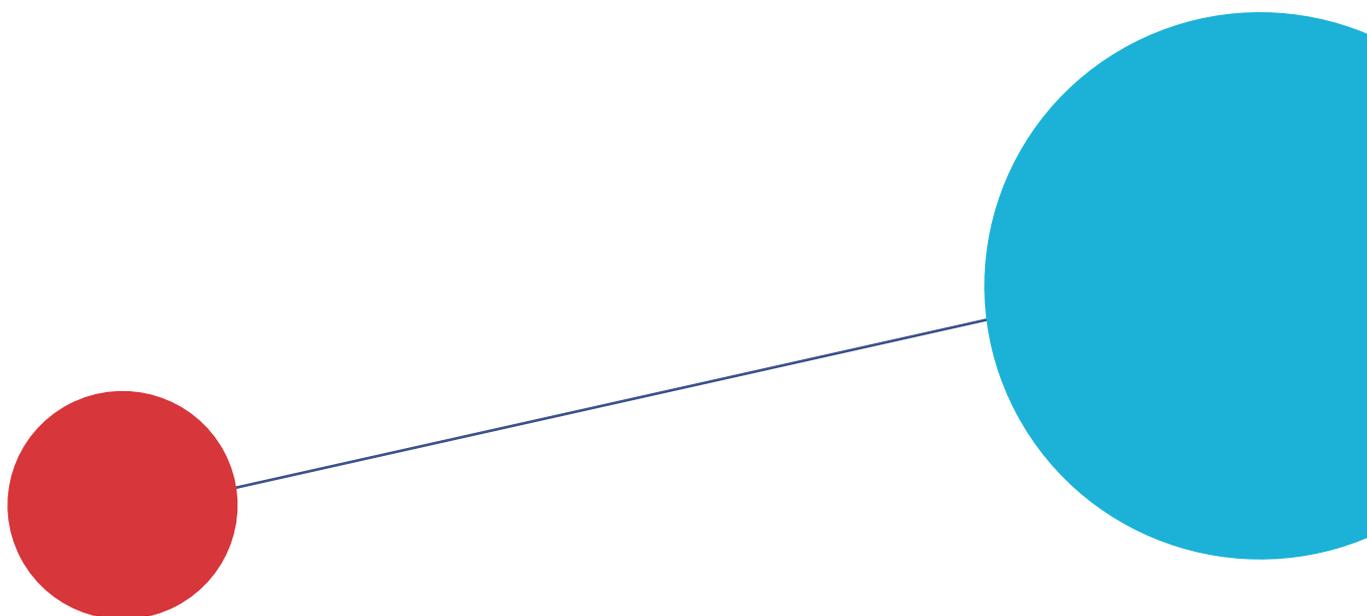
The project's key objective is to research and compile information on a range of digestate-derived products in terms of how they can be used, the demand for them and how each of them compares to a suitable non-waste comparator. It builds on the Hub's Project 2: Digestate Characteristics and Valorisation Options which was completed in 2021.

The University of Southampton was appointed as the contractor in May 2025, and the project team has made great strides this year – completing a literature review, collating information about digestate-derived products and their markets, and beginning to set up testing regimens.

 **Project 10: Alternative Control Growing Media for PRT**
Alternative control growing media for REAL CCS plant response tests

The current REAL Compost Certification Scheme (CCS) plant response test (PRT) compares the growth of tomato plants in a 'control' peat medium against a mixed medium of peat and 'test' compost sample. Anticipating changes in planning requirements for peat extraction, the purpose of this project is to evaluate and test alternative control growing media for use in the CCS PRTs.

RSK ADAS were appointed as the contractor for this project, and work began on experimental design, in June 2025. A shortlist of peat alternatives was compiled in consultation with the Steering Group, and physical property testing was under way by the end of the year, with growth trials scheduled as the next step.



Selected projects in 2025

Two projects were selected by the Hub's Research Panel in October. Below is a summary of each selected project.

Project 2502: Physical Contaminants in Delivered Biowastes

Evaluating quantified and visually assessed physical contaminants in delivered biowastes and biowastes after pre-treatment, and improving their assessment and pre-treatment management

Regulators are imposing stricter physical contamination (PC) limits on composters and AD processes. At the same time, Schemes participants are reporting receipt of delivered waste loads from Local Authorities with contaminant levels which challenge the participants' ability to meet EoW criteria.

Prevailing wisdom is that the best way to reduce PC in finished compost/digestates is to minimise it as early as possible in the waste stream. This project aims to understand and quantify the nature of PC in targeted biodegradable waste stream types that arrive at composting and AD facilities and assess current pre-treatment techniques to inform interventions to minimise this challenge. The information gathered may provide the basis for discussions with Local Authorities and other suppliers of organic wastes to endeavour to reduce the physical contaminants that arrive at biodegradable waste treatment sites and improve their removal during on-site waste pre-treatment.

The Hub is assembling a Steering Group from across the sector – speaking with LA representatives, industry, and regulators.

Project 2505: RBP Test Duration Review

Review of residual biogas potential test duration and 5-day gas evolution quality criterion

The residual biogas potential (RBP) test is used under the BCS to assess the stability of the digestates and is an important criterion for operators to demonstrate resource recovery. Although the RBP test was reconsidered as part of Research Hub Project 3 (Evaluation of the potential for the improvement of the Residual Biogas Potential test and investigation of alternative test procedures for 'End of Waste' biofertilisers), that project did not have a large enough dataset to make conclusive and robust recommendations. Shortening test duration was last considered in a WRAP project in 2013, when the BCS had only 24 operators.

Consequently, the project will review BCS RBP data to assess whether the test duration could be reduced from 28 days.

Further Information

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, and follow us on LinkedIn: [linkedin.com/company/real-research-hub](https://www.linkedin.com/company/real-research-hub)

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.

REAL Research Hub is part of Renewable Energy Assurance Limited.

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