

Carbon Star, Hawthorn and paper

Biochar Sculptures

Discovering Biochar through Art

Catherine Price and Billie Ireland



Modular paper form and Hawthorn

WELCOME TO THE WORLD OF BIOCHAR

Biochar is created by heating organic matter like wood, straw or green waste in a low-oxygen environment. This process, called pyrolysis, results in a black material. Not only does biochar help improve soil health and stores carbon, but it also inspires creativity in artists. In this zine, we invite you to explore biochar through the medium of sculpture.

What Is Biochar?

Biochar offers solutions to some of today's most urgent environmental issues, such as climate change and soil degradation. When biochar is added to soil, it captures carbon in a stable, enduring form, preventing it from returning to the atmosphere. This secure storage means the carbon remains stored for hundreds or even thousands of years. Additionally, biochar can potentially improve water retention and help retain nutrients.



Biochar in a field

For gardeners and farmers, biochar is a valuable resource designed to be incorporated into soil, where it continues to store carbon and benefits ecosystems. By understanding biochar's environmental benefits, we can better appreciate its significance as a material that actively shapes and supports life for both humans and non-humans.

Biochar as a More-than-Human Material



Biochar

Biochar can be described as a more-than-human material. The more-than-human is a way of looking at the world that doesn't place humans at the centre. It recognises that soils, plants, microbes, carbon, and other natural processes shape life alongside us. Biochar fits into this idea because, although humans make it from biomass, once it's added to soil it becomes part of these wider relationships. It interacts with microbes, affects soil structure, and takes on a role within the living systems around it. Seeing biochar in this way also shapes how artists work with it, treating it not just as a sculptural material but as something with its own ecological story.

Artists are discovering the beauty and versatility of biochar. With its striking dark colour and textured surface, biochar lends itself to a variety of sculptural forms. Whether shaped into abstract figures, intricate patterns, or representations of nature, biochar sculptures capture the imagination and provoke thought about sustainability and our relationship with the environment.



Seed heads

The Art of Biochar Sculptures



Connection, paper form



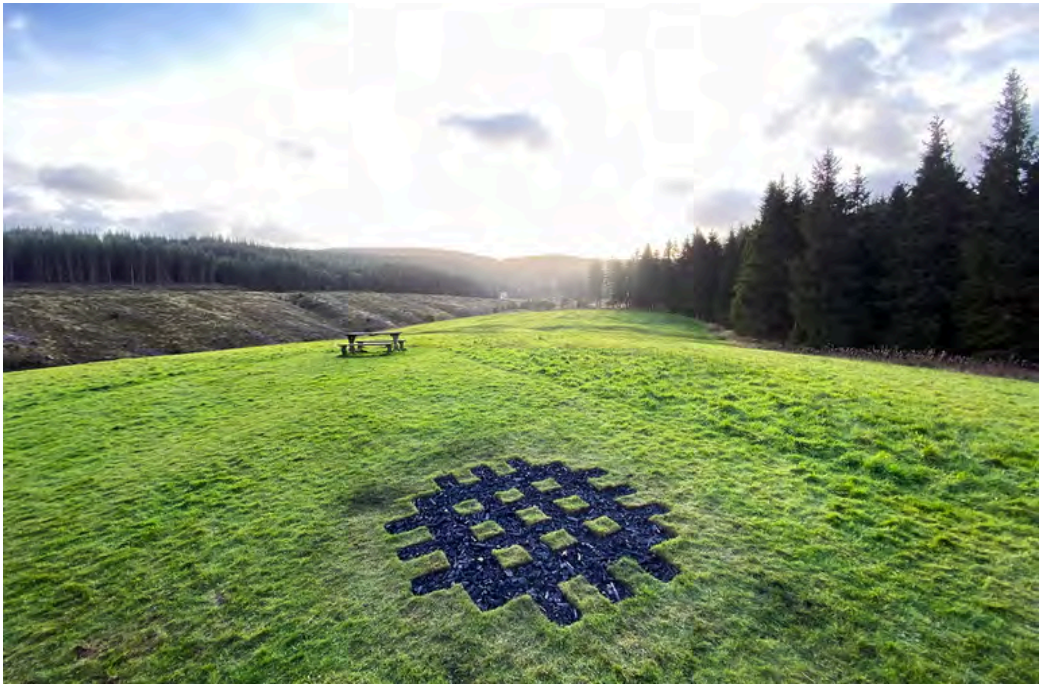
Scroll stack

Visual Impact
The deep black colour of biochar makes it a dramatic medium for sculpture, offering bold contrasts and rich detail.

Environmental Message
Each biochar sculpture is a reminder of the importance of carbon management and sustainable practices.

Connection to Nature
Created from organic material, biochar sculptures embody the cycle of life, decay, and renewal.

Biochar sculptures are not only artistic statements but also symbols of connection. They invite us to appreciate the shared journey of renewal and resilience among the living and non-living.



The Weave. Artscape Project. Hafren Forest, Wales

Some sculptures may appear rugged and organic, while others are polished and geometric. Each piece tells its own story about transformation, resilience, and the power of nature.

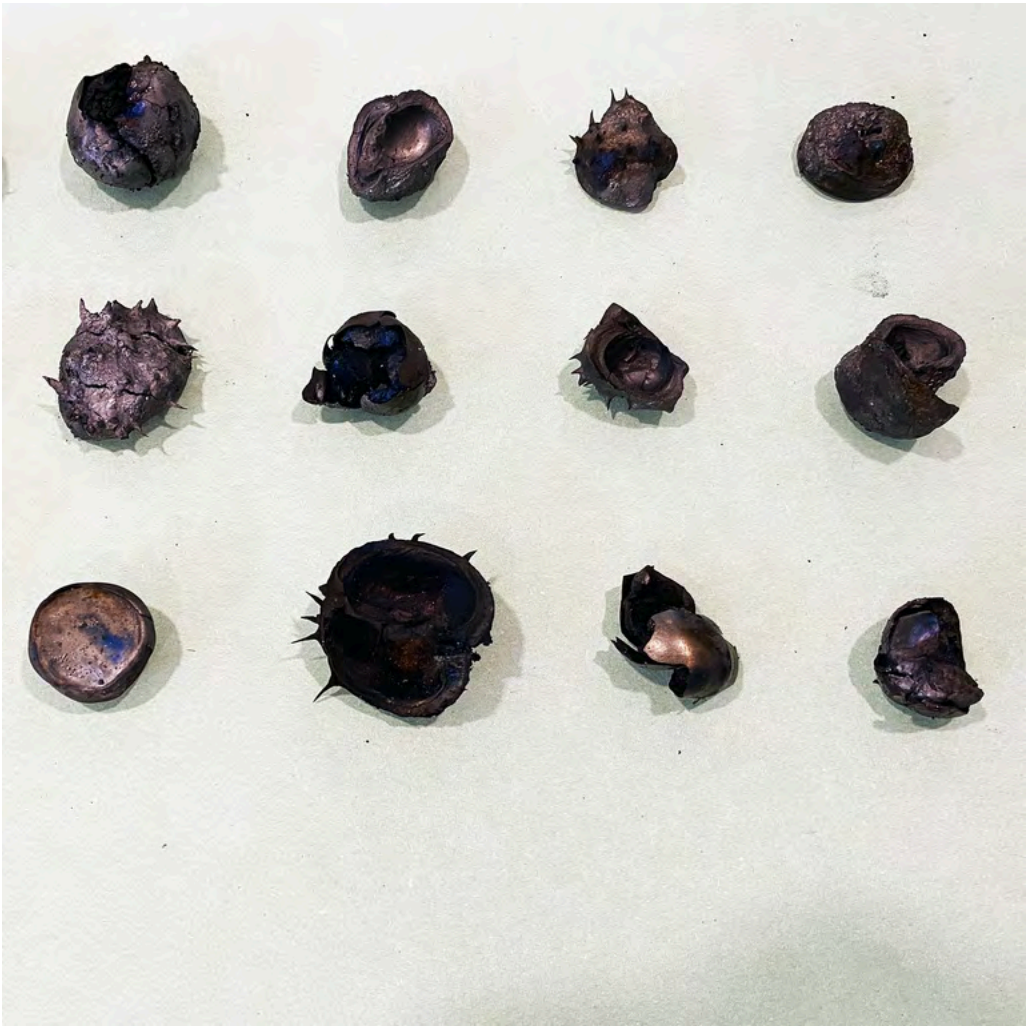


Oak branch

Biochar sculptures offer a unique blend of artistry and ecological responsibility. Through visual imagery and creative expression, we can better understand biochar's potential as both a technology for environmental improvement and an inspiration for a more sustainable future.



Buried Alder and Beech seeds



Conkers

Whether you're an artist, an environmentalist, a farmer, a gardener, or simply curious, we invite you to celebrate the wonders of biochar and its potential to inspire positive change. Let art and sustainability shape our future, one biochar sculpture at a time.



Artichoke Head



Rose

About the Authors

Dr Catherine Price is a Research Fellow based in the School of Geography, University of Nottingham. She works on the social science work package of the Biochar Demonstrator project. Her research interests include the impact of agricultural technologies on more-than-human worlds, food systems, multispecies justice, just transitions associated with greenhouse gas removal technologies such as biochar, and responsible research and innovation.

Publications: ResearchGate

Billie Ireland is an artist and teacher living in Wales, UK. She makes research-driven, site-responsive, temporary land art interventions, sculpture, paperworks and film. For the past three years, the exploration of biochar and pyrolysis has been a central process in her work. With carbon's legacy of power, extraction and exploitation it has been through sacred ecology and connections to place that Billie has attempted to reconnect with this sustaining material. Themes of sacrifice, fragility, and resilience weave through the work, offering insights into the intersections of care, creation & connection. Billie's current practice attempts to capture the cycles of unseen labour and energy at the heart of both creation and craft, whilst making the flow and transformation of carbon and life's fleeting nature palpable.

Instagram: billieirelandart
Website: www.billieireland.co.uk
CO2RE artists: Billie Ireland

About this Zine

Catherine's work on the Biochar Demonstrator project examines stakeholder perspectives of biochar production and deployment. She also leads a project that seeks to develop a conceptual framework for including the more-than-human world (animals, plants, soil, water, land, etc.) within responsible research and innovation (RRI). A one-day workshop at the University of Nottingham brought Catherine and Billie together, and the zine was subsequently developed as a collaborative output spanning both projects. It explores biochar as a more-than-human material, using creative practice to open up different ways of thinking with the material and its relationships.

About the Biochar Demonstrator

The Biochar Demonstrator is a UK research project exploring how biochar is produced and used, and what it can offer for greenhouse gas removal. Nearly 200 tonnes of biochar have been applied to farmland and forestry land to understand how it behaves in real conditions and how it might support climate goals. The project brings together scientists, engineers, social scientists, and industry partners to build clearer evidence for how biochar could contribute to the UK's net zero plans.



Spreading biochar

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Contact details
If you have any questions about this zine, please contact Catherine Price via email at catherine.price@nottingham.ac.uk

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Biochar DEMONSTRATOR

ACCESS Advancing Capacity for Climate and Environment Social Science

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