# Grounds for Good turns UK coffee waste into sustainable products with global impact



The concept of utilising spent coffee grounds has gained traction, and Grounds for Good exemplifies this innovative approach. The idea originated in a local coffee shop when a retired NHS volunteer, curious about the fate of coffee waste, discovered that much of it ended up in landfills. This unsettling reality spurred the creation of a business dedicated to transforming these discarded grounds into valuable products. This perspective shifts coffee grounds from being mere waste to a resource rich in potential, boasting flavour, aroma, and a range of useful properties.

In the United Kingdom, approximately 98 million cups of coffee are consumed daily, resulting in a staggering amount of coffee waste that contributes significantly to landfill. When these organic materials decompose, they produce methane, a greenhouse gas far more harmful than carbon dioxide. This final journey for coffee grounds seems particularly wasteful, given that they have already undergone cultivation, processing, and logistics across the globe. Hence, Grounds for Good aims to reclaim this overlooked resource, developing a suite of end products that includes personal care items, homeware, and even gourmet foods, all while adhering to a principle of intentional waste reduction.

The model employed by Grounds for Good features a closed-loop collection system in South Wales, efficiently integrating local distribution networks to gather coffee waste without amplifying emissions. Any unutilised grounds are directed towards anaerobic digestion, generating biofertiliser and energy for the national grid. While not flawless, this practical solution offers a tangible step toward embracing a circular economy. The Well-being of Future Generations Act in Wales provides a favourable framework for such initiatives, underscoring the potential for local leadership in sustainability.

However, the transition to a more sustainable consumption model also hinges on consumer attitudes toward waste. Many individuals remain hesitant, often chaining the term “waste” to negative connotations. Reframing this narrative through quality branding and design is crucial. By showcasing upcycled materials as premium offerings, Grounds for Good seeks to shift public perceptions and foster a culture that embraces sustainability. Such storytelling takes effort, yet it forms a vital part of the educational journey toward wider acceptance.

The potential for innovation does not stop with the current product offering. Collaborating with researchers, Grounds for Good is exploring new applications for coffee waste, such as biochar and carbon capture technologies. This aligns with global efforts, as seen in Australia, where researchers at RMIT University have started transforming used coffee grounds into biochar to improve concrete. This means not only strengthening the material but also diminishing reliance on traditional, emissions-heavy cement. Projects like this could pave the way for significant reductions in both coffee waste and greenhouse gas emissions across various industries.

Other global initiatives further enrich the discussion around coffee waste. For example, Finland is harnessing coffee grounds for a range of uses, from biofuel production to textiles, illustrating a shift in operational practices towards circular economy principles. These approaches from different regions emphasise the existing synergies potential within the wastage of coffee, reflecting a broad movement towards sustainability that transcends borders.

Finally, as Grounds for Good matures, it stands as a beacon for small businesses aiming at waste valorisation. Its journey reflects that even the most routine items, such as coffee grounds, hold the potential to spark significant environmental and economic benefits when approached strategically. By fostering collaborations and sharing innovative ideas, it becomes clear that the future of sustainability might be as simple as looking beyond traditional waste paradigms.

Source: [Noah Wire Services](https://www.noahwire.com)

## Bibliography

1. <https://businessnewswales.com/what-a-cup-of-coffee-can-teach-us-about-the-circular-economy/> - Please view link - unable to able to access data
2. <https://apnews.com/article/5a3a5d7d4a66725f9747cbab23cb586d> - Starbucks is aiming to eliminate disposable cups by 2030 to boost sustainability, motivated by the need to reduce waste and greenhouse gas emissions. The effort includes programs like offering customers $1 discounts for bringing their own reusable cups. In some stores, reusable cups are standard, and customers can return them to be washed and reused. This initiative is part of a broader plan to halve Starbucks' waste, water use, and carbon emissions by 2030. The transition involves overcoming significant production and operational challenges, such as increasing the use of recycled material and refining cup designs without compromising quality. The ultimate goal is to shift entirely to reusable cups while also developing more recyclable disposable options. The success of this initiative relies on customer participation, supplier collaboration, and possibly government regulation.
3. <https://www.reuters.com/business/environment/australian-researchers-turn-morning-coffee-waste-into-greener-concrete-2024-05-22/> - Researchers at Melbourne's RMIT University have developed a method to convert used coffee grounds into biochar, a material that can replace up to 15% of sand in concrete, resulting in stronger and more sustainable concrete. The inclusion of biochar not only enhances the concrete's strength by 30% but also reduces the need for cement by up to 10%, thus potentially lowering greenhouse gas emissions from concrete production, which is responsible for 7% of the world's emissions. The Macedon Ranges Shire Council has already used this coffee-based concrete in constructing a footpath, and several construction firms, including Bild Group and Arup, plan to trial it. The initiative can help address environmental concerns associated with sand extraction and cement production. It also presents a viable use for millions of tons of waste coffee grounds, significantly reducing methane emissions from landfills. The success of this project may lead to the formation of a dedicated company to produce biochar from coffee waste, with potential global applications.
4. <https://www.mdpi.com/2673-8783/4/2/14> - This review explores the potential of spent coffee grounds (SCGs) as a source of value-added compounds through various conversion technologies employed in the valorisation of SCGs into biochar, biofuel, and important chemical building blocks. SCGs are rich in cellulose, lignin, protein, lipids, polyphenols, and other bioactive compounds, making them important raw materials for use in industries including pharmaceuticals and cosmetics. The energy sector has the potential to capitalize on the high calorific value of SCGs for biofuel and biogas production, offering a sustainable alternative to fossil fuels. The review presents the state-of-the-art, current knowledge, future research to stimulate the creation of sustainable products, and the challenges and economic feasibility of exploring SCGs in a biorefinery context.
5. <https://www.mdpi.com/2227-9717/12/12/2851> - This article discusses the valorization of spent coffee grounds (SCGs) within the circular economy, focusing on their potential in bioproducts and chemical production. SCGs are rich in cellulose, hemicellulose, lignin, lipids, phenolic compounds, and proteins, making them suitable for conversion into various biobased products, including bioethanol, biodiesel, biochar, and other bioactive compounds. The article explores the biorefinery approach to coffee waste valorization for energy production, employing processes to convert SCGs into valuable energy products and other useful by-products. It also discusses the potential of SCGs as a source of biochemicals and biomaterials, highlighting their use in the production of bioplastics, biofuels, and adsorbents, and the challenges and economic feasibility of exploring SCGs in a biorefinery context.
6. <https://circulareconomy.europa.eu/platform/en/good-practices/coffeefrom-processing-coffee-grounds-durable-and-resistant-alternative-single-use-plastic> - Coffeefrom is an innovative project from Italy that has built a supply chain based on the recovery and processing of industrial coffee grounds. Coffee grounds from the food industry are blended with biopolymers to become a new bio-based material produced entirely in Italy: Coffeefrom. It is a durable and resistant alternative to single-use plastic, produced in collaboration with Milan polytechnical university and companies in the supply chain. The project reduces the substantial management and environmental costs associated with the food industry and has a positive social impact by integrating fragile and disadvantaged people, as well as working closely with other social enterprises.
7. <https://www.fertilizerdaily.com/20241031-finlands-model-for-coffee-waste-recycling-from-grounds-to-green/> - In Finland, companies are finding value in coffee waste by turning it into fertilizers, biofuels, and even textiles. These innovations, driven by the country’s focus on circular economies, illustrate a shift in waste management that holds promise for agribusiness and resource managers worldwide. Finnish firms, including Natural Indigo Finland and Marimekko, are using coffee-based dyes for eco-friendly clothing. Retailer Kesko repurposes coffee grounds into gardening soil for consumer use, while also offering large-scale agricultural benefits by enriching soil health and supporting organic farming needs. Finnish companies are converting coffee oils into biodiesel, supporting national goals for renewable energy and reduced carbon emissions, particularly in agribusiness and logistics. These initiatives provide a replicable framework for other sectors aiming to cut waste and adopt sustainable practices.