# EPSRC supported EngD: Towards net-zero manufacture of chilled/refrigerated prepared foods

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Samworth Brothers

Tax free bursary of £25,000 p.a plus fees paid

The Food Industry is the largest manufacture sector in the UK’s and the fourth highest industrial energy user. To contribute to the achievement of UK’s zero-carbon emissions targets by 2050, it is critical to act on those hotspots for energy demand and/or GHG emissions. One of these potential areas of action is the food cold chain – the manufacture and distribution of frozen, refrigerated and chilled foods is energy intensive and often involves the use of high-GWP (Global Warming Potential) refrigerants.

In this context, this project aims to identify those food manufacturing scenarios that would lead to successful strategies for the transition to net-zero food supply chains focusing on chilled foods (e.g., ready meal foods), and working in partnership with Samworth Brothers. The project will combine techno-economic, environmental and/or policy aspects in an integrated approach for the design and evaluation of decarbonisation solutions, focusing on the comparison of different manufacturing paradigms of prepared chilled/refrigerated foods. This approach is based on the development and implementation of suitable simulation/optimisation and decision-making tools, for which a high level of engineering and computational competence, coupled with adequate knowledge of (bio)process systems is desirable.

For informal enquiries please contact cdt-formulation@contacts.bham.ac.uk , together with a CV. Candidates must have at least a 2.1 in a relevant degree discipline or a 2.2 plus an MSc. For details on the Engineering Doctorate scheme visit the [homepage](http://www.birmingham.ac.uk/schools/chemical-engineering/postgraduate/eng-d/index.aspx). **Deadline August 5th.**