

## What are the Determinants of Brownfields Regeneration? A Revealed Preference Study of England Brownfields

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Urban sprawl and the development of greenfield sites that most developed countries societies are currently facing, has recently pushed government in both the EU and the US to reuse previously developed land. Observers believe that, among other things, compact cities contribute to biodiversity conservation and decrease energy consumption. At the same time, the regeneration of brownfield sites addresses problems of contamination, improves the balances between urban, peri-urban and rural relationships, identifies sustainable future opportunities, may increase the supply of affordable housing close to local amenities and open space, reduce inequalities, and make our inner cities less congested and safer places to live.

The UK Government has requested that 60 per cent of all new homes to be built on brownfield land and more recently the Barker Review (2006) has suggested the use of policy instruments, such as introducing a *charge* on vacant and derelict brownfield land and a *subsidy* to help developers bring forward hard-to-remediate brownfield sites.

This paper uses **econometric** techniques, supported with GIS data, to address key questions that brownfield stakeholders and policymakers are facing in the UK and elsewhere: what site characteristics, what ownership type, what geographical characteristics, what policy instruments make brownfield sites more likely to be regenerated? What are the drivers of specific regeneration projects? Are there any regional variations?

To address these questions we analyse a dataset of more than 20,000 observations of brownfield sites in England. The analysis of the **Revealed Preferences** of local stakeholders is carried out to investigate past decisions at brownfield sites in England to disentangle the drivers of those decisions. We first run **probit models** to explain the determinants of regeneration decisions. Next, we estimate **multinomial logit models** to assess the impacts that different site characteristics have on the final land use of brownfield sites.

The results of our study contribute to the brownfield research by providing insights on the effectiveness of different policy instruments for successful redevelopment of brownfield sites.