



Environmental Optimisation of the Production of Bricks and Tiles at Honey Lane, Selborne

Project Staff	Principal investigator:	Prof. CJ Banks
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Tower Brick and Tile Company Limited (TBTL) manufactures handmade bricks and tiles from gault clay quarried from a site adjoining the works. The single biggest direct cost of manufacture is the gas, which is used to fire the bricks to 1050 oC. At the end of the process the hot air from the kiln is then discharged to atmosphere.

This project identified improvements in the thermal and emissions efficiency of brick production by TBTL and developed plans to implement them. The project included investigation of the potential for use of alternative fuels, additional heat recycling and re-utilisation, and changes in the composition of the bricks and tiles themselves. The aim was to allow production of high-quality, low-energy, carbon-neutral bricks to meet growing demand for environmentally sustainable products in the building sector.

For the opportunities identified, the project included the scoping and outline design for the fabrication, installation and operation of any ancillary equipment required. The final report included assessment of these options.

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Collaborators:

Tower Brick and Tile Company Ltd

Publications:

Gredmaier, L., Banks, C.J. and Pearce, R.B. (2011) Calcium and sulphur distribution in fired clay brick in the presence of a black reduction core using micro X-ray fluorescence mapping. *Construction and Building Materials*, 25, (12), 4477-4486. (doi:10.1016/j.conbuildmat.2011.03.054)