



The **HISTORICAL  
METALLURGY**  
Society



**100th Anniversary of Stainless Steel**  
Annual Conference 19th-20th October 2013,  
Cutlers' Hall, Sheffield, S1 1HG

**9.30-10.30 Registration**

10.30-10.40 Introduction

10.40-11.20 Justine Bayley A look back at the Historical Metallurgy  
David Crossley Society

11.20-11.50 David Dulieu 'In the beginning: the early days of stainless  
steel in Sheffield'

11.50-12.20 John Beeley Stainless Steel in Sheffield 100 years on

**12.20-13.50 Lunch**

13.50-14.20 Joan Unwin History and heritage in a knife drawer

14.20-14.50 Peter King Iron and steel statistics 1860-1886

**14.50-15.20 Tea/Coffee**

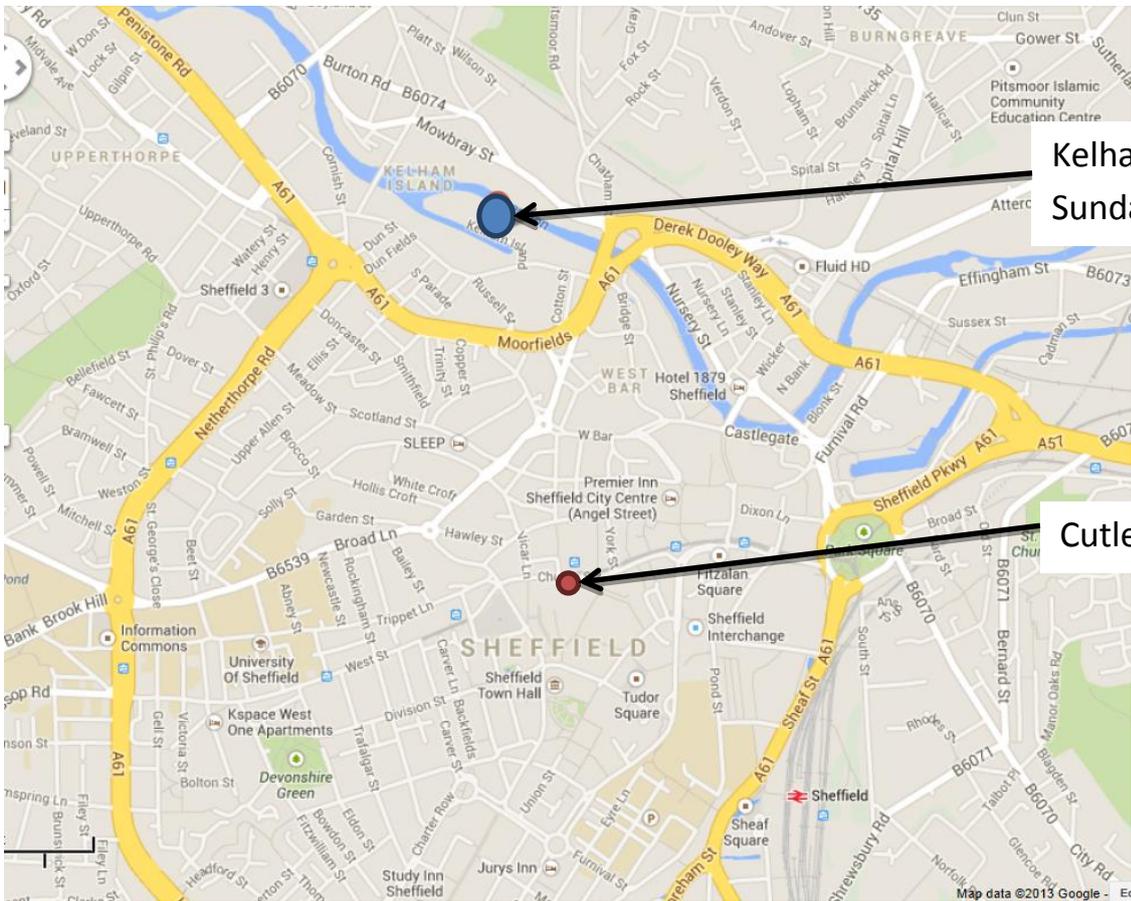
15.20-15.50 Mick Steeper and Stainless rolling

Jonathan Aylen

15.50-16.20 Robert Booth Stainless steel sculpture

The Sunday will be field trip to Kelham Island, this includes an opportunity to see the River Don Engine in action. Please meet at 11am outside the museum.

For more information and for the booking form visit [www.hist-met.org](http://www.hist-met.org)



Kelham Island  
Sunday Trip

Cutlers' Hall

**History and heritage in a knife drawer**  
**Dr Joan Unwin, Honorary research Fellow,**  
**University of Sheffield; Archivist to the Company of Cutlers in Hallamshire**

Since Harry Brearley used his new stain-less steel for knife blades in 1914, the design and use of domestic knives has changed remarkably. Look in anyone's knife drawer and you will probably find examples charting these developments of the 20th century. From canteens of cutlery given as wedding presents to supermarket 'bistro' sets and from fish knives to steak knives, people's cutlery reflect the transformations in our food preparation and eating habits.

Using documents and examples from the Cutlers' Company collection and from my own knife drawer, this paper will highlight the impact of this new metal on manufacturing processes, the effect of imports on the local industry and how our knives indicate the changes in our social customs.

**Stainless steel sculpture**  
**Robert Booth**

Robert Booth has worked for 4 years on a stainless steel sculpture by Anish Kapoor. It's original location was in front of the Reading Room at the British Museum. The newly appointed director didn't share Fosters Associates version for the Great Court and its installation didn't happen.

My talk would illustrate the casting and construction of the 30 ft tall, 10 ton mirror polished stainless steel sculpture and show numerous unseen images of the construction.

## **The Mill Builders' Century - Rolling Mills and their Engineering in Sheffield and the UK from the Time of Brearley to the Present Day**

***Mick Steeper, Siemens***

When Brearley discovered stainless steel in 1913, rolling mills were primitive machines compared with the technology familiar today. Mills were steam-powered and four-high designs had not yet gained ground. The paper describes the Grimesthorpe plate mill (powered by the still-extant River Don Engine) as exemplifying this time, and introduces Davy Brothers, the local company that built it.

Within a few years, electric mill motors became established. The Millsands mill is considered as an early example, also serving to demonstrate cross-country configurations and “catcher” mill operation.

Though first developed away from the city, the origins of the two characteristic types of flat rolling mill for stainless are explained. Cold rolling is almost universally based on Sendzimir mills, first appearing in the 1930s at Shotton as a component of an early galvanizing line. The Steckel mill, similarly dominant in hot rolling, first came to Sheffield at Firth Vickers in 1960.

The later history of Davy, including its development of a hydraulic variant of automatic gauge control (itself pioneered in the city by Ford at BISRA) is considered, down to the company's eventual demise in 1990. The recent history of rolling mill engineering in Sheffield is described, being characterised by a near-complete conversion of the supply sector to exporting, paralleling a stagnation of local investment.

The paper concludes with an overview of the UK's metalforming industry today, and of Sheffield's prospects in particular. The transition to higher-value, lower-volume metalworking that Brearley himself presaged is echoed in current developments in processing technology.

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