

# Gridiron

Architect - David Chipperfield Architects

Engineer - f.b.c.

Location - King's Cross Station

Element - Column

## Overall Information

Height: Largest 6 m

Diameter: +/- 1m

Weight: 2.2 t

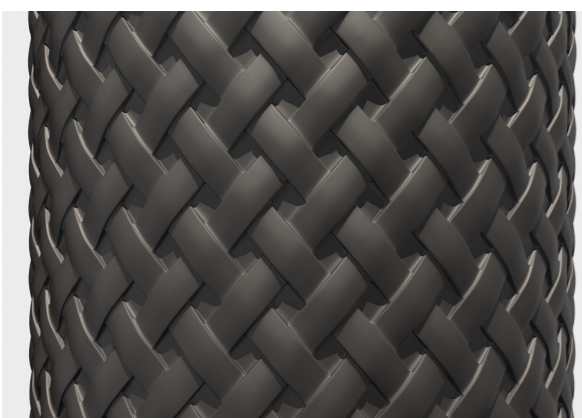
Number of units deployed: 396

Material+method: Cast Iron Cladding

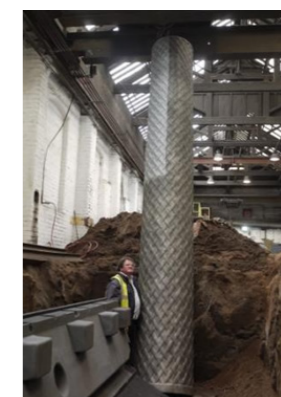
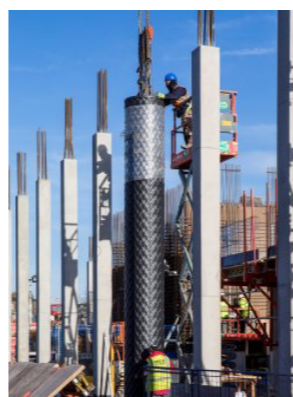


The key element that defines aesthetics of the building are the round iron precast columns. The columns surround the building becoming its facade. The glass sits in between each column, which emphasizes the importance of columns.

For more info - <http://www.archdaily.com/438007/gridiron-one-st-pancras-square-david-chipperfield/>  
- <http://gridironkingscross.co.uk/>



The columns are iron cast, plated and painted to prevent weathering. The surface follows a particular intertwining pattern (to the right). The production involved casting the pattern as an iron sheet, bending it into a semi-tube structure and then sanding and coating it. Each column is composed of two halves, which are then attached together through a process of careful weldings from the inside of the tube in order to hide the welding stitch.



The iron columns do play a minor structural role in supporting the vertical weight of the building (dead load and live load) which are primarily supported by an interior structural columns made of reinforced concrete. However, the steel columns form the facade and are used as a frame for windows in order to withstand the wind load. The primary role of the column is aesthetics.

Iron is used as a material because of its price-efficiency compared to other metals which are often utilized for the similar purposes such as steel, bronze or aluminium. Additionally, the melting point of iron is lower and the process of casting iron is easier than casting steel. Since the most structural work is done by concrete columns in compression, the strong qualities of steel are not required.