



project info:

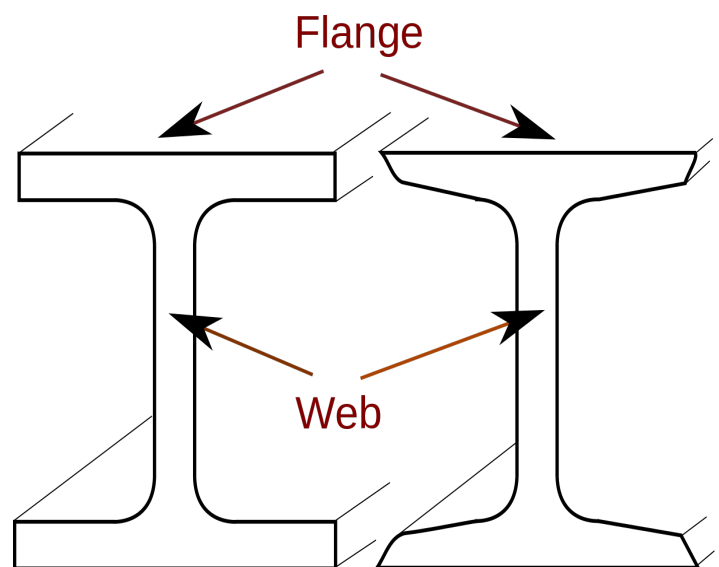
1-3 Goodge Street was built in 1780 as part of a development project by Francis and William Goodge with the builder and architect Jacob Leroux. The inside of the building, which the architectural historian Dan Cruickshank described as 'an important historic asset', has been completely demolished.

Developers Dukelease won consent at appeal for its residential and retail development at the corner of Tottenham Court Road and Goodge Street designed by Rolfe Judd. The consent obtained earlier this year allowed for the demolition of the interior of the building leaving the facade.

explanation of building component:

A girder is a support beam used in construction. This particular girder is strengthened by its I-beam cross section. Girder is actually a term used to describe the main horizontal support of a structure which supports smaller beams which in this case, hold up the brick facade.

The horizontal element of the I beam is called the flange. The vertical is the web. The flange resists the bending moment while the web resists shear forces. On the other hand, the cross-section has a reduced capacity in the transverse direction, and is inefficient in resisting torsion, for which hollow structural sections are often preferred.



material study:

Strength: Structural steel has high tensile and compressive strength, stiffness, toughness

Constructability: Structural steel is malleable and ductile and can be developed into nearly any shape, which are either welded or in this case, bolted together in construction. Structural steel can be erected as soon as the materials are delivered on site.

Fire resistance - Steel is not combustible, but when heated to fire temperatures, the strength and stiffness of the material is significantly reduced. Steel must be coated in fire resistant material.

Corrosion - When in contact with water, steel can rust or corrode. Methods of prevention include painting and galvanisation.