

# West Hampstead Square

## Project Brief

Project name: West Hampstead Square Redevelopment  
Project Value: 40m pounds  
Description: Construction of a mixed use development  
Client: Ballymore/ Network Rail JV

## Design Team

Architect: WCEC Architects  
Structural & Civil: O'Connor Sutton Cronin  
Mechanical & Electrical: Troup Bywaters & Anders

## What material was used ?

- Main Structure  
Reinforced concrete frame on reinforced concrete piled foundations
- Building Envelope  
External wall with quality brick finish
- Floors  
Reinforced concrete slab with appropriate floor finishes
- Walls  
Party walls constructed from metal studwork finished on both sides with sound resistant plasterboard and acoustic insulation



Building under the construction, 2015

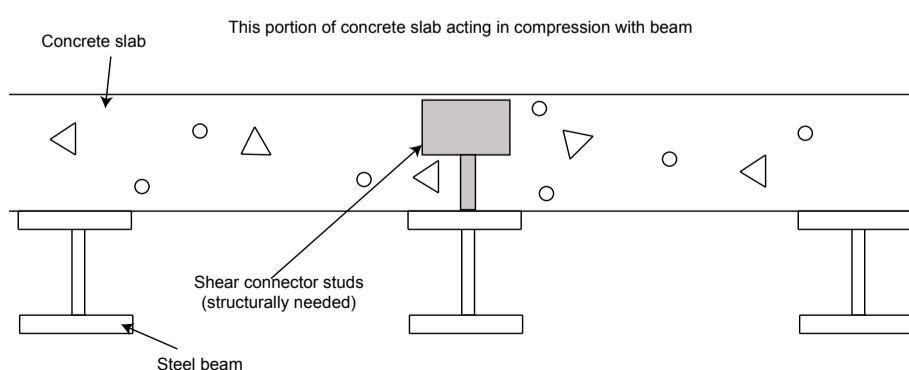


Building under the construction, 2015

## How was the material sourced/ What fabrication processes were needed ?

Composite design marries some of steel and concrete's best attributes together for an efficient structural system. Structural steel beams placed at 4' on center with a steel deck spanning perpendicular which will have 4" of concrete placed on top of the steel deck is not a composite system. That means the steel beams will carry their own weight, the weight of the steel deck and concrete above and whatever live load gets applied. The steel deck and the concrete must carry their own weight and the live load spanning from steel beam to steel beam. Another way to state the proposition: the steel beam acts on its own structurally and the steel deck and concrete act on their own structurally.

A composite system ties together that steel beam and concrete floor and forces them to act as a single structural unit. Some connector on top of the steel beam makes the steel and concrete act as one unit. The steel beam can't slide independently of the concrete slab, the two are bonded together. Since the concrete is strong in compression, the composite system can be quite efficient structurally.



External rendering of the site