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TS2 Materials - Second Year 2015
Construction Site Material Exercise

XY APARTMENTS project
York Way, Camden
Completion of project: 2016
Apartment Building Development

Reinforced Concrete Frame Structure

Material Analysis

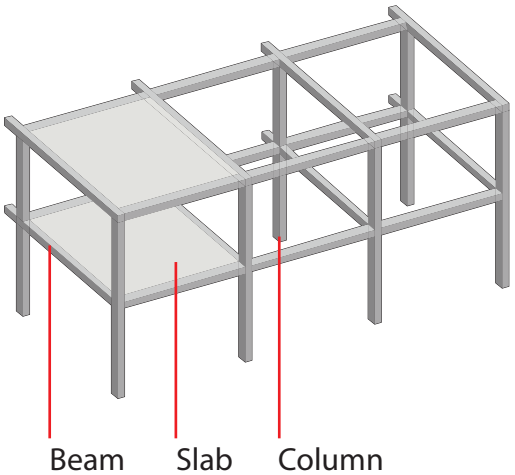
Reinforced Concrete is used to create the concrete frame structure for the buidling. The skeleton consists of horizontal beams and columns acting as the main skeleton, holding in place the concrete slabs which are the actual floor of the building, the columns being the main load carrying elements in the structure.

Reinforced concrete is concrete that contains metal bars. The material is inexpensive and easy to produce on site and is very good in both compression and tension, due to the steel rods within it.

Fabrication Process

The Fabrication process is relatively simple and can be done on site. To create the elemens a mould or formwork is first created the reinforcement bars are then inserted and tied in with cables, then the liquid mix can be poured in. The mix is made up by cement, sand, stone chips and water, prepared in a concrete mixer, once poured it takes a couple of hours to solidify but will take up to a month to reach its maximum strength therefore it will be supported up until that time.

The thickness of the slabs seems to be approximately between 400 and 300mm. While columns and beams have a similar thickness they will also have a larger width as they are the main elements



Images taken by me from the sidewalk in York Way