# FAQ's

**1. Explain the Hearst tower with characters which got the LEED Gold rating for this building.**

The new tower rises above the old building to a height of forty-four-storeys. Structurally the tower has a triangulated 'diagrid' form - a highly efficient solution that uses 20 per cent less steel than a conventionally framed structure.

Its heating and air-conditioning equipment utilizes outside air for cooling and ventilation for nine months of the year, and it consumes 25 per cent less energy than an equivalent office building that complies minimally with the respective state and city codes.

The floor of the atrium is paved with heat conductive limestone. Polyethylene tubing is embedded under the floor and filled with circulating water for cooling in the summer and heating in the winter.The building is naturally overshadowed by the surrounding buildings so large skylights were used at the podium level to bring daylight into the atrium space.

Rain collected on the roof is stored in a tank in the basement for use in the cooling system, to irrigate plants and for the water sculpture in the main lobby.

The atrium features escalators which run through a 3-story water sculpture titled Icefall, a wide waterfall built with thousands of glass panels, which cools and humidifies the lobby air.

To minimize solar gain, the building envelope contains high performance low emission glass, with integral roller blinds which can be used to reduce glare.

The diagrid structure uses 20 per cent less steel than a conventionally framed structure, and it was built using 85 per cent recycled steel. Locally sourced materials are used throughout.

The design ensured that all existing trees on site were protected, and to ensure their long term vitality, they are now irrigated through the rainwater harvesting system.

**2. Explain the HSBC building, Hong Kong.**

The building is 180 metres high with 47 storeys and four basement levels. The building has a modular design consisting of five steel modules prefabricated in the UK near Glasgow, and shipped to Hong Kong. About 30,000 tons of steel and 4,500 tons of aluminium were

used.
The requirement to build in excess of a million square feet in a short timescale suggested a high degree of prefabrication, including factory-finished modules, while the need to build downwards and upwards simultaneously led to the adoption of a suspension structure, with pairs of steel masts arranged in three bays.
As a result, the building form is articulated in a stepped profile of three individual towers, respectively twenty-nine, thirty-six and forty-four storeys high, which create floors of varying width and depth and allow for garden terraces.
The mast structure allowed another radical move, pushing the service cores to the perimeter to create deep-plan floors around a ten-storey atrium.
A mirrored 'sunscoop' reflects sunlight down through the atrium to the floor of a public plaza below - a sheltered space, which at weekends has become a lively picnic spot.