B A T T L E M c C A R T H Y©
Consulting Engineers & Landscape Architects

PROJECT:
Bejing World Science and Trade Center

CLIENT:
Beijing Modern Hongyan Real Estate Development Co., Ltd

ARCHITECTS:
T.R. Hamzah & Yeang

BM SERVICES:
Multidisciplinary engineering and landscape design

VALUE:
Classified

DESIGN BRIEF

To design a group of mixed use towers utilising a creative approach to structure, form and materials with a number of low energy technologies to produce a simple yet innovative environment for residents, workers and the public.

The development features 7 towers to accomodate 221,000m² of gross area. The entire area has been carefully masterplanned to offer a healthy and fulfilling environment to its users and to minimise energy use and carbon emissions.

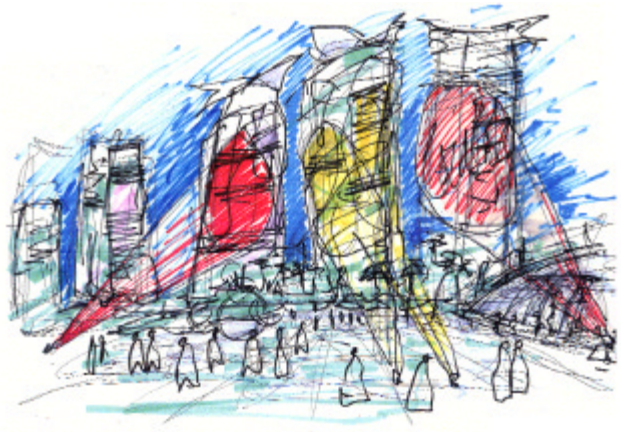
DESIGN INITIATIVES/ACTIONS UNDERTAKEN

Each tower combines the benefits of wind scoops for ventilation, glazing for daylight, external shading for solar control, wind generators for electrical power and solar collection for hot water. The towers are all orientated within the site context for optimal through-views and daylight penetration whilst also ensuring that the park below is comfortable and not overshadowed.

Eco-cells provide natural ventilation and light to internal and underground zones whilst narrow cores minimise the developments footprint onto the park. The towers are designed to induce natural ventilation to central atria and all residential units have garden terraces with views, the planting of which helps to increase the biomass volume on site.

The entire site has a green area ratio of 70%, due largely to the park-land setting of the towers. This landscaped park is vehical-free and offers extensive pedestrian routes and recreation facilities. Water features extend across tha park with a number of bridges and walk-ways to link pedestrian routes across the site.

The towers aim to acheive a 50% reduction in cooling and ventilation plant and use 50% less energy than more conventional hotel, residen-tial, or office towers. Also all building elements are designed to be robust and for easy low-tech construction are standardised.



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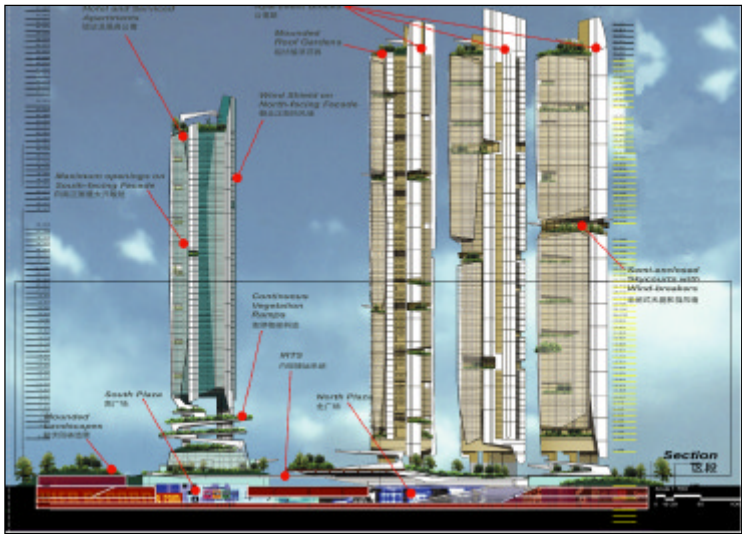
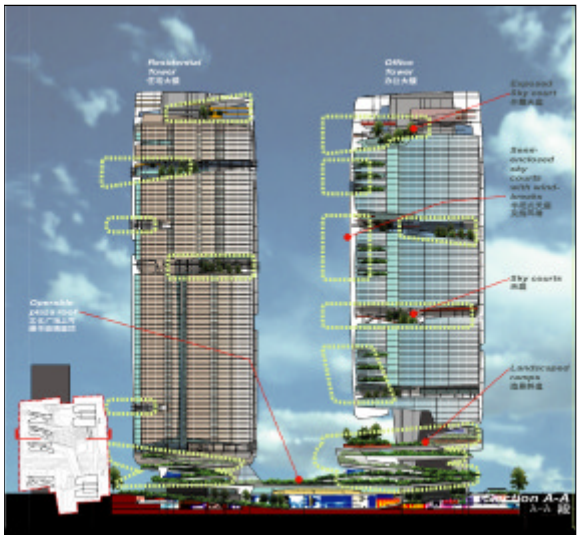
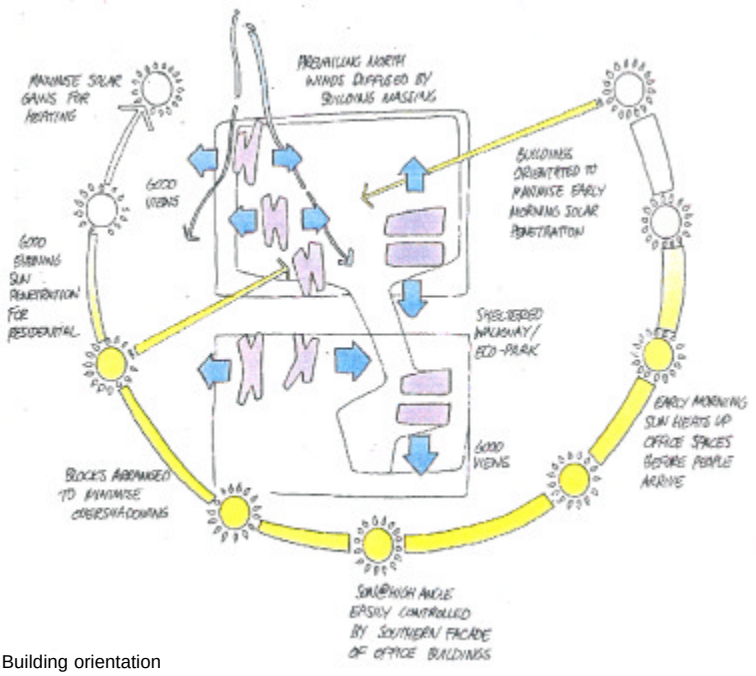
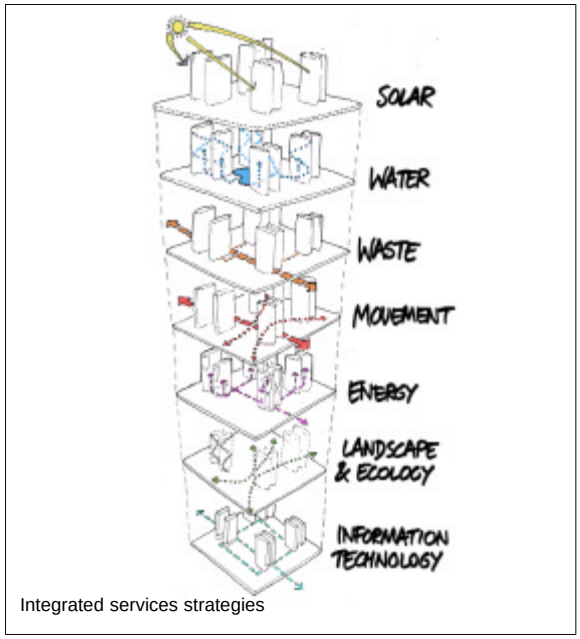


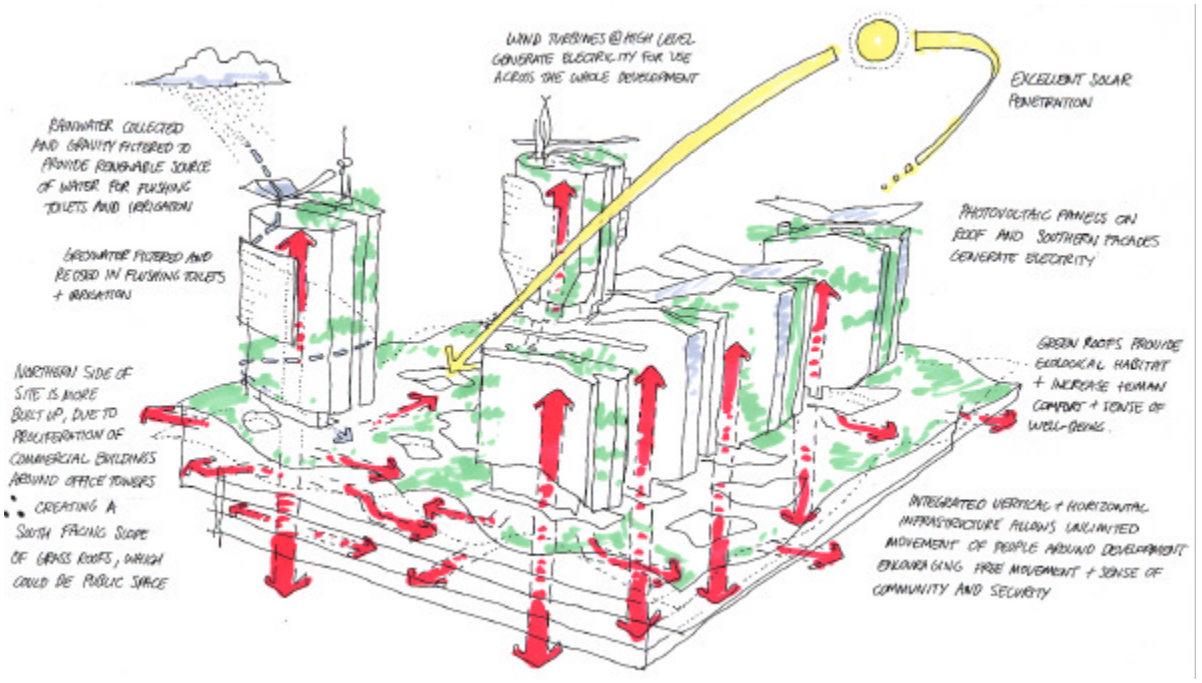


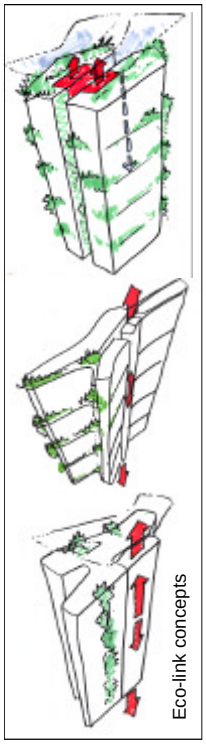


Building orientation



Integrated services strategies





Eco-link concepts