Aedas Sustainability

Aedas’ commitment to address environmental, social and economic challenges through design excellence is central to the practice ethos. Aedas is confronting the reality of climate change by addressing environmental, social, economic challenges through our designs and our practices.

Aedas is committed to working alongside our clients to create sustainable designs that reduce environmental impact, maximise social benefits, balance financial returns, and exceed current legislative standards wherever possible. This is executed through an evidence-based approach and the offering of an expert sustainability service with all our projects. We also provide specialist consultancy services to advise our clients on the implementation of sustainable design from briefing and masterplanning to concept design, procurement and building management with Post Occupancy Evaluations being offered for every Aedas projects.

As one of the most recognized architectural practices, our Sustainability team has developed a comprehensive practice strategy with dedicated design tools and methods to maximise the sustainable value of every project. As part of Aedas R&D Group we are able to draw on modelling and computational design expertise and research to evidence our design solutions.

The team has developed in-house analytical tools to create unique and cutting-edge environmental design strategies in its design project. The latest modeling and simulation software is being used to develop projects pear metrically. The Integrated Design Environmental by Aedas Sustainability (IDEAS Box) is an in-house environmental specialists use analytical tools that supports the design process by providing performance metrics from inception to construction and operation.
Integrated Holistic Design Approach
Below illustrates our in-house developed analytical tools / methods that can be used for incorporating a holistic sustainable design approach on Aedas projects.

1) Climate Analysis
   - Collect basic climate information of the site
   - Prepare tables, charts and text to illustrate the climatic characteristic and design limitation and potential of the site

2) Envelope Solar Heat Gain Analysis
   - Analyze solar heat gain on all building façades
   - Propose appropriate shading strategies for façades in accordance with its solar heat gain analysis result

3) Shading Design Analysis
   - Quantify the performance of external shading device on reducing façade solar heat gain
   - Optimize the design of external shading device

4) CFD Urban Wind Environment Analysis
   - Conduct CFD simulations in different stages
   - Identify wind corridor and calm wind areas to maximize ventilation potential
   - Evaluate ventilation performance of proposed design
   - Identify extreme wind patterns
   - Identify wind power generation potential

5) Sunshine Regulation Assessment
   - Conduct computer sunshine simulations to evaluate compliance with regulations
   - Provide recommendations for non-complied options to meet the requirement

6) Open Space Sunlight Access Assessment
   - Study average solar access on open space, including ground and podium levels, during different timer period
   - Recommendations on planning of outdoor recreational facilities and landscape

7) Daylight Factor Analysis for Typical Floors Assessment
   - Calculate the daylight levels on typical floor(s) by computer simulation
   - Compare daylight performance of various design options, including variations on building form, room layout, façade design and/or shading design
   - Recommendation on potential zoning of automatic lighting controls

8) ViewVantage - View Value Assessment
   - Identify valuable viewing object(s) with design team
   - Quantify the accessibility (View Value) of every single residential unit towards the valuable viewing object(s)
   - Compare performance of various design options on overall View Value
   - Produce View Value distribution map of preferred design option
Sustainable Projects

Today, no firm can claim leadership in architecture without also being a leader in sustainable design. Aedas has been fulfilling the demand for ‘green’ buildings world-wide for much of the past decade. In Hong Kong, the numerous design accolades that Aedas has gained throughout the years have affirmed Aedas’ long lasting commitment to quality spatial solutions tailored for the needs of the community in a sustainable demeanor.

To name a few, the acclaimed MTRC Sunny Bay Station received ‘The Best Green Design’ category of the Business Week/ Architectural Record China Awards 2008; the Landmark and the AIG Tower received the Certificate of Merit (non-residential category) 2008 of the Quality Building Awards; the EcoPark Administration Building for the Environmental Protection Department of the HKSARG won the BCI Asia Green Design Award 2009 and Certificate of Excellence in Perspective Awards 2010 Green or Sustainable Build Category.

Top Left & Right: MTRC Sunny Bay Station, Hong Kong

Top Left & Right: EcoPark Administration Building, Hong Kong
Sustainable Projects: 18 Kowloon East

One recent sustainable project is the 28-storey mixed-use building housing offices, retail spaces and a carpark in Kowloon Bay. Located in a community with dense industrial blocks, the target is to contribute a greening effect to the neighbourhood and enhance the quality of life for users in the building as well as the pedestrians on the street level.

With ‘green’ as the theme, the final design introduces extensive planting at the carpark floors located at the lower portion of the tower. In addition to the visually greening effect to the neighbourhood, the planting also filters the air and improves the air quality within the carpark.

Therefore, as a global design powerhouse delivering the highest level of service to the world, Aedas uses the most applicable environmental designs in all aspects with innovation, imagination and professionalism, and formulating design solutions which are successful from both aesthetic and practical perspectives. Aedas sustainable design services aim to provide the best environmental result with the least cost in the long run.