



PROJECT:
King Abdullah University of Science and Technology

CLIENT:
King Abdullah University of Science and Technology

ARCHITECTS:
HOK

BM SERVICES:
Sustainability Consultants

VALUE:
\$5 billion

DESIGN BRIEF

Battle McCarthy were the sustainability consultants responsible for the environmental sustainability strategy covering ecology, landscape design, climate massing, renewable energies, water, waste and air quality.

The proposed KAUST campus located near the Old Qadima Port of the Old Jeddah-Yanbu highway shall extend along the Red Sea shoreline and significant segments of the campus will be constructed as a 'man made' island on top of an existing shallow coral reef.

Battle McCarthy's involvement in the development of KAUST allowed the integration of a range of sustainable systems in the project, mainly with the aim of minimising the used of natural resources. This includes the use of seawater for flushing toilets and grey water recycling for the use in irrigation in nearby landscaped areas such as the golf course.

Thermal mass concepts were adopted from day one for regulating the internal thermal environment. The proposed landscape was

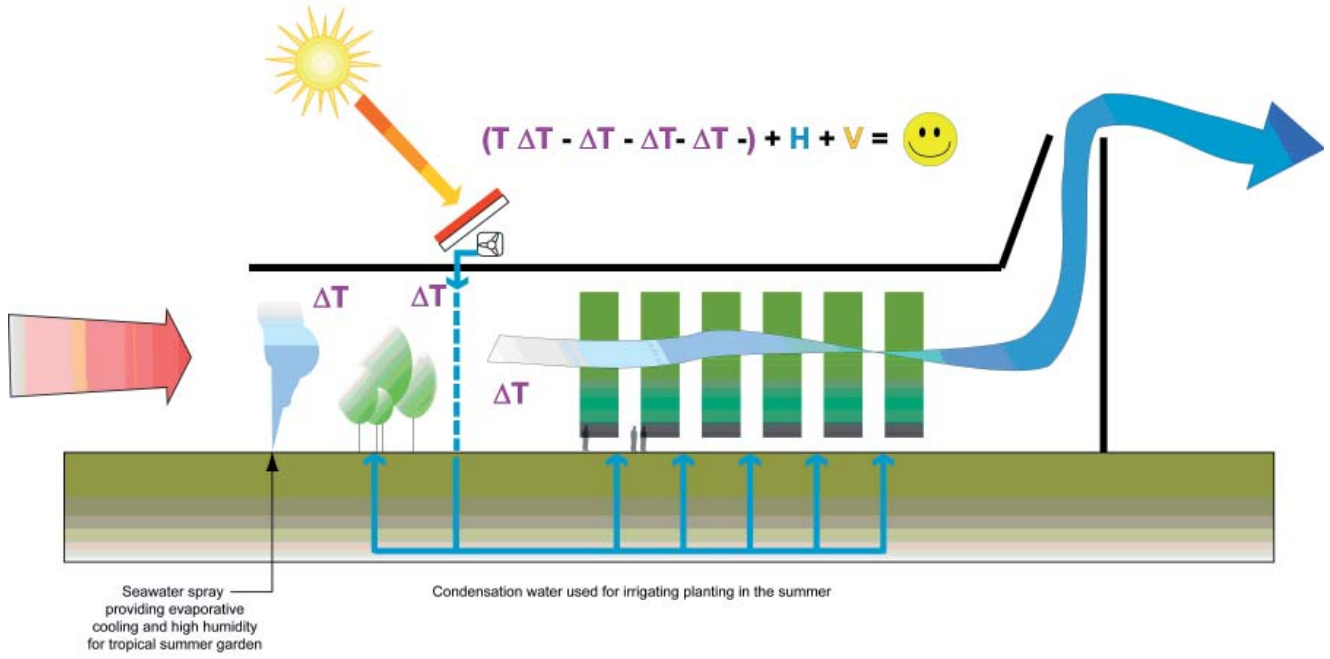
also utilised and integrated into the design to carry out a number of functions, providing 'coolth' and shade, providing a healthy green enjoyable space and also dispensing dust and air pollutant to improve the local air quality.

Battle McCarthy originally developed with HOK the concept of a highly insulated roof over the development. Furthermore Battle McCarthy and HOK incorporated wind towers to enhance the air movement beneath the roof as well as providing evaporative cooling with seawater and seawater planting.

KAUST has been awarded LEED Platinum certification from the U.S. Green Building Council, the highest attainable level and the first development in Saudi Arabia to achieve such a distinction. This high standard of sustainable building has been achieved through the following initiatives:

- Alternative transportation reduces campus emissions and provides convenient transit options
- Renewable energy helps cool and power the campus
- The natural habitat surrounding KAUST has been preserved and protected
- Campus architecture is designed to maximise the area's unique microclimate and ecosystem
- Campus construction and design teams selected building materials that minimised environmental effects and recycled waste materials
- Water and material use has been minimised through innovative design and on-site treatment plants and recycling programs
- Energy efficiency measures reduce total power demand

Concept stage image showing solar tower and cooling via atria vegetation



Construction stage images with solar tower clearly visible

