



SUSTAINABILITY IS A WAY OF LIFE

Sustainability should not be treated as a solution to a chaos that we create, it should rather be a fundamental and a permanent fad, writes Ar. Gurpreet Shah of Creative Group

Sustainability is a much talked about concept, but perhaps, it has been misunderstood and misused at most occasions. Any built form that we call 'sustainable' needs to be a built mass which is in harmony with nature. Using technology to make a 'green building' is usually confused with sustainability. Examples from history suggest that Indian cities were simple yet intelligent without much use of technology. Hence, a perfect amalgamation of passive strategies of sustainability and use of technology is what makes a 'smart yet sustainable' building. Factors that reinterpret our definition of 'smart architecture' are—restoration of our water resources like kundis and baolis, mutually shading and orienting the building to minimise the heat gain and maximising daylight and practising courtyard planning

to assure moderate temperature and better articulation of spaces. The above mentioned factors should be the basic of architecture design and not add-ons to the ready design.

Definition of Smart Cities

Under the plan of India having 100 smart cities, many existing cities will be updated to a standard of smart cities. This comes as an important opportunity for architects and planners to create smart and sustainable cities. Architects are not expected to imitate global technology rather the cities need to be planned with respect to the socio economic and cultural heritage of the community or the society so that there is a sense of belongingness. The pressure of the transport and infrastructure system can only be reduced if neighbourhoods are inter-connected through walkways and cycle-lanes.

Sustainability in India

India is pioneer in having sustainable architecture. The pre-independence cities of India were sustainable and were created as per the aspirations of the society. Due to the elevated urban growth in the major cities, the ethnic character of a city is getting neglected and infrastructure layers are being superimposed through flyovers, elevated metros and overhead bridges—all of which have created a jungle of concrete mass and have overshadowed open spaces leading to an unbreathable environment. India experiences extreme climates in various parts and some of the truest examples of sustainability have been achieved by mutual shading, creation of hierarchy of courtyards and blocking of the sun by deep verandahs and use of jaali. Lakes, baolis, stepwells and kundis have been made to conserve rainwater.

Design Philosophy

Our firm follows philosophy of sustainability very religiously. A building should not be treated as a mass of brick and concrete, but as a living organism that breathes and is embodied with the natural environment. Sustainable designs are creating designs that are conscious to the climate and nature, and are able to cater to the needs of the people, rather than their desires. We, as architects, have the responsibility of making architecture a force for mobilising cities and rejuvenating cultures. We must focus on the performance of architecture responding firstly and primarily to its ecology and available resources; this criteria will change how the design performs throughout its life cycle, hence making the buildings truly sustainable and eco-friendly.



Ar. Gurpreet Shah



Redevelopment plan for Jamshedpur city



Chennai Airport



Interiors of Raipur Airport



Koba Circle Metro Station



Raipur Airport

OUR PROJECTS

Our projects speak volumes of our responsibility towards nature and society.

Times Square Mall, Raipur



The intelligent design of Times Square Mall in Raipur allows the mall to remain cool

without air conditioning, reducing the high energy consumption cost and making the mall affordable in true sense. The intention was to create stepped terraces on north and north-east as a comfort zone for sitting outside while avoiding the south-west sun by making south-west as the highest point. The elements of jaali, double layered facade, ribs have been logically used depending upon the solar movement so as to provide comfort in the central atrium and in other public movement areas.

Oil India, Jodhpur

Through the mechanism of 'corbelling', the building is shaded from the harsh sun, a factor that avoids heating and thus reduces energy consumption. Similar attempts have been done in HPGCL Building, Panchakula and Suguna Poultry and CRI Pumps, Coimbatore.

Koba Circle Metro Station



The Koba Circle Metro Station, it is a Transit Oriented Development Model (TODM)

which has a dense radial design, thus reducing the travel distance. It is based on a 'walk to work' concept, where we have designed a walkable and cyclable neighbourhood around the metro station, a factor which automatically reduces energy consumption and use of fossil fuels. We have also incorporated a green roof that runs over the area.

Vadodara Airport



Vadodara Airport has been accredited with a four-star rating by GRIHA,

the terminal has a continuous overhang on the south-south-west and north-north west side, as big as 18 mts., thus respecting the solar movement and avoiding the low harsh sun. On the north-east and north-west, as well as on the south-east and south-west, glazing has been avoided and solid insulating walls have been incorporated such that there is no penetrating heat from the sun, neither from North-East nor from South-West. Diffused skylights in the roof maximise the daylight while a solid mass of AAC blocks used in the external wall protects from the west sun. We also discourage cutting of trees and almost all existing trees have been left untouched. All active strategies of sustainability have been utilised in terms of equipment to conserve energy intelligently. Similarly, water is recycled for flushing, HVAC and

gardening and rainwater harvesting within the premises is practiced.

Chennai Airport



The terminal's orientation according to the sun movement plays a major

role in ensuring energy efficiency. Facing south, the city-side is shaded with a 24mts. long cantilever, one of the largest in India. Retention of storm water and rain water harvesting recharges ground water, to ensure judicious and energy efficient functioning of the terminal. Achieving 43 percent reduction in water consumption, the terminal building complies with the ECBC (Energy Conservation Building Codes) for attaining the energy savings. The terminal has been constructed by use of recycled local materials – fly ash in concrete and materials such as AAC Blocks minimising heat gains in the building. The terminal is clad with double insulated glass that maximises daylight into the terminal. The airport has received various awards like 'Outstanding Concrete Structure' by ICI (TNCC) & UltraTech, 'Award for Architecture' by AICA and 'Special Mention Award' by Engineering Watch. We have recently redeveloped the Master Plan 2057 for the industrial city of Jamshedpur with the idea of having a sustainable living. **d**

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TIME: 7:00 P.M ONWARDS

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