

PEC673 - Master of Science in Environmental Architecture

*Solar Passive Architecture as a Design Element for  
Residential Houses in Nasik, India*

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Dissertation Report 2012

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# PEC673 ENVIRONMENTAL ARCHITECTURE DISSERTATION

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## **Abstract**

There is an urgent need to conserve energy due to the depletion in its natural reserves and escalating prices. Architects, engineers and planners play an important role in creating the built environment. So, it is time they start designing energy saving, climate sensible, solar passive human habitat. Thus, the primary objective of this research is to produce some guidelines for climate sensible architecture and design solar passive elements for houses in Nasik, India.

In this research, understanding of different types of solar houses has been demonstrated. Climatic data has been collected for Nasik and accordingly the solar passive principles are applied for the houses of Nasik. To enhance the aesthetic appearances of the building, few solar passive elements have been designed in this research and their effectiveness is tested by Tecto-hand calculations. The outcome of this report can be used by Nasik's architects and planners as a design manual for planning solar passive houses.

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