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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STUDENT'S NAME: Pranita Pawar - 31460346 **Enrolment: PEC673 8pts**

SUPERVISOR'S NAME: Neville D'Cruz

TITLE OF DISSERTATION: Solar Passive Architecture as a Design Element for Residential Houses in Nasik, India

OFFICIAL SUBMISSION DATE: 2nd November 2012

ACTUAL SUBMISSION DATE: 2nd November 2012

If these two dates are different, give a brief explanation

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DISSERTATION APPROVAL DATE: _____

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Degree Program : Master of Science in Environmental Architecture

Document Information

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

Year of Completion: 2012

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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.

Acknowledgements

I would like to thank and appreciate those who have contributed to efforts in writing this dissertation. Invaluable editorial and writing assistance was provided under the guidance of Neville D'Cruz.

I would also like to thank the following,

Adjunct Professor Garry Baverstock for his help in tecto hand calculations.

Staff of Nashik Meteorological center for providing all climate information for Nasik.

Ar.Prakash Pawar and Associates,Nasik, for their contribution in the designing process.

My Mother for reading and suggestions.

My friend, Tanvi gupta, for helping me out in collecting resource materials and suggestions.

Lastly my family for their support and because of whom I could come to Perth for studying, this is dedicated to them.

- Pranita Pawar

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