Designing Of An Eco Industrial Park

Avani Sheth

Index

Ch. 4. About Auroville industries

4.1 Introduction

4.2 Typology of industries

4.2.1 Produce first what the community needs

4.2.2 Produce from what is available in the region

4.3 Regional resource

4.3.1 Regional Linkages

4.3.2 Natural resources

4.4 Income generating trusts and units in Auroville

4.5 Influence on village life

4.6 Turnover

4.7 Work ethics

4.8 Innovation and Research

4.9 Present State of Existing Industries in Auroville

4.9.1 Strengths

4.9.2 Weaknesses

4.9.3 Failures

4.9.4 Innovation, Technology and Environmental Concerns

4.9.5 Achievements of Auroville industries

Section II
Eco Construction Techniques

Ch.5. Eco technologies

5.1 Sustainable architecture, construction and planning
5.2 Water
5.2.1Aim of water management on site
5.2.2 Rain water harvesting
5.2.3 Open tanks for the storage of harvested rainwater
5.2.4 Expected Problems and their solutions;
5.2.5 Water recycling concept
5.3 Waste
5.3.1 Sewage water
5.3.2 Aim of wastewater treatment systems
5.4 LOMWATS
5.4.1 Characteristics of LOMWATS
5.4.2 Principles of waste water treatment applied in LOMWATS.
5.4.3 Choosing the appropriate system
5.5 Biogas
5.6 Biocoal
5.7 Solid wastes
5.8 Interrelationship between waste, water and energy

Ch.6. Energy

6.1 Energy-its implications on architecture and environment
6.2 Conservation of energy
6.3 Renewable energy sources
6.4 Solar passive architecture
6.5 Climatically responsive, energy efficient architecture
6.6 Low energy content building materials
6.7 Advantages of passive systems

Ch.7. Building Materials and Construction

7.1 Building materials

7.1.1 Building materials - accessibility and availability

7.1.2 Human resources and skill

7.1.3 Climate and comfort

7.1.4 Environmental impact

7.1.5 Cost effectiveness

7.2 Criteria for identification

Ch.8. Building technologies

8.1 Appropriate building technology

8.2 Appropriate architecture

8.3 A material for the future

8.4 Challenge

Section III
Case studies and designing parameters

Ch.9. Eco community parameters
9.1 Designing considerations
9.1.1 Circulation
9.1.2 Spatial considerations
9.1.3 Massing
9.1.4 Graded transition
9.2 Planning considerations
9.2.1 sustainable urban planning
9.2.2 Appropriate architecture
9.3 Satisfaction of basic needs
9.4 Development in the overall sense
9.4.1 Resource development
9.4.2 Social development
9.4.3 Cultural development
9.4.4 Human development
9.4.5 Environmental development

Ch.10. Case studies

10.1 Case study 1

10.1.1 Paper industries-Auroville
10.1.2 Diagrammatic study of different areas with their functions
10.1.3 Areas and their functions
10.1.4 Uses of this handmade paper
10.1.5 Advantages of the handmade paper

10.2 Case study 2

10.2.1 Wood industries-Auroville
10.2.2 Diagrammatic study of different areas with their functions
10.2.3 Areas and their functions
10.2.4 Waste obtained
10.2.5 Uses of wood
10.2.6 Advantages of having a wood industry.

10.3 Case study 3

10.3.1 Cloth industries (handloom)-in Auroville
10.3.2 Diagrammatic study of different areas with their functions
10.3.3 Areas and their functions
10.3.4 Uses of handloom cloth
10.3.5 Advantages of cloth

10.4 Conclusions

Ch.11. Design Project

11.1 area estimation

11.1.1 Existing industrial areas
11.1.2 For the E.I.P.

11.2 Selection of industries

11.3 Site analysis

11.3.1 Location
11.3.2 The access roads to the site
11.3.3 Climate
11.3.4 Temperature
11.3.5 Rainfall
11.3.6 Sea level

11.3.7 Wind direction
11.3.8 Soil conditions
11.3.9 The maximum ground coverage
11.3.10 FAR (floor area ratio)
11.3.11 Population distribution

Bibliography