# LAPURAN PROJEK TAHUN AKHIR KURSUS DIPLOMA KEJURUTERAAN JENTERA KAJIAN KEJURUTERAAN, I.T.M., SHAH ALAM

BUILDING MATERIALS
FROM
WASTEPAPER PRODUCTS

ΒY

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#### INTRODUCTION

Housing, especially low-cost housing, has at last started claiming a greater share of attention from our government than it did in the past. This is certainly a good sign but if the problem of housing is to be solved, not only on paper but also in practice, it is essential to draw up programmes that will utilise as many local resources and skills as possible.

The problem of housing has many facets and therefore its solutions should be based on a multi-faced approach. Efforts are being made in various directions such a planned utilisation of avaiable land, research into the improvement of indigenous materials and techniques and establishment of suitable finance mechanisms.

### 1 1 RECENT INNOVATIONS IN THE VARIOUS FIELDS

## 1.1.1 Research in Building Techniques

In the conventional practice for wooden houses the joints for members were usually fabricated in complicated shapes so that the wooden members alone could maintain adequate strength and rigidity.

Researches have led to a new practice in which simple joints are reinforced with metal plates and bolts.

The timber roof truss using light gauge metal plate connectors is extensively used for low-cost house construction, replacing the traditional bolted or nailed trusses.