

INTRODUCTION

- Use of timber in Building construction
- From an Architect's view – a Personal View
- Best way for discussion – via own experience
- Exposure to use of timber in both Australia and Malaysia
- Very few timber buildings – urban area
- Rural area – traditional ways and vernacular houses are under threat
- Only SOME ARCHITECTS doing timber design

- PAPER HAD THREE (3) SECTIONS
 - A) PREFERENCE for Timber
 - PERSONAL approach and view
 - BASED on 20 years experience in building construction

 - B) OBJECTIONS to the use of Timber
 - MISGUIDED Opinions –
 - a) Layman;
 - b) Architects;
 - c) Engineers;
 - d) Building Contractors;

 - C) EXAMPLE of work by CSL ASSOCIATES

A) PREFERENCE

There are essentially thirteen (13) reasons why we continually use timber.

They are:-

1. BEAUTY

- WORKED - created variety of beauty
- CHOICE - in finishes
- VARIETY - grain
 - pattern
 - texture

- Different treatment to create different BEAUTY

2. AVAILABILITY of timber in Malaysia

- EASILY
- NATURALLY
- TROPICAL FOREST NEARBY
- HARVESTED & PROCESSED LOCALLY
- UNINTERRUPTED SUPPLY SUSTAINABLE

3. EASY TO WORK WITH MATERIAL

- SIMPLE TOOLS NEEDED
- SIMPLE TO PUT TOGETHER
- IS A DRY CONSTRUCTION TECHNIQUE
- SIMPLE FASTENING & FIXING

4. SPEEDY ERECTION

- DRY CONSTRUCTION
- INHERENT STRUCTURAL STRENGTH
 - instant platforms & floors
 - creates instant work space
 - instant wall structure
- BEAMS – across a span can carry loads immediately
- COLUMNS – carry loads from above

5. RELATIVELY ECONOMICAL

- STRUCTURE as a FINISH
- SIZING members vs. Load CARRIED & REDISTRIBUTE
- Is ECONOMICAL
- Construction wise – item 6
- In comparison RC is wasteful use of timber

6. ONE TRADE CONSTRUCTION I.E. CARPENTRY

- RC – involves six (6) trades
 - 1) carpenter - formwork
 - 2) barbender - reinforcement
 - 3) concreter - concrete
 - 4) carpenter - strip f.w.
 - 5) bricklayer - brick
 - 6) plasterer - plastering
- RC - 14 – 28 days) WALL
- Timber 2 – 3 days)

7. EASY MAINTENANCE
 - MINIMAL cost
 - Recognise. How to USE or TREAT timber
 - Occasional Oiling
 - “EXPOSED” LOOK
 - “SHELTERED” LOOK
 - Detailing to SHED WATER
 - Keep joints DRY
 - Availability Good PROTECTIVE MATERIALS & TREATMENT FOR TIMBER
 - SOME – 9-10 years durability

8. DURABILITY
 - Old Timber recycled.
 - Burnt Timber - reused
 - Old Buildings - structural
 - carvings
 - wall panels
 - doors
 - windows

9. INHERENT WARMNESS
 - To TOUCH
 - To LOOK
 - Universal ACCEPTANCE
 - EXPENSIVE MATERIAL – In Western Countries
 - Nature’s Gift to Malaysia – Tropical rainforest
 - Envy of the West

10. CULTURAL ROOTS & TRADITIONAL TO MALAYSIA

“Timber” is:

 - Identity Malaysian HERITAGE
 - TRADITIONAL & CULTURAL BUILDINGS
 - Uses “Timber”
 - CULTURAL MEMORIES LINKING present to PAST

11. THERMAL COMFORT
 - Do NOT Retain HEAT
 - Easy Cooling for TOUCH

12. FLEXIBLE & VERSATILE
 - Allows INTRICATE CARVINGS & DETAILING
 - Good Craftsman Produce FINE WORKMANSHIP
 - EASY Modification
 - ADDITIONAL WORK To Structure Finishes
 - Carvings

13. MASS PRODUCTION
 - Easy FABRICATION
 - Easy HANDLING
 - SYSTEM to be Developed by Designers
 - NOT Impossible – Done Before
 - e.g. Timber Mosque – Pahang

B) OBJECTIONS

- a) Laymen's
- ii) Professional Architect's
- iii) Professional Engineer's
- iv) Building Contractor's

i) LAYMEN'S

- Looks Cheap
 - Why only LOW cost?
 - Expensive overseas
- Difficult to maintain
 - Pest, White Ants
 - Type of Timber used
- Fire Hazard
- Difficult to obtain Finance
- High Insurance Premium

ii) ARCHITECT'S

- Time Consuming
- Complex Detailing
- Extensive Supervision required
 - Knowing Timber
- Lack of Working Knowledge of "Timber"

iii) ENGINEER'S

Similar to reasons for Architect's not doing Timber

- Not Familiar
- Difficult Load Calculations
- Non-standard Method of Detailing

iv) BUILDING CONTRACTOR'S

- Unfamiliar with types
 - Difficult to put together
- Careful workmanship
 - Junctions, ensure details are correct
- Protection of finished product
(RC Structures can be easily patched when damaged)
- Professional must be keen to work out all details for the main contractor

TIMBER CONSTRUCTION IS NOT EASY
THERE ARE MANY FACTORS TO BE CONSIDERED

C) EXAMPLES OF WORK BY CSL ASSOCIATES DISCUSS FROM SLIDES.

