Research of development and characteristics of historical buildings in Levuka
PURPOSE

Elucidate the value and development of historical buildings in Levuka

METHODOLOGY

Actual measurement
Trace research
Bibliographic survey
Interview
Photograph comparison
Actual measurement
Trace research
Target Buildings in Levuka

Residence  82
Shop House  43
Public Building  25
Checked the roof structures 73
Drew the Original Plan 89
Conducted interview 115

Structure Material
Wooden 119
Concrete 25
Stone 6
Rules of wooden pillars

- 2×4 inc
- 2×3 inc
- 4×4 inc

Wall Boards

Weather Board

Tongue and Groove Boards
Roofing Materials

Galvanized iron

Shingle Roof
Residence
Catalogue House

Source: George Hudson Limited. 1950, Some designs of Hudson’s “Ready-Cut” homes, Collection in Sydney living museums
Front Verandah
Collection in Fiji museum
Back Verandah
Changing floor plan

- Segmentation of the Verandah
- Expansion of Living room
- Making of the passage
Fijian traditional house “Bule”
Source: George Hudson Limited. 1915, *Cottage homes*, Collection in Sydney living museums
SHOP HOUSE
<table>
<thead>
<tr>
<th>With Arcade</th>
<th>Gable roof or Hip roof</th>
<th>Without eave</th>
<th>With eave</th>
<th>Without Arcade</th>
<th>Gable roof</th>
<th>D</th>
</tr>
</thead>
<tbody>
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<td>A</td>
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</table>
SHOP HOUSE

- Warehouse
- Small one room
- 2 stories building
SMALL ONE ROOM
Taken in 1869
Source: Fiji museum

Taken in 1894
Source: Fiji museum
After Hurricane (Taken in 1895)

Source: Fiji museum
## Roof Structure

<table>
<thead>
<tr>
<th>Roof Structure</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-framed roof</td>
<td>6</td>
</tr>
<tr>
<td>Collar Beam roof</td>
<td>24</td>
</tr>
<tr>
<td>Collar Beam and Rafter tie roof</td>
<td>5</td>
</tr>
<tr>
<td>King-post roof</td>
<td>24</td>
</tr>
<tr>
<td>Queen-post roof</td>
<td>7</td>
</tr>
<tr>
<td>Others</td>
<td>7</td>
</tr>
</tbody>
</table>

- Mansard truss
- Skillion roof
- Scissors truss
Relationship between Width and Year
Eaves’ Rafter

Central core

Central core
Conclusion

- **Residence**
  - Residences were based on Bungalows and the early time they had open verandahs.
  - Bedroom were moved verandahs from central core and living rooms were expanded.

- **Shop House**
  - There were bungalow type buildings, but the number of shop house type buildings increased with the development of the town along the beach street of Levuka before the capital time.
  - After that many buildings disappeared due to hurricanes. Existing shop house type buildings of Levuka built in the time copra trading, and the original plans of the shop houses is the small one room type.

- **Roof Structure**
  - The roof structure is reinforced based on the rafter roof types, and there are few trusses in Levuka.
  - There are some devices in verandahs that enable to prevent rising of the rafters.
  - Based on the above, it could be considered that these have the shape before the “catalogue house” were developed.
  - It is important to know the transition of bungalows.