



**What one needs to know
for the safety assessment
of timber structures.**

Is there a need for guidelines?

Helena Cruz

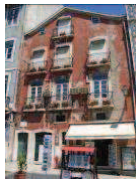


Laboratório Nacional de Engenharia Civil



Repair, strengthening and up-grading of old buildings

represent an increasing percentage of building contractors activity:

- the urge for new construction is diminishing
- economical benefits
- historical or environmental concerns

| "Pre-Pombalinos" | "Pombalinos" | "Gaioleiros" |
|---|---|---|
|  |  |  |
| (< 1755) | (1755-1820) | (1880-1930) |
| Variable no. of storeys | 4 storeys | 5 to 8 storeys |
| 20 820 | | |
| 39 % | | |

