

UQ Fire Project #2020.13

FIRE SERVICE INTERVENTION DURING FIRE IN AN INFORMAL SETTLEMENT

Advisory Team

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Keywords

Timber, fire safety, charring rate, structural performance

Background and motivation

To investigate the fire service and first responders' operational procedures in the event of a fire in an informal settlement with relatively high density. Close proximity between informal structures and the use of non-conventional (and sometimes combustible) building construction materials can result in a rapid spread of the fire; posing a challenge to the intervention of fire service and first responders. Prompt fire service intervention are therefore critical to ensure safe evacuation of occupants and minimise the total damage of the informal settlement.

Research objectives;

- 1) Review of past fires in informal settlements in India
- 2) Meet and interview the fire service officials to discuss their operational procedures during a fire in an informal settlement (ideally these meetings occur with diverse ranges of fire service officials)
- 3) Survey the conditions of a range of informal settlements representative of the socio-cultural context of India. Obtain field data (Humanities, Social Sciences)
- 4) Propose an ad-hoc and comprehensive fire service and first responders' operational procedures in the event of a fire in an informal settlement

Methodology

This project will be based on the following research stages:

- Reviewing past fires in informal settlements in India, including the socio-cultural context of informal settlements in India
- Summarising the current fire service and first responders operational procedures in India
- Presenting a proposal for a novel fire service and first responders operational procedures in India

Recommended literature

Arup. 2018. *A Framework for Fire Safety in Informal Settlements*.

https://www.arup.com/-/media/arup/files/publications/f/fire_safety_in_informal_settlements_2018.pdf

Improving the Resilience of Informal Settlements to Fire

<https://www.iris-fire.com/>