INSPECTOR GROUP PTY LTD

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WA Building Surveyor: Registration Number 2194
Registered Master Inspector (Master Inspector Association Australia)
Inspect for and Report on Timber Pests - CPPPMT3008
Control Timber Pests - CPPPMT3010

Mob: 0414 607 240

Special Purpose Inspection Report

Client(s): **Sample Clients**
Property address: **Sample Street In Sampleton1234**
Inspection date: **Monday, June 5, 2023**

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How to Read this Report

This report is organized by the property's functional areas. Within each functional area, descriptive information is listed first and is shown in bold type. Items of concern follow descriptive information. Concerns are shown and sorted according to these types:

Major Structural Defect	Further deterioration of the building structure

Contact your inspector If there are terms that you do not understand, or visit the glossary of construction terms at **https://www.reporthost.com/glossary.asp**

GENERAL INFORMATION

1) - **Building consultant's experience and qualifications**

In support of my capacity to undertake the assessment and provide expert evidence, I would like to highlight my extensive experience in the construction industry spanning over 30 years. This includes practicing as a registered Building Surveyor (WA licence 2194) and holding a Master's Degree in Civil Engineering from the University of Innsbruck. Since 2009, I have been working as a building inspector in Western Australia.

Regarding your request, I have conducted a visual site inspection of your property to identify any chemical delignification in the roof frame. It is important to note that the client specifically asked me to assess whether this issue should have been classified as a major structural defect during a pre-purchase inspection. Based on my professional judgment and industry standards, I will provide an assessment on whether this classification is appropriate."

ROOF FRAME

2) ***Major Structural Defect*** - During the inspection, severe chemical delignification was identified in both the roof rafters and tile battens. Chemical delignification occurs when the structural integrity of wood is compromised due to chemical reactions, leading to significant weakening and deterioration. In this case, the delignification is highly advanced, resulting in a loss of strength and stability within the roof structure.
It is important to note that tile battens, being integral components of the roof system, serve as structural members that provide support for the roof tiles. As such, any significant damage or weakening of the tile battens directly impacts the overall structural integrity of the roof.
The classification of this issue as a major structural defect is justified based on several factors.

Firstly, the compromised roof rafters and tile battens, including their role as structural members, pose a significant safety risk to the occupants and the overall structural integrity of the property. The weakened load-bearing capacity of these elements increases the likelihood of structural failure, especially under the influence of external forces such as heavy wind.

Secondly, the extent of the delignification is so advanced that treatment options are no longer recommended. The severity of the damage necessitates the replacement of some of the affected tile battens to restore the structural stability of the roof.

In accordance with Australian Standard AS 1684.2-2010, 'Residential timber-framed construction - Non-cyclonic areas,' tile battens are considered structural members that are required to possess adequate strength and rigidity to support the roof tiles and transfer loads to the underlying framework. The severe chemical delignification observed in the tile battens compromises their load-bearing capacity, thereby necessitating their replacement to meet the standards outlined in the Australian code.

Lastly, the long-term implications of neglecting this major defect are substantial. If left unaddressed, the chemical delignification will continue to progress, leading to further deterioration and potential collapse of the roof structure. Moreover, the cost of repairs and remedial work associated with the replacement of damaged components is significant.
Considering the safety risks, the extent of damage, compliance with Australian standards, and the costly repairs involved, the severe chemical delignification in the roof rafters and tile battens, which are essential structural members, is appropriately classified as a major structural defect. Urgent attention and appropriate remedial measures are strongly advised to ensure the safety and structural soundness of the property.

Photo 2-1

Photo 2-2

Photo 2-3

Photo 2-4

Photo 2-5

Photo 2-6

Photo 2-7

AS 4349.1-2007.

3) - The severe chemical delignification issue identified in both the roof rafters and tile battens falls within the scope of the Australian Standard AS 4349.1-2007: Inspection of Buildings - Part 1: Pre-Purchase Inspections - Residential Buildings. This standard provides comprehensive guidelines for conducting pre-purchase building inspections and classifying defects based on their significance.

The identified issue of severe chemical delignification aligns with the criteria outlined in AS 4349.1-2007 for classifying major defects. Firstly, it poses a safety risk as it compromises the structural integrity of the roof, potentially leading to structural failure and endangering the occupants. Secondly, the delignification is highly advanced, resulting in significant damage to the roof rafters and tile battens, which affects the overall stability and load-bearing capacity of the roof. Lastly, the rectification of this defect goes beyond routine maintenance and requires substantial repair work, including the replacement of affected tile battens.

Considering these factors, it is evident that the severe chemical delignification issue falls within the purview of AS 4349.1-2007, and it would be appropriately covered during a pre-purchase building inspection. The standard's guidelines and classification criteria support the recognition of this defect as a major structural issue, emphasizing the importance of addressing it promptly to ensure the safety, functionality, and value of the property

Please feel free to contact the inspector who carried out this inspection. Often it is difficult to fully explain situations, problems, access difficulties or timber pest activity and/or damage in a manner that is readily understandable by the reader. Should you have any difficulty in understanding anything contained within this report then you should immediately contact the inspector and have the matter explained to you. If you have any questions at all or require any clarification then contact the inspector prior to acting on this report.

Thank you again
For and on behalf of Inspector Group Pty.Ltd

Peter Hopfinger
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