



# COA application for residential deck

Document Control Record

Document prepared by:

Tuatara Structures  
10A Abros Place  
Christchurch  
8083

T: +64 3 3590441

E: [Johnathan.fairey@tuatarastructures.com](mailto:Johnathan.fairey@tuatarastructures.com)

Document control	Tuatara Structures
Report title:	Design features brief
Document ID:	20070C

Approval

Author: Johnathan Fairey	Signature:
--------------------------	------------

# COA application for residential deck

## Contents

1. Introduction
2. Building works
  - 2.1 Scope / function
3. Details of building works
  - 3.1 Deck Construction
4. Design criteria
5. Conclusion
6. Explanatory notes
7. Supporting documents
8. Appendix A - Photos

# COA application for residential deck

## 1. Introduction

Tuatara structures has been commissioned by David Tipple, to aid in compiling information and documentation for a COA submission for building works undertaken at the Tipple residence 38 Kaiteriteri Sandy Bay Road, Kaiteriteri.

A large deck has been constructed to the rear of the property extending out over a steep incline. The outer deck structure extends approximately 3.6 meters above AGL at its highest point at the South to SW location.

Under the building act it states, "A building consent is not required for work on decks, platforms, bridges, boardwalks and like structures where it is not possible to fall more than 1.5 metres. A safety barrier will also be required under Building Code clause F4 as there is a fall of 1 metre or more"

The works were completed at the time of some confusion and during the covid period and lock down and works completed December 2022. AMK civil and structural consulting engineers completed construction review of the deck structure and advised of some changes required to comply with B1 standards. This was followed up with a final inspection and issuing of a final acceptance letter for the deck structure.

## 2. Building works

### 2.1 Scope / function

A large timber deck has been installed to the South / Southwest of the main dwelling. The rear of the property borders a recreational reserve overlooking the coastal view. The dwelling is used as a family home for the Tipple family.

The deck is considered as residential use and constructed to NZS3604 with a 2kpa loading. The perimeter of the deck is constructed with a cantilevered balustrade with the design principles taken from NZS 3064 clause 7.4.1.3.

New Zealand Building Code clause B2 *Durability* sets out the durability requirements for building elements and cites NZS 3602:2003 *Timber and wood-based products for use in building* for timber treatment levels. Generally, structural elements must have not less than 50-year durability, and stairs, stair handrails and decking require not less than 15-year durability. All structural fixings must have the same durability as the elements with which they are associated and will need to be stainless steel.

from NZS 3602: Table 1:

- piles must be H5 treated (ground contact)
- all other structural members, i.e., bearers, stringer, braces, joists, and safety barrier support posts, must be at least H3.2 treated, (exposed to the exterior but not in ground contact).

NZS 3604 clause 2.3.2 requires SG8 (structural grade) timber for wet-in-service conditions.

# COA application for residential deck

Selecting piles and footings:

A combination of ordinary and braced piles must be used. Select 140 mm diameter timber piles. For pile footings, use NZS 3604 Table 6.1. For ordinary piles:

- maximum bearer span = 1.3 m; maximum joist span = 2.1 m
- footings – 260 mm diameter, 200 mm minimum deep (NZS 3604 Figure 6.2). For braced piles:
- two systems in each direction
- footings – 400 mm diameter, 450 mm minimum deep (NZS 3604 clause 6.8.1.1)

Required under Building Code clause F4 – Safety from falling where there is a fall of 1 metre or more.

## 3. Details of building works

### 3.1 Deck construction

The deck has been constructed in accordance with the above scope, a mix of 200 SED and 125 x 125 H5 timber piles with H3.2 timber for the sub frame bearers and joists. All fixings are stainless steel in accordance with Subfloor structural connections specified on plans.

Low retaining boards under the deck have been constructed to batter the slopes to avoid erosion of surface soils under the substructure.

Barriers have been installed in compliance of F4.3.4 and AS/NZS 1170-part 1 table 3.3.

AMK civil and structural consulting engineers overviewed the construction of the deck, monitoring through the construction period noted some alterations were required, no information has been provided for the purpose of this report regarding the alteration, or time / date of the instructions. A final inspection on 20<sup>th</sup> December 2022 confirmed the alterations had been carried out as per their instructions. On the 21<sup>st</sup> of December 2022 AMK provided a certification of acceptance letter for the purpose of the COA. (Letter included in supporting documents).

## 4. Design criteria

The following design standards and codes have been used in the deck construction.

Design AS/NZS1170.0: Structural Design Actions – General Principles

NZS3604:2011: Timber Structures Standard (Non-Specific Design)

NZS3602:2003 *Timber and wood-based products for use in building* for timber treatment levels

B1/AS1: Structure, New Zealand building code

F4/AS1: Safety from falling, New Zealand building code.

In addition, code commentaries for the above codes will be referenced where applicable.

# COA application for residential deck

## 5. Conclusion

All the works undertaken on this project have followed the requirements of the building code and qualified registered trades have only been used as outlined in the building act 2004. From the information issued to Tuatara Structures evidence exist that every effort to comply with the building regulation and codes has been the intention of the Tipple family.

All the information provided to Tuatara Structures, has been reviewed against the building code and concluded that the information contained within, does demonstrate compliance to the above codes.

## 6. Explanatory Notes

- We have prepared this report in accordance with the brief as provided and our terms of engagement. The information contained in this report has been prepared by Tuatara Structures at the request of its client, David Tipple, and is exclusively for its client's use and reliance. It is not possible to make a proper assessment of this assessment without a clear understanding of the terms of engagement under which it has been prepared, including the scope of the instructions and directions given to and the assumptions made by Tuatara structures. The assessment will not address issues which would need to be considered for another party if that party's particular circumstances, requirements and experience were known and, further, may make assumptions about matters of which a third party is not aware. No responsibility or liability to any third party is accepted for any loss or damage whatsoever arising out of the use of or reliance on this assessment by any third party.

- The assessment is also based on information that has been provided to Tuatara Structures from other sources or by other parties. The assessment has been prepared strictly on the basis that the information that has been provided is accurate, complete, and adequate. To the extent that any information is inaccurate, incomplete, or inadequate, Tuatara Structures takes no responsibility and disclaims all liability whatsoever for any loss or damage that results from any conclusions based on information that has been provided to Tuatara structures.

Tuatara Structures were solely engaged to the extent of works completed as outlined in above works and compile the information for the purpose of the COA. Tuatara Structures have not been involved or undertaken any works completed at 38 Kaiteriteri Sandy Bay Road, Kaiteriteri

## 7. Supporting documents

T2739. Drawing T01 20-05-2022, survey of existing deck location relative to title boundary

David Tipple, Deck – As Built drawings:

- A103, Deck Foundation Plan
- A104, Deck Framing Plan
- A105, Existing Subfloor Structural Connections Pile 01 - 06
- A106, Existing Subfloor Structural Connections Pile 7 - 12
- A107, Existing Subfloor Structural Connections Pile 13 – 15 & A - C
- A108, Existing Subfloor Structural Connections Pile D - I
- A109, Existing Subfloor Structural Connections Pile J - O
- A110, Existing Subfloor Structural Connections Pile P - Q

19733 38 Kaiteriteri-Sandy Bay Deck Compliance acceptance letter



# COA application for residential deck

## 8. Appendix A:

Photos



# COA application for residential deck

