

Our Reference No: 18067

2 September 2020

Sandy and Steve Speter
55 Robertson Road
SCOTLAND ISLAND

Dear Steve

Re: Review of Retaining walls Deck and new sub Floor at this address
Subject: STRUCTURAL DESIGN REVIEW – Inspection and review

I confirm that I attended this address on Wednesday 27 August 2020 to inspect the front sandstone block mass retaining wall, the timber deck at the front entry of the house on the water side, the new timber floor under the house.

I note that I did not design any of these items but construction had commenced or been completed and I inspected part way through construction. Specific details as follows below. My inspection and potential subsequent certification assumes that all is done in an appropriate manner and by tradesmen experienced in the relevant types of construction. If this assumption is incorrect then it may cause me to alter my opinion and or withdraw my certification.

The mass sandstone block retaining walls:

The front sandstone block mass retaining wall with one as the break water wall and one behind a new path across behind the noted lower wall.

The lower break water wall is founded on sandstone bedrock with some mortar bedding below the bottom course.

This wall is only two course high so it is very stable.

The upper wall behind the path is, so you told me, founded on sandstone bedrock with some concrete packing below the bottom course.

This wall is four courses high and has a slight lean backwards and each successive course is set back from the one below by around 50 mm so it is also very stable.

There is virtually no surcharge on the path and some soil surcharge on the upper wall.

The lower break water wall appears to be adequately constructed and supported.

The upper wall also appears to be adequately constructed and supported although it is not finished.

There is an intended kink in the upper wall half way along its length with a re-entrant corner and wall so that makes it more stable.

Where possible a return should be added to each end running back into the hill for stability and to stop erosion.

There are some large gum trees close to and behind the upper wall and one had evidently recently fallen down and in my opinion all such trees should be removed as the ground is quite weathered crumbly and thus weak.

The area above the rear retaining wall can be further or better stabilised with the use of Gabion basket wall stabilisation as discussed but not too close the upper wall.

The new deck at the water side front of the house:

Again I did not design this deck and it was finished at the time of the inspection. The deck appears to be adequately constructed.

The new sub floor under the house:

Again I did not design this floor and it was only constructed as far as the joists and bearers were concerned.

The joists at the existing room end at that level were connected to a new bearer connected to the existing wall framing already there.

The joists at the other end at that level were connected to a new bearer connected to the existing timber posts but only by 1 M16 bolt per post.

There needs to be an additional say 2 x M12 bolts installed in line with the existing bolts per post.

Once the retaining walls are finished and the extra bolts in the bearer are installed I will reinspect and I am sure that will lead to my certification of the structure as a whole.

I will be reviewing all using the following standards:

AS 1170 Various loading codes
AS 1684 Timber framing code;
AS 1720.1 Timber structures. Part 1;
AS 1720.2 Timber structures. Part 2;
AS 2870 Residential slabs and footings;
AS 4055 Wind loads for housing;
AS 4678 Earth-retaining structures

Yours sincerely

Peter Blacker and Associates



Peter Blacker
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