



23 September 2020

Ref: 20-251.r

Blue Haven Pools

68 Hume Highway

LANSVALE NSW 2155

Attn: **MRS NADENE SCERRI**

Dear Madam

Re: **PROPOSED SWIMMING POOL AT 3 BAZ RETREAT, WARRIEWOOD**
CLIENT: MR CHRIS MAKER; BLUE HAVEN POOLS REF: 20S4286

As requested, we have reviewed the plans of the above swimming pool (as prepared by Blue Haven Pools) and the structural engineering drawings of the residence (as prepared by Secta Consulting Engineers) and advise as follows.

We have also liaised with the structural engineer from Secta who completed the design of the residence (being Mr Sharief Abdelfattah).

Based on the above, we understand the following:

- (i) the pool will be located in close proximity to the external western wall of the garage and the north western corner of the residence;
- (ii) the pool will also be located 1,000mm from a retaining wall (which is along the western boundary of the property);
- (iii) the pool will be between 470mm and 570mm above the ground and have a maximum depth of 1.6m;
- (iv) the maximum width of the coping will be 300mm;
- (v) the floor of the residence is a waffle pod slab on screw piers;
- (vi) the screw piers are not connected to the slab;
- (vii) there is approximately 1m of uncontrolled fill on the site; and
- (viii) the retaining wall is approximately 1.1m high and it retains the higher ground of the subject property (relative to the lower ground of the adjacent property to the west).

Based on the above, we consider that the construction of the pool will not have an adverse affect on the retaining wall and that it will be structurally adequate if it is constructed in accordance with the generic plans with the following modifications:

- (i) found the base of the pool on uniform natural ground with a minimum safe bearing value of 150kPa;
- (ii) where the height of a wall from the centre of the base radius to the top of the wall is greater than 1,000mm, increase the vertical reinforcement to S12-150 from 400mm below the top of the wall; and
- (iii) extend the S12-150 reinforcement to a minimum of 1,200mm into the floor.

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Notwithstanding the above, extra precautions should be taken to ensure that the excavation for the pool does not undermine the foundations of the residence or be such that the walls and floor of the residence impose any lateral loading on the pool. In particular, we recommend that this part of the works be referred to Mr Abdelfattah for further advice prior to the works commencing.

We trust that the above meets with your requirements. Please contact the undersigned should you have any further enquiries.

Yours sincerely
KEIGHRAN & ASSOCIATES PTY LTD

A handwritten signature in black ink, appearing to read 'G. Keighran', written in a cursive style.

GEOFFREY P KEIGHRAN
BE(Hons), MEngSci, FIEAust, CPEng, NPER, APEC Engineer