

**15<sup>th</sup> October 2015**

CRGref: 07359a Ferngrove Stage 3C 15\_10\_15

Rayshield Pty Ltd,  
C/- Hammond & Associates  
4/52 Centennial Circuit,  
**BYRON BAY NSW 2481**

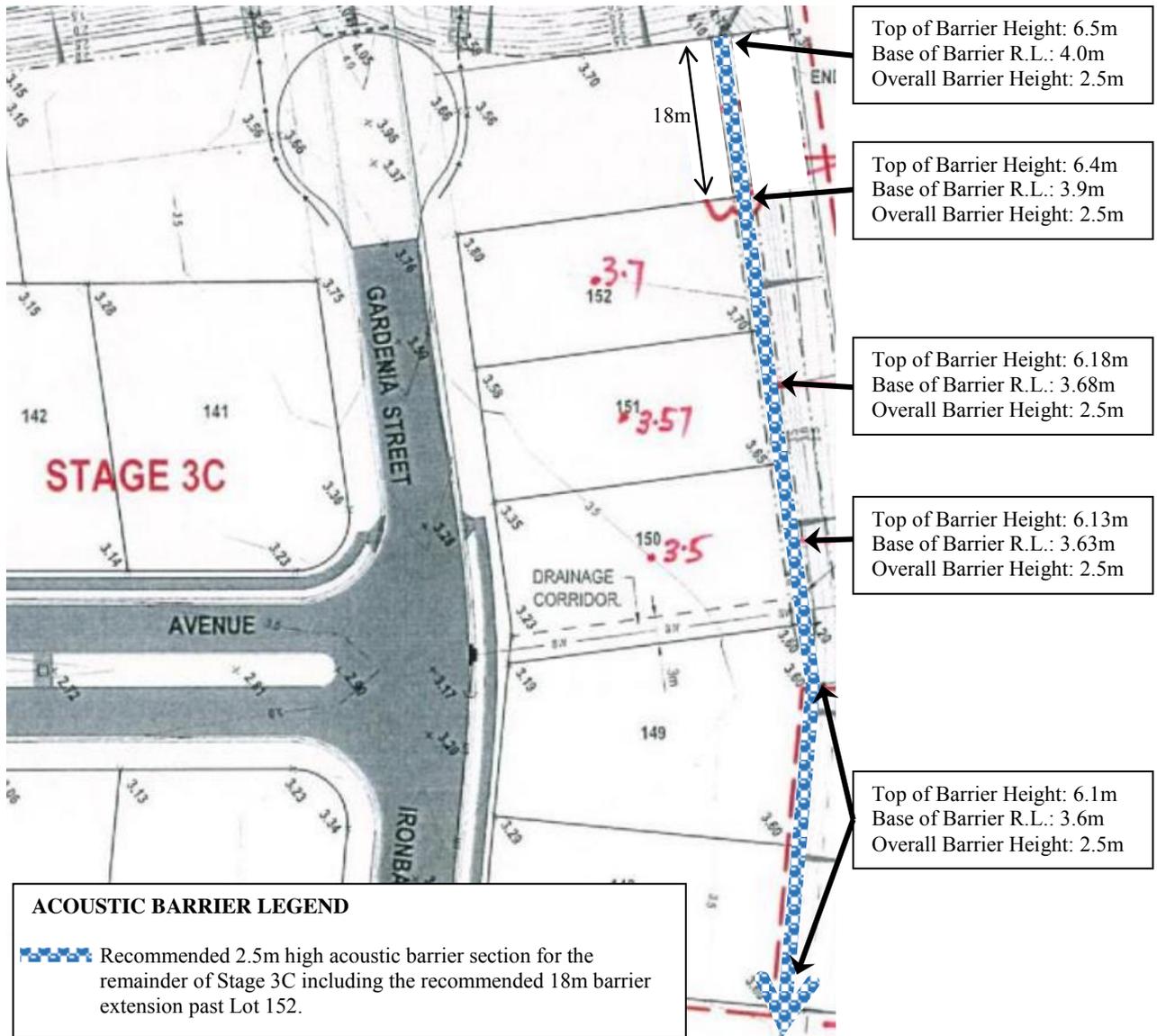
**RE: Proposed Acoustical Barrier Section (Lot 148 to 152), Stage 3C, Ferngrove Estate, Ballina**

Thanks you for your request for CRG to provide comment in regards to the proposed roadside acoustic barrier adjacent to Lots 148 to 152 and the recommendation of the approved noise impact assessment. We produced the approved Environmental Noise Report dated 10<sup>th</sup> December 2009 (CRG reference 07359a report rev. 6), and are therefore familiar with the site and requirements for acoustical treatment. We are in receipt of the marked-up "*Earthworks Plan Stage 3C*" (refer to the rear of this letter) detailing acoustic barrier remedial works (i.e. adjacent to Lots 148 and 149); and the proposed new section of acoustical barrier adjacent to Lots 150 to 152.

The recommendation for acoustical barrier design (from the 2009 report) was a barrier of 2.5m above finished ground levels. We are aware that finished ground levels were raised to accommodate hydraulic issues; and for Lots 148 to 149 the constructed barrier was not increased to allow for the adjusted finished ground. Therefore, the constructed barrier is intended (as detailed in the attached plan) to be raised to the full 2.5m barrier height above the ground R.L. of 3.6m (i.e. top of barrier R.L. of 6.1m). We can also confirm that the indicated Top of Barrier R.L. heights adjacent to Lots 150 to 152 are the required 2.5m above the indicated finished ground levels at the barrier alignment location.

Guidance is also sought for the minimum length of acoustic barrier overrun / extension required past Lot 152 to ensure traffic noise impacts at Lot 152 are of an acceptable level. Based upon our 3D road traffic noise modelling, the acoustical barrier would need to extend 18m past the end of Lot 152 (as detailed in Sketch 1 over the page), which is effectively the length of the future residential lot directly adjacent to Lot 152.

**Sketch 1:** Acoustic barrier alignment including the recommended barrier extension past Lot 152.



Assuming that the barrier is altered and constructed as per the attached marked-up “*Earthworks Plan Stage 3C*”, including the construction of the 18m barrier extension past Lot 152 (as per Sketch 1 above), we can confirm that the Lots that form Stage 3C will be exposed to traffic noise levels from Tamarind Drive (the old Pacific Highway) deemed acceptable in the approved noise impact assessment.

Kind Regards

**CRG ACOUSTICS PTY LTD**



**JAY CARTER BSc**

Director

