Gascoigne Wicks Lawyers
P.O. Box 2
Blenheim
Att Quentin Davies

Consent application – Hearing 2 December 2014

This is in response to questions raised at the Council hearing relating to the location of reef habitats in the proximity to an application by Jim Goulding for an extension to a marine farm in Waitata Bay.

1. Location of rocky structures

I have included enlarged sonar scans of the site. I have indicated the offshore extent of rocky structures (green arrows) (Figures 1 and 2). The boundary of the extension and the parent farm area also indicated for reference (yellow arrows). The closest rocky substratum to the proposed extension boundary is located at the eastern end of the presently proposed extension. It is probable that this is the rocky area reported in the Marlborough Mussel application (Davidson 1995). The closest point of the rocky substrata to the presently proposed extension is 40 m distance.

There are two other distinct rocky areas located inshore of the presently proposed extension. One is located about half way along the inshore boundary and the other is located west of the extension (Figures 1 and 2). The closest distance between these rocky substrata and the inshore boundaries are: (1) central = 47 m and (2) western = 40 m to parent farm.

2. Accuracy of locations

Davidson (1995) used a transect to determine the distance of substrata from low tide. The author shows the rocky habitats extending approximately 40 m distance offshore from low tide (Transect 1). The sonar shows this reef extending 40 m distance from low tide (as depicted on the aerial in Figure 1). At this location the inshore extension boundary is approximately 77 m from low water. Although both studies use very different methodologies, they are in agreement. The rocky substrata ends approximately 40 m inshore of the presently proposed marine farm.

3. Impacts of farming on inshore rocky substrata and monitoring

A mussel farm is detectable at some considerable distance, however, detectable impacts seldom extend beyond 10-20 m distance from droppers. The inshore rocky substratum in this area is 40 m

and greater distance from droppers. It is therefore most unlikely that any detectable impacts could be recorded on rocky habitats should the application be approved.

Any monitoring of inshore rocky habitats aimed at detecting mussel farm related impacts would be confounded by the present of a large dirt road located east of the application area. This road extends from the coast up to the hill top and would undoubtedly introduce sediment loading directly into the inshore shallow habitats of this bay. Based on the literature, it is probable that sediment loadings from the road would be considerably larger than those from the mussel farm, further road sediment would be delivered directly into the inshore zone, whereas sediment (pseudofaeces) from the mussel farms would be delivered offshore where currents tend to travel alongshore rather than inshore. I do not therefore suggest any monitoring of the inshore habitats.

The habitats and substratum located under the proposed extension are characterised by silt and clay (mud). This is the habitat traditionally regarded as most suitable for consideration for marine farming activities. The impact of mussel farming on this habitat type is well known and is represented by a shift in community structure. No monitoring of this offshore area therefore appears necessary.

Yours faithfully
Rob Davidson
Davidson Environmental Ltd.

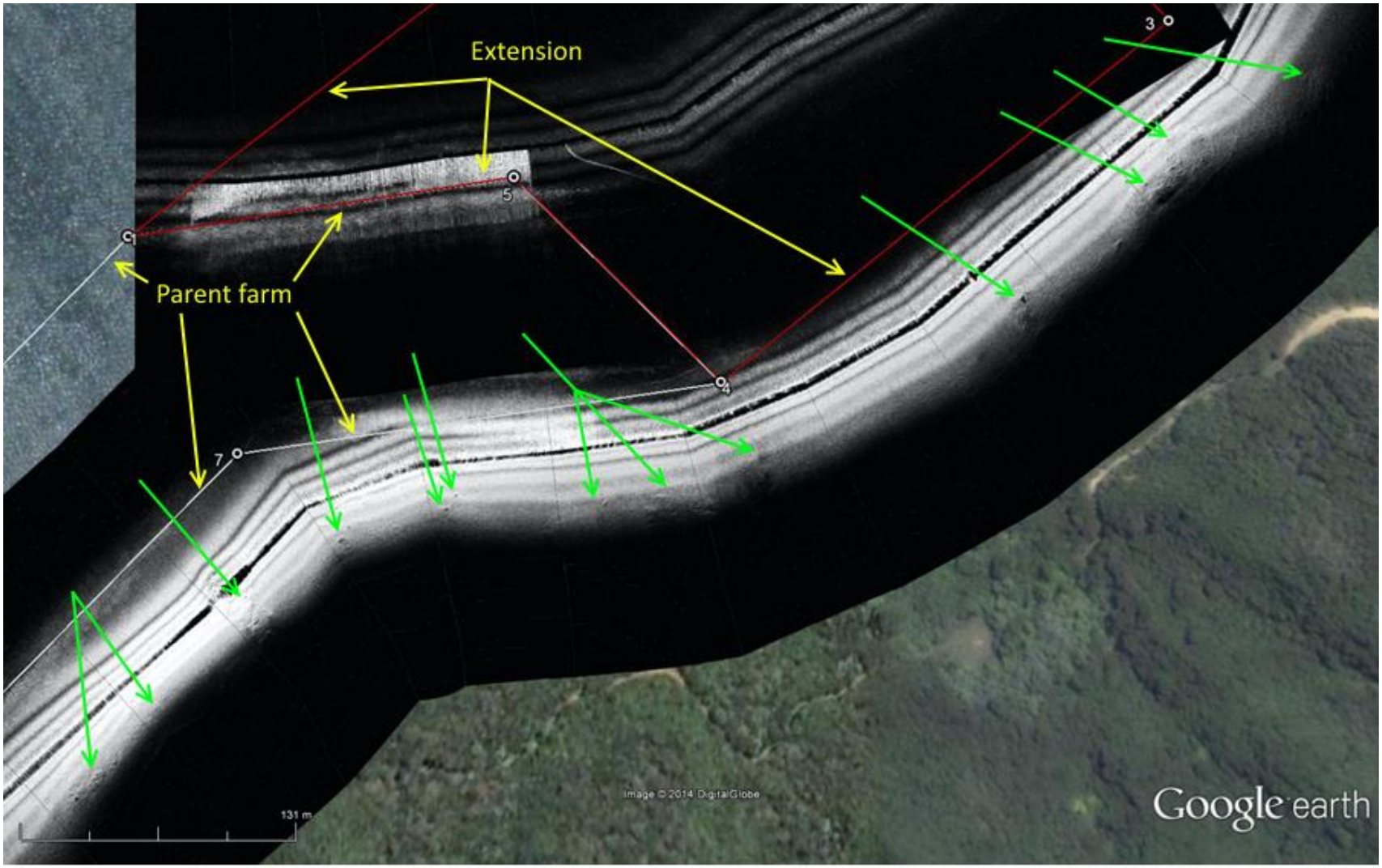

Figure 1. Vertical view of rocky structure in Waitata Bay. Locations of the extension and parent farm boundaries are included.

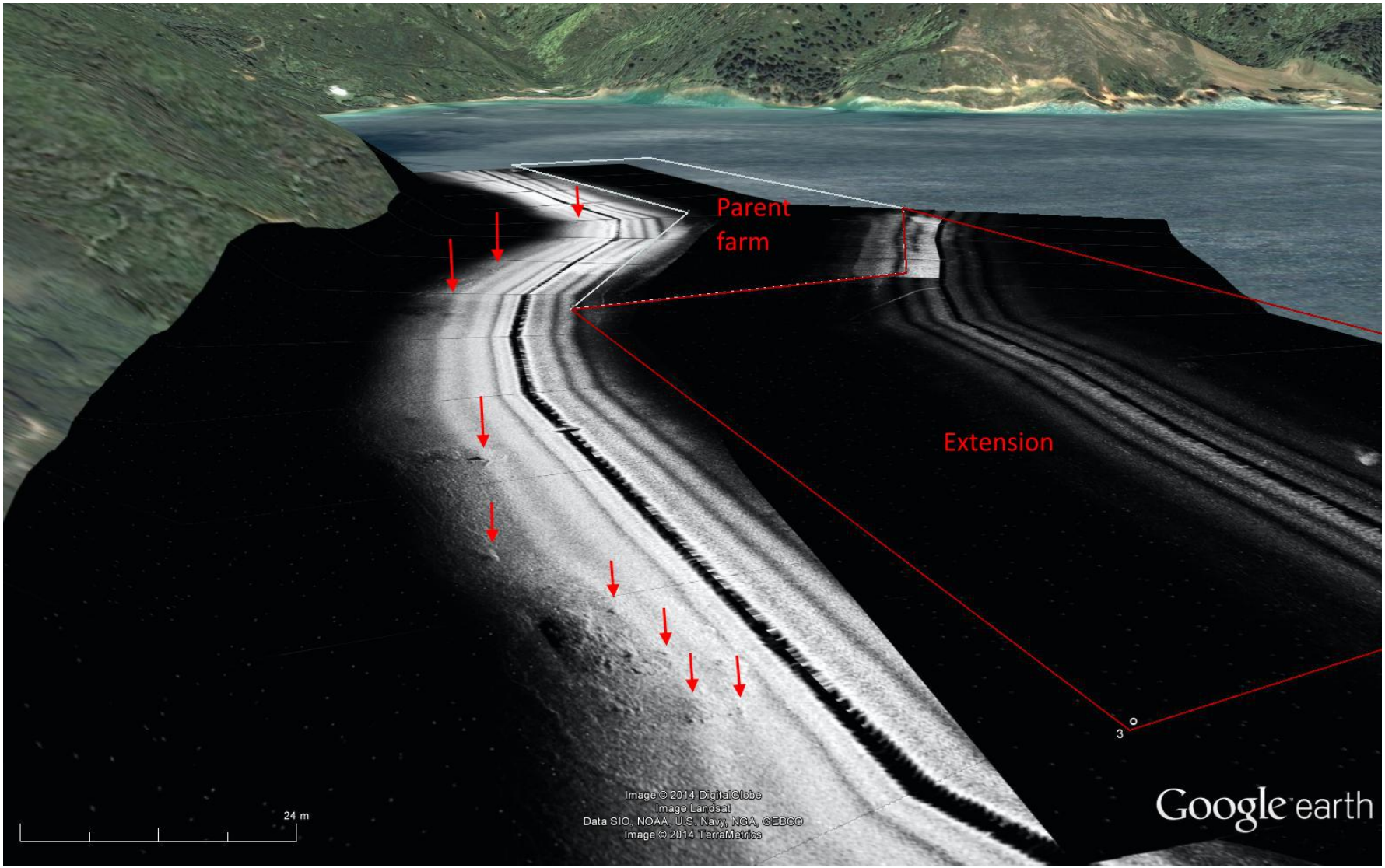

Figure 2. Oblique view of rocky structure (red arrows) and extension and parent farm in Waitata Bay.