Response to issues raised in ALAB technical report

The Technical Advisors interim report on appeal No. AP2/2015 identifies three points which require clarification as follows:

1. The nature of and the risks to salmonids in the Dromagowlane/Trafrask River.
2. The associated impact on the freshwater pearl mussel.
3. The robustness of the Applicant's Integrated Pest Management Plan /Single Bay Management Plan dated 26.10.2016.

The nature of and the risks to salmonids in the Dromagowlane/Trafrask River

Since 2007 Ireland has operated a comprehensive salmon stock assessment and conservation programme based on an annual assessment of individual catchments. The report of the Independent Salmon Group and the subsequent annual reports of the Standing Scientific Committee on salmon do not identify the Dromagowlane/Trafrask River as a salmon river nor is it specified as a river closed to salmon and sea trout fishing in the annual S.I.s in respect of angling. McGinnity *et al*. 2003, carried out a comprehensive and in depth inventory to identify those river systems that were considered to hold biologically significant salmon and/or sea trout. The Dromagowlane/Trafrask River is not listed among the 261 fishery systems designated as holding salmon and sea trout or sea trout only. It is designated as not holding significant numbers of salmonids. There is anecdotal evidence of small brown trout populations in the river system. These non-migratory salmonids will not be exposed to sea lice and therefore there is no mechanism for impacts from the proposed salmon farm.

The risks to wild salmon from sea lice infestation have been quantified by Marine Institute research (Jackson *et al*., 2013). This has shown that lice induced mortality in wild salmon post-smolts is in the order of 1% (ICES CM 2016/ACOM:42). The studies on the impacts of lice infestation on smolts suggest that while sea lice induced mortality on outwardly migrating smolts can be significant, it is a minor and irregular component of marine mortality in the stocks studied and is unlikely to be a significant factor influencing conservation status of salmon stocks. Studies in Norway have reported similar results (Skilbrei *et al.* 2013). This conclusion is further supported by the findings that in fact, the rivers in the River Basin Districts with salmon farms have performed best in terms of meeting their Conservation Limits, in terms of ability to support a commercial catch by way of a commercial draft net fishery and that there was no correlation between the presence of aquaculture and the performance of adjacent wild salmon stocks (Jackson *et al*., 2013). Furthermore recent research

(Milner *et al*., 2016) has found that the growth and survival of sea trout in the southwest region is higher than other areas on the South and East coast of Ireland.

The associated impact on the freshwater pearl mussel

In respect of the freshwater pearl mussel (*Margaritifera margaritifera*) the loss of host fish for the glochidial larvae is the only mechanism through which the proposed salmon farm could impact on this species. The Freshwater Pearl Mussel Sub-Basin Management Plans (Anon. 2009) identify the catchments of the specified pearl mussel populations. Of the 27 populations identified 26 were found to be in unfavourable conservation status. The conclusions of the Freshwater Pearl Mussel Sub-Basin Management Plans (Anon. 2009) and the North South II project Report (Moorkens, 2010) was that juvenile salmon were found in all 26 catchments surveyed, juvenile trout were present in 25 of the 26 catchments surveyed and that glochidial attachment to fish was detected in 12 catchments. Consequently there is no evidence to support the theory that changes in salmonid populations have contributed to the current unfavourable status of the freshwater peal mussel in Ireland. In contrast the evidence from these and previous studies carried out by the National Parks and Wildlife Service (NPWS) provide overwhelming evidence that declines were caused by sedimentation and eutrophication of juvenile and adult mussel habitats (*pers. comm*. NPWS). In the Dromagowlane/Trafrask river it is the non-migratory salmonids (brown trout) which act as hosts for their glochidia larvae and these are not subject to any interactions with marine salmon farms. There is therefore no mechanism for impacts on the pearl mussel populations.

The robustness of the Applicant's Integrated Pest Management Plan /Single Bay Management Plan

The National Sea Lice Monitoring and Control Programme monitors sea lice levels on farmed salmonids in Ireland. Following the introduction of a revised management strategy to underpin the Sea Lice Monitoring and Control Protocols there was a steady and sustained improvement in sea lice control (Jackson 2011). The strategy was aimed at implementing a more strategic approach to lice control at a bay level and targeting efforts on the spring period where there is a potential for impacts on wild smolts embarking on their outward migration. Trends in sea lice infestation on farmed fish (Fig. 1) in May, the peak period for wild salmon smolt migration have shown a strong downward trend since the introduction of the new management strategy. The pest management plan for the control of sea lice on salmon farms in Ireland is widely regarded as international best practice and the EU Commission has accepted that the mitigation measures in place are both appropriate and adequate.

Furthermore sea lice control on existing farms in the southwest region is currently excellent, with numbers well below the national average, and this has been the case since the introduction of the new pest management strategy in 2008 (Fig. 2).

The plan submitted by the company dated 26/10/2016 is in line with the plans on file with the Marine institute for sea lice control in the region. It is an appropriate and workable plan and fully meets the conditions of the SBM process.

Figure 1. National May Mean adult female egg bearing salmon lice, 1991 - 2016

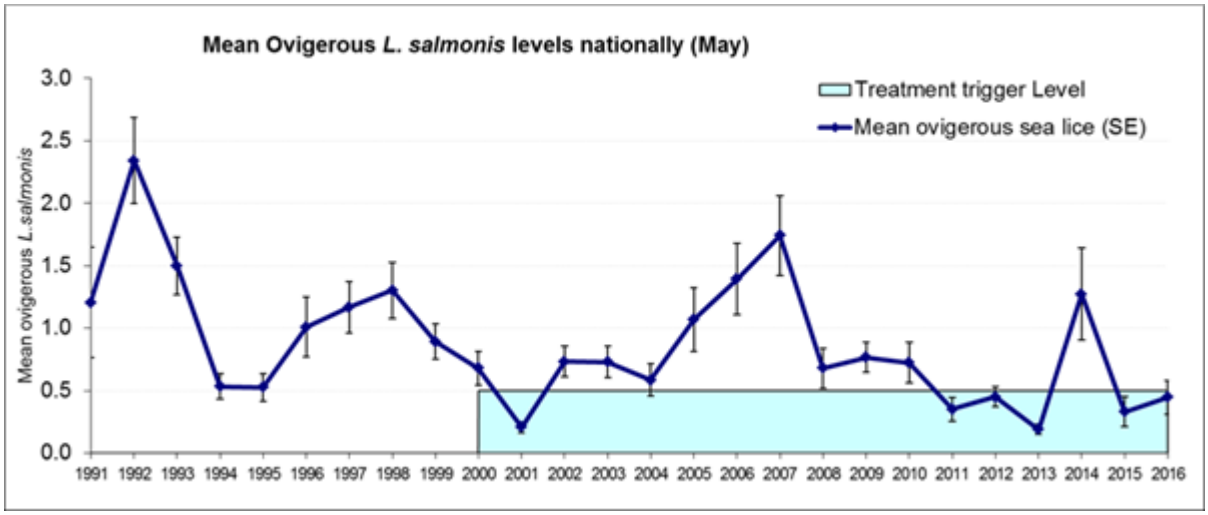
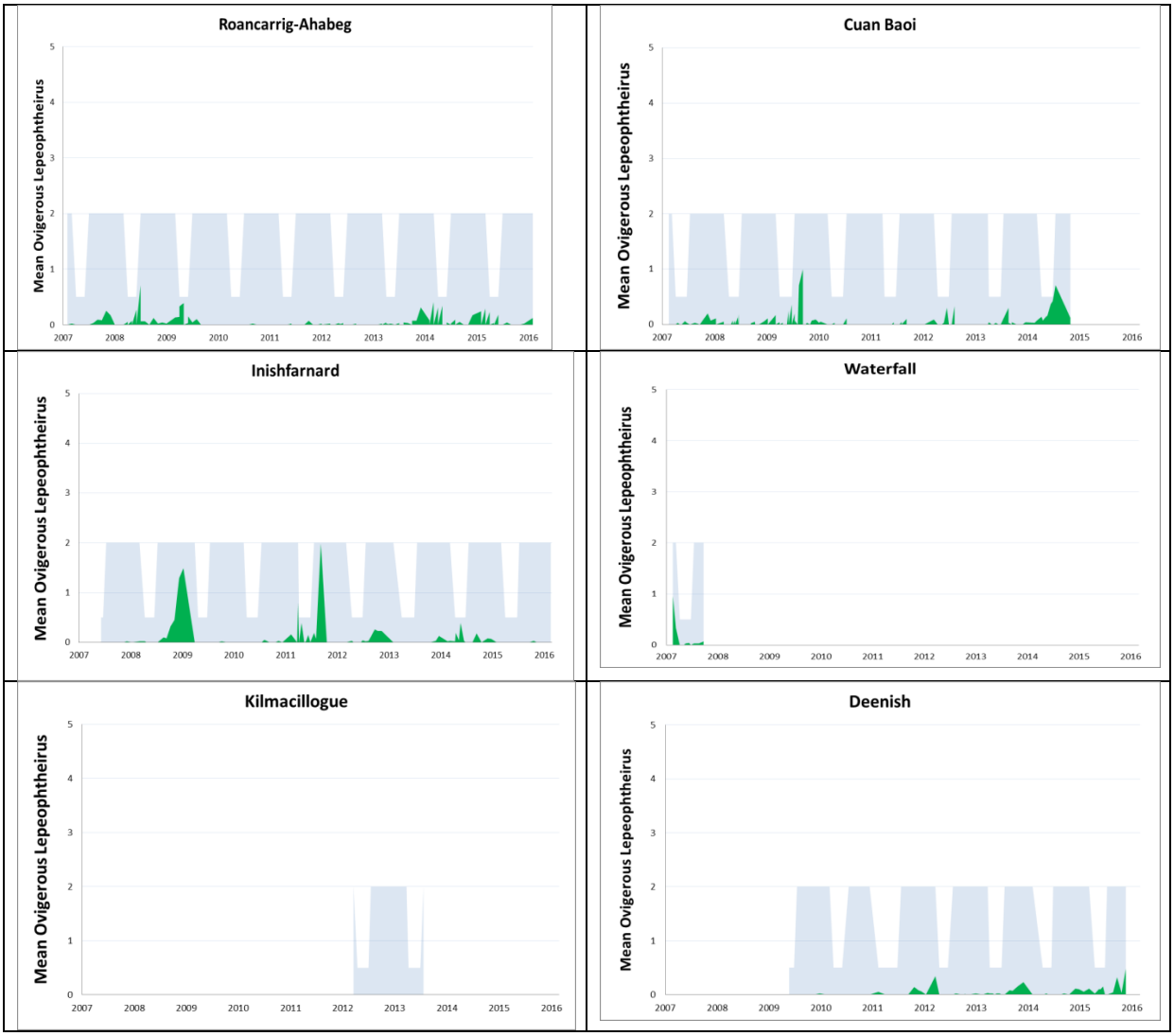


Figure 2. **Mean Ovigerous Sea Lice Numbers (green) with treatment trigger levels (grey) SW**



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9th February 2017