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Greg Thomas and Mike Brown  
Wellington International Airport Ltd  
Stewart Duff Drive  
Rongotai  
Wellington

30-03-2015

Hello Greg and Mike,

**Re: Proposed Airport Extension - Getting It Right For Lyall Bay Surfers.**

The Surfbreak Protection Society (SPS) is extremely disappointed at what appears to be an underarm bowl by WIAL with regard to choosing an overseas company, DHI Ltd for assessing possible impacts on the bay's surf breaks from the extension, to the apparent exclusion of eCoast Ltd .

eCoast Ltd, is a New Zealand company based in Raglan, and their staff are internationally recognised in the field of surf science, furthermore ecoast has already mapped the swell corridors for the Wellington Regional Plan review - including Lyall Bay.

As an organisation, SPS itself has a stable of committee and active members, all experienced surfers who have over the years developed a unique toolset of knowledge and understanding regarding impacts on surf breaks.

SPS has been at the forefront of surf break conservation for some ten years now, and were instrumental in lobbying for protection of surf breaks in the New Zealand Coastal Policy Statement 2010.

During that time we called upon some of the finest legal, planning, and scientific expertise to put forward our case. Dr Mead and eCoast Ltd are world leaders in surf science and has the confidence of the New Zealand surfing public.

This was demonstrated last year with the grounding of the MV Lake Triview on the Waiwhakaiho Reef, a nationally significant surf break in Taranaki, one of 17 breaks recognised in the NZCPS. The Taranaki Regional Council undertook investigations in part to determine if any impacts had occurred to surfing wave quality at the reef due to the grounding, the ship owners hired Dr Mead to do the same, Dr Mead found *no* evidence of detrimental effects and caucused his results with the council's experts.

When SPS and local surfers heard that Dr Mead had been hired by the *shipping company*, we were all relieved that the company had hired the best in the field and were satisfied with Dr Mead's findings.

SPS have also been in correspondence with the Wellington Boardriders club (WCB), whom you met with on the 28<sup>th</sup> of January and from that meeting it was agreed that:

1. WIAL to share timeline outlining key milestones (eg when reports/studies can be shared, consultation/feedback window etc).
2. WBC to identify best days at corner in semi recent history so we can align with data from your studies.
3. Caucus to take place sometime in near future between WBC, WIAL, marine science experts and surf protection society.
4. WBC to research, contact and share details of international experts who understand why specific waves work the way they do.

SPS recommended Dr Mead, and through the Wellington Boardriders Club we forwarded Dr Mead's C.V. on to you.

Greg, Dr Mead informs us that you have not responded to his emails or communications regarding the services he can contribute to the project.

SPS believe WIAL have chosen the wrong team in appointing a multi-national company based in Denmark with little applicable expertise over the single largest group of surf science and consulting experts in the world, which are a 100% NZ-owned and based company.

Ironically, the only current project that DHI is doing with respect to surfing breaks is the detailed design of the 2nd Gold Coast multi-purpose reef (MPR) – Dr Mead was part of the design team for the 1st one which has extended the renourishment requirements 3-fold, however, the new laws in Queensland means that a tender has to include having an office in the State, which at 15% of the tender evaluation was pointless for NZ's eCoast to bid for (DHI have an office in Brisbane).

“DHI [does not] have a long history of modelling surf”, only one person based in their Brisbane office has any experience in surf science and modelling, which is also in reference to the statement “and from our research are the world leaders in dynamic modelling of surf breaks” – Simon Mortenson has done a fair bit of modelling of surfing breaks, which have been often very impressive in terms of “dynamic modelling” in creating 3-D animations of surfing waves (possible with very high computer power).

Most importantly, DHI has little if any experience in the most important aspect of the airport extension - that is the impacts on the existing surfing breaks in Lyall Bay

SPS is very disappointed that eCoast were not even contacted by WIAL in relation to impact assessment and potential for enhancement. eCoast has 3 Principle Consultants/Directors that have done their Doctorates in coastal oceanography specialising in surf science and have decades of experience in modelling of surf reefs (numerical and physical modelling), for research/understanding how they work, considered the impacts of development on existing reefs, and designing MPR's (mostly with a primary aim of coastal protection) – a 4th Director is currently doing his PhD in the discipline.

eCoast Ltd have published the vast majority of literature on what makes up surfing breaks and the design of MPR's for coastal protection, marine ecological enhancement and amenity enhancement (e.g. surfing, diving), and also have a large volume of unpublished research undertaken over the past

2 decades that incorporate the main 3 aspects of MPR's – coastal protection, ecological enhancement and surfing amenity.

Dr Mead's PhD thesis is entitled "Incorporating High-Quality Surfing Breaks into Multi-purpose Reefs", he has published over 40 peer-reviewed papers with ¾ of them on the subjects of surf science and MPR's, he has written (along with co-author and fellow eCoast Director, Dr Jose Borrero) 2 chapters for the post-graduate and practitioner's text book "Marine and Coastal Resource Management: Principles and Practise" (Chapter 19 - Beach Management and Chapter 20 - Surf Science and Multi-Purpose Reefs), and has supervised many MSc and PhD candidates in areas of surfing science over the past 15 years.

Indeed, eCoast's consultants are the only group that has worked almost continually on surfing break projects for the past 2 decades, a claim no other company in the world can make.

In terms of assessing impacts of surfing breaks due to developments, eCoast's consultants and Dr Mead in particular have been involved in all projects in NZ and Australia in some way or another, as previously listed, and many others world-wide.

eCoast.Ltd has worked with SPS and Save the Waves, and several other organisations over the years providing advice on potential impacts and working with all parties to develop sustainable solutions (i.e. allowing for development while still maintaining the amenity and physical assets for future generations).

Our concern with WIAL and the experts they are working with is that we will just end up going down all the same old pathways – eCoast have combined decades of experience in this exact area. The Ports of Otago (impacts on Aramoana and Whareakeake surfbreaks) and Whangamata Bar are 2 good NZ examples.

At Whangamata, the modelling work for the new marina actually indicated the changes to the terminal lobe and flood channel that have been observed to have negative impacts following the marina construction, but were not recognised (including by independent peer-review by a University expert), due to the lack of incorporating feedback mechanisms associated with sediment transport. Changes to sediment transport due to changes in waves and currents caused by the extension are a potential concern for Lyall Bay.

Mr Ed Atkin (one of eCoast's Directors) is currently undertaking a PhD part-time to determine and demonstrate the physical processes that led to the negative impacts on Whangamata Bar, one of NZ's 17 nationally significant surfing breaks (also supervised by Dr Mead). Mr Atkin is also presenting a keynote speech at this year's Global surf Conference in the UK titled "Protecting Surf Breaks in New Zealand through Surf Science Techniques".

At Whangamata, it was too late, while at Ports of Otago, SPS were able to make submissions against the nearshore dumping of dredge spoil that impact on 2 of NZ's 17 nationally significant surfing breaks. This consequently led to an appeal against the proposed dumping. SPS and POL settled out of Court during negotiations, with a significant amount of input and direction by Dr Mead as our expert witness.

As mentioned at the beginning of this letter SPS and eCoast have recently completed a project determining the regionally significant surfing breaks for the Greater Wellington Region, in which Lyall Bay and its associated breaks are featured. This is in addition to previous work that Dr Mead

has undertaken in Lyall Bay (indeed, the reference to “the 10-20 days a year that the corner wave is working at its absolute optimum level” is taken from Dr Mead’s work).

Dr Mead also undertook the surfing impact assessment on the 10 surf breaks that would have potentially been impacted on by TTR’s seabed mining in the Southern Taranaki Bight – in this case he worked closely with NIWA who conducted all the modelling of specific cases with his direct input.

### **In summary**

It is difficult understand how eCoast could have been over-looked to undertake and/or be involved in WIAL’s proposed extension project.

Therefore, we would like to see the proponents (in this case WIAL) get it right from the start, and include eCoast and their relatively vast knowledge and experience in the area of surf science in the process of determining impacts - and potential for the enhancement of the structure; rather than having an overseas multi-national reinvent the wheel in isolation and go through the process of ensuring that the correct and appropriate investigations are undertaken and interpreted, to ensure that this regionally significant surfing area is not negatively impacted on.

SPS strongly recommends that to maintain the confidence of the surfing community WIAL follows through with points 3 and 4 of the meeting of the 28<sup>th</sup> of January. It is our understanding that Simon Mortenson of DHI has a high regard for Dr Mead and would appreciate working with him on the project.

Let’s get it right first time.

Kind Regards

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On behalf of the Committee  
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CC:	Steven Sanderson	WIAL CEO
	Mike Brown	WIAL Project Manager
	Celia Wade-Brown	WCC Mayor and councillors
	Ray Wallace	Hutt City Mayor and Councillors
	Wayne Guppy	Upper Hutt Mayor and Councillors
	Ross Church	Kapiti Coast Mayor and Councillors
	Lyn Patterson	Masterton Mayor and Councillors
	Nick Leggett	Porirua Mayor and Councillors
	Adrienne Staples	SWDC Mayor and Councillors
	John Booth	Carterton DC Mayor and Councillors