

11 May 2016

U140295 – Richmond

Dr Steve Urlich
Marlborough District Council
PO Box 443
Blenheim 7240

**Compliance with Condition: Structural Engineering Design, Installation and Maintenance
22 & 23 Richmond**

22. The design, including the design loading, for the anchoring and mooring warp system shall be specified by a suitably qualified and experienced Chartered Professional Engineer (with appropriate peer review) to cater for the maximum wave loading, and maximum tidal range and currents. The design report and plans shall be provided to the Council, prior to the initial placement of the first structure(s) at the marine farm. A suitably qualified and experienced Chartered Professional Engineer shall supervise the installation of, and certify that, the anchoring system has been installed in accordance with the design report and plans.
23. During installation of the anchoring and mooring warp system, a test pullout loading shall be undertaken of a representative screw anchor, in order to confirm the anchor pullout capacity, in accordance with the Engineering Feasibility Report dated September 2011, prepared by OCEL Consultants Limited and lodged with the application. A report describing the results of the test, and confirming the pullout capacity of the representative screw anchor shall be prepared by the Chartered Professional Engineer specified in Condition 22 who supervises the installation of the anchoring system, and provided to the Council.

Can Council please confirm in writing that Appendix 1 is acceptable as per the conditions above.

Yours faithfully



Mark Gillard
Environmental Compliance Manager

Appendix 1

OCEL Letter re Conditions 22 & 23

OCEL CONSULTANTS NZ LIMITED

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10 May 2016

Dr S Ulrich
Environmental Scientist (Coastal)
Marlborough District Council
PO Box 443
BLENHEIM 7240

Dear Sir

CONSENT COMPLIANCE U140295 – CONDITIONS 22 AND 23

I am in receipt of a copy of your letter of 27 April 2016 to Mark Gillard, NZKS Environmental and Compliance Manager, noting compliance with condition 23 and partial compliance with condition 22 on the basis of information supplied by the undersigned in relation to the anchor pullout test and design certification. The design has been specified by a suitably qualified and experienced Chartered Professional Engineer – the undersigned – to take the maximum hydrodynamic loads developed by waves and tidal currents and to accommodate the tidal range at the entrance to Pelorus Sound.

With regard to supervision of the installation of the anchoring system there is no requirement for me to be present full time on site for the installation of the system. This is quite normal for other engineering projects we work on such as heavy duty wharf construction. We may have a site engineer for complex projects. I review the QA data and maintain contact with the construction team. I have full confidence in the professionalism of the installation team for the NZKS farms and I am supplied with the installation torques developed during the installation of each anchor which is an effective form of quality control.

The anchoring system has been installed in accordance with the design report and plans.

Yours faithfully
OCEL Consultants NZ Limited



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CPEng