

13 September 2018

Client: Christchurch City Council
Project Name: Lyttelton Wastewater Project
Project Number: IZ043500

Subject: Vision Environment Water Quality Monitoring Services

Vision Environment Pty Ltd, were engaged by Christchurch City Council in March 2017 to provide professional services for the Lyttelton Wastewater Project to enable the Council to fulfil its obligations, as Consent Holder, for the coastal permit to disturb the seabed and foreshore during construction and to temporarily place structures and buoys in Governors Bay, Diamond Harbour and Lyttelton Harbour.

The conditions of the coastal permit included requirements for the management of sediment disturbance by undertaking a Baseline Monitoring Programme over a minimum period of 3 months prior to construction and to use the data obtained to develop a Coastal Water Quality Monitoring Plan (CWQMP) for the work to be undertaken in the Coastal Marine Area.

Vision Environment designed and implemented the baseline monitoring programme, which included the supply, installation and maintenance of telemetered monitoring equipment, cloud based data delivery and the weekly collection and laboratory testing of water sample to determine Total Suspended Solids. The initial 3-month baseline monitoring programme was extended through to the commencement of construction work, a total period of 11 months.

Vision Environment designed, developed and prepared the CWQMP, in conjunction with the Jacobs engineers and input from the contractor for the marine work, utilising the data gathered from the baseline monitoring programme between April and December 2017. The CWQMP was implemented in May 2018 with the supply, installation and maintenance of two additional monitoring stations and the incorporation of data provide from two existing monitoring stations in the Lyttelton Harbour.

The data gathered at the sites was available in real time via the projects KPI Viewer, established and maintained by Vision Environment. The data was shared with key project stakeholders including the Canterbury Regional Council and the Lyttelton Port of Christchurch as well as the Christchurch City Council and the contractor undertaking the marine work.

At the outset of the project VE expediently mobilised equipment and personnel to commence the project within the agreed time frame. The real time validated data was provided in an easily accessible but secure viewable platform developed specifically for this project.

The Directors and VE staff have always been available, even at very short notice, displaying a high standard of professionalism and integrity. Their assistance, cooperation and proactive involvement has proved invaluable in providing timely analysis of the data, including both the routine monthly reporting and on the high turbidity events recorded during the course of the project when turbidity levels at the compliance monitoring stations triggered the alert levels established from the baseline monitoring.

Our experience working with Vision Environment over the past 18 months has confirmed that they have a high regard for the Client's requirements. In particular, for this project they have

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provided Christchurch City Council with an excellent level of service. Their proactive approach to identifying, designing and implementing the water quality monitoring plan of the harbour for the Lyttelton Wastewater Project has exceeded Client's expectations.

I have no hesitation in recommending Vision Environment where a proactive, innovative and best for project solutions approach for the monitoring and management of water quality is required.

We have been impressed by their ability to design and implement a water quality monitoring system, data collection, real time viewing and the timely provision of accurate and comprehensive reports, supported by strong technical and scientific skills and resources.

The project is currently in its final stages of construction with completion of the marine works scheduled for November 2018.

Vision Environments contribution to the Project has been invaluable in ensuring the desired objectives and outcomes of minimising the environmental impact on Lyttelton Harbour from the excavation and backfilling of trenches and the installation of 6.8kms of PE pressure main pipelines has been achieved.



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