



11 June 2021

Bryce Henderson
Deloitte Centre
80 Queen Street
Auckland
1010

Mangawhai Consultant Request

File Reference 1-14129.19

Dear Bryce,

In response to your request on 2 June 2021 I have prepared this letter to address your specific questions regarding my role and the role of WSP at Mangawhai CWWTP on behalf of Kaipara District Council.

1. I can confirm that WSP have been engaged by Kaipara District Council to give independent advice on matters regarding the long term strategy at Mangawhai CWWTP.
2. My experience and professional qualifications are summarised below.

I attained an MSC (with distinction) in Water and Environmental Engineer, from the University of Surrey and a BSc (Hons) in Industrial Biology from South Bank Polytechnic London.

I am a wastewater treatment engineer with over 31 years of experience in the industry. My background includes assessing environmental impacts, operating treatment plants, asset management and advising on investment on technical matters on over 300 treatment plant projects. From 1989 to 2015, I was engaged in the UK working directly with Southern Water (10 years), Yorkshire Water (5 years) and was seconded as consultant long term to Anglian Water (5 years), Scottish Water (6 months) and Severn Trent Water (2 years). I additionally had a period of 2.5 years at a contracting company specialising in wastewater treatment. These projects have included long term strategy, assessment of options, assessment of plants and delivery of capital projects and strategies across a very wide range of treatment processes and elements of delivery.

Since July 2015, I have been resident in New Zealand and an advisor on many wastewater related projects. These include treatment plants, strategies, supporting consent application, project feasibility and detailed design covering flow, odour, sludge, treatment and disposal aspects.

3. I can confirm that I am aware that the MCWWTP Long Term Strategy for Growth will be supporting the LTP for 2021 to 2031.
4. There have been no imposed restrictions on the scope of services provide to KDC, other than the limits of engagement through the agreed scope of works and the engagement contract used.
5. The data used in the preparation of the long term strategy for growth has been provided by KDC and its operating partner (Trility Water) and been interpreted for the needs of the

project. All raw data provided, usually in spreadsheet format has been reviewed prior to usage to ensure anomalous information is removed that may produce erroneous outcomes. These reviews include graphical checks to assess trends in flow are consistent, outliers are identified and if required queries are raised to determine whether anomalous data can be explained or should be discounted. All checks on data are undertaken by a senior or principal engineer before used in calculation. To reduce risk multiple years of data have been analysed to ensure values used for the strategy are robust and justifiable

6. To ensure appropriateness and reasonableness of assumptions all calculations and recommendations are reviewed by a competent senior engineer before issue to the client. This is to meet the WSP quality procedures. Discussion with KDC is undertaken of the draft issue of report to ensure that assumptions and interpretation are understood. A final report is only issued after this review by client and a final quality check. This process ensures that the outcomes are the responsibility of WSP and the Council.
7. The costs presented in the WSP MCWWTP Long Term Strategy report are developed using engineering estimation techniques employed by our Quantity Surveyors. WSP have had no input to the use of these values in the setting of the long term plan.

If you have any queries regarding this correspondence, or require further clarification on the Mangawhai CWWTP strategic approach, please contact me.

Regards



Andrew Springer
Technical Principal Wastewater Treatment Engineer

Cc Jim Sephton, KDC
Eros Foschieri, WSP

