

INNOVATION, SUSTAINABILITY + DIGITAL IN PRACTICE

ISDIP

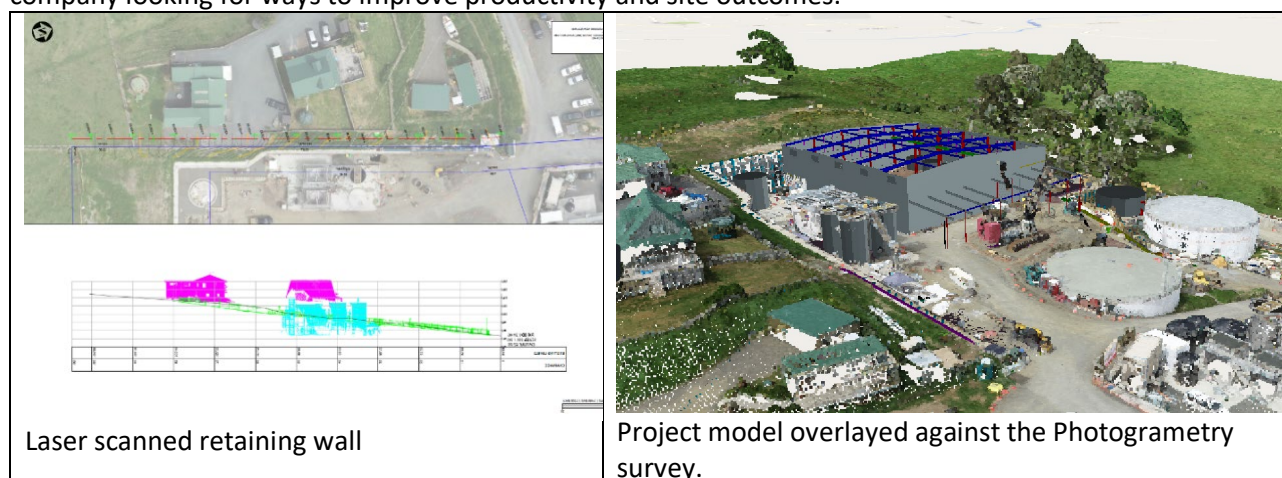
ISDIP 030	Survey Innovation for Effective Noise Wall Design.	
Date	Ongoing	
Business Unit	BPC	
Project & Region	Papakura WTP – Northern Region	
ISC Themes	<ul style="list-style-type: none">Emissions, Pollution and WasteInnovation	

1 What Happened?

The Papakura Water Treatment Plant is located in close proximity to residential housing. It is important the finished plant has as little impact as possible on the quality of life of residents in the area. Therefore, a noise wall was needed to minimise the noise levels produced by the plant during operation. However, as the plant design is changing as construction progresses, it can be difficult for engineers on site to manage placement and changes to structures when there is very little reference content.

2 What Are We Doing Differently?

The Senior Surveyor on site used drone photogrammetry and laser scanning to create a representation of the finished plant, allowing for an optimised noise wall to be designed. The survey innovations also are used to track construction. This has made site planning easier and resulted in a more effective noise wall being made. The surveyor has also used the laser scanner to identify and prove tie in points in a previously installed manhole with out the need for a confined space entry. This provided H&S risk elimination and resource reduction. This approach aligns with the intent for BPC to become a more digitally conversive company looking for ways to improve productivity and site outcomes.



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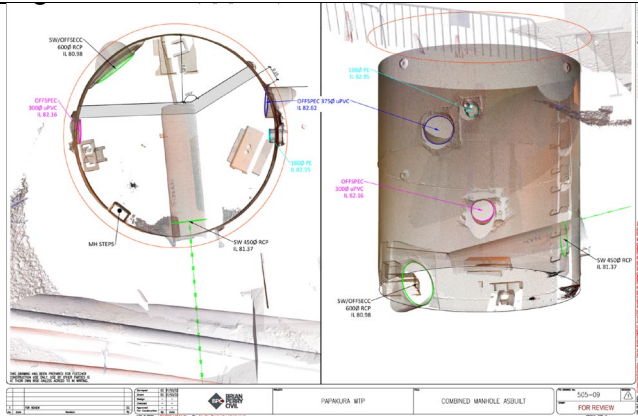
Timber Retaining wall installed



Optimised for the close proximity properties



Laser scanning a site manhole without confined space entry.



Pipe connections confirmed digitally

Benefits of laser scanning to the site team

- Planning of new/changed structures on site is a simpler process
- Combines aspects of 3D mapping and CAD modelling to give a simulated view of the site
- Neighbours to the finished plant will be less impacted by the noise of the plant due to improved noise wall being constructed thanks to surveying smarts.

Surveying techniques will continue to be implemented to optimise construction and placement of structures.

Laser scanner used: Trimble X7

3 More Information

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