



Water Pipe Assessment Report

**CCTV/Acoustic inspection report produced on behalf of:
SAMPLE REPORT**

CCTV Inspection Project Scope

A pressurised CCTV and acoustic survey was undertaken on a potable water pipeline to confirm internal pipe configuration and a leakage sweep was also completed using the Flowrider system.

Flowrider Pressurised Pipe Internal Inspection Report

Equipment Testing Details:

Calibration and Testing undertaken by:	C Webster
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Equipment Information:

System Used:	Flowrider	Visual Check:	12/07/2021
ID Number:	FRII108	Sanitised:	12/07/2021
Purpose Used:	CCTV Survey Potable Water	Pat Test Date:	03/06/2021
Pressure Tested:	12/07/2021	Pat Test Due:	03/10/2021

Chlorination Details:

Chlorination Mixture:	13/07/2021
Chlorine/Water:	1 part to 1000
Technician Name:	Clive Webster

Flowrider Pressurised Pipe Internal Inspection Report

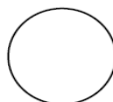
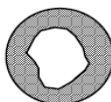
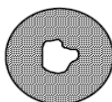
Location:	SAMPLE	Inspection Date:
Client:	SAMPLE	13/07/2021
Client contact:	SAMPLE	Reference ID
API Staff on site:	SAMPLE	API-Pipewell Road L7-L6

Pipe Details:

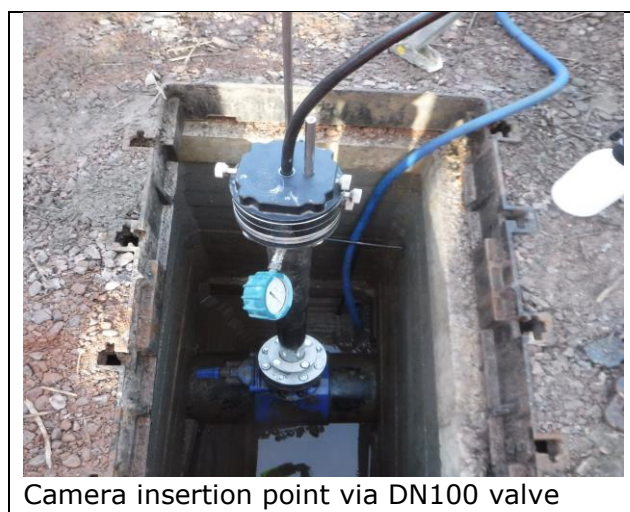
Pipe Material:	Ductile Iron (DI)	Pipe Coating:	None
ID (Nominal):	450mm	Internal Lining:	Yes Cement
Age:	1970 (data supplied by client)	Reason for Survey:	Condition Assessment and leakage sweep
Pressure:	3 Bar	Distance of Survey:	400 metres

Condition Grading: *Pipe grading a visual representation only

Hydraulic Grade:	2
Asset Condition:	Good
Flowrate:	0.65 M/S

Grade 1	Grade 2 Slight	Grade 3 0-20%	Grade 4 20-40%	Grade 5 >40%
				

Supporting Photo information:

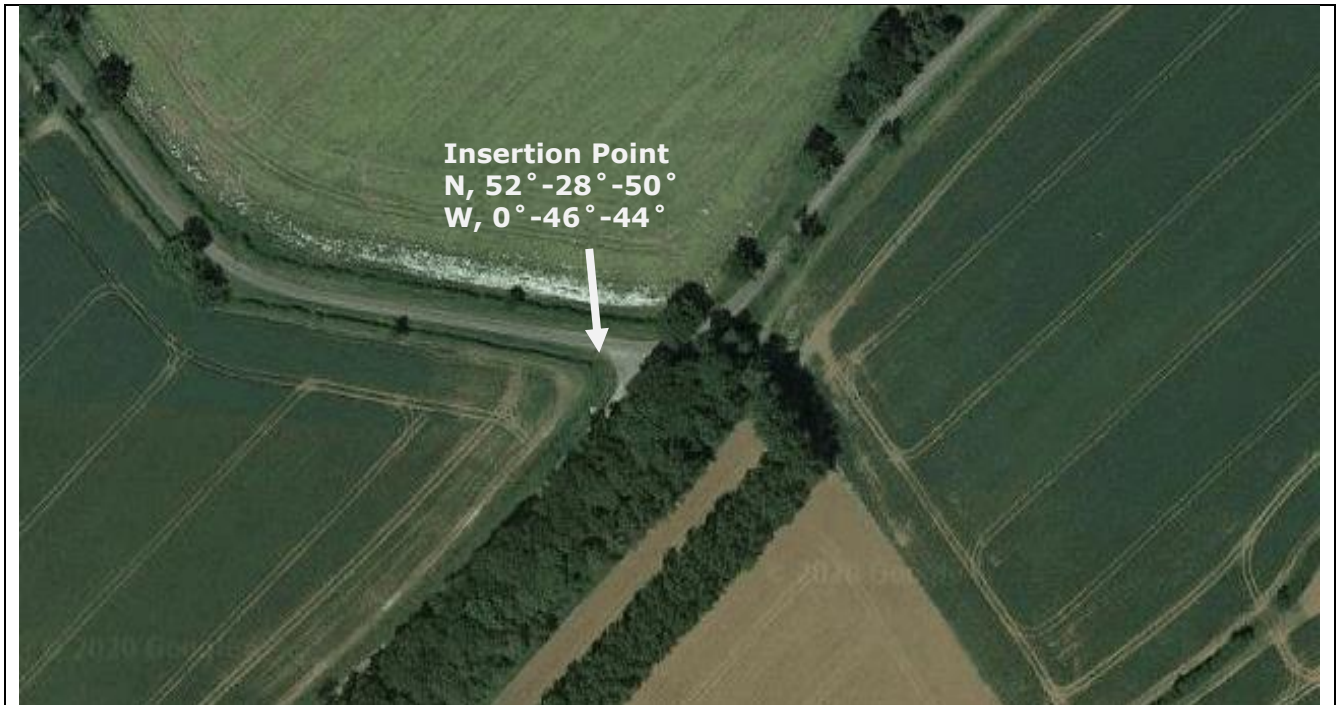


Flowrider Pressurised Pipe Internal Inspection Report

Pressure reading taken on site (actual):



Location Map of Survey:



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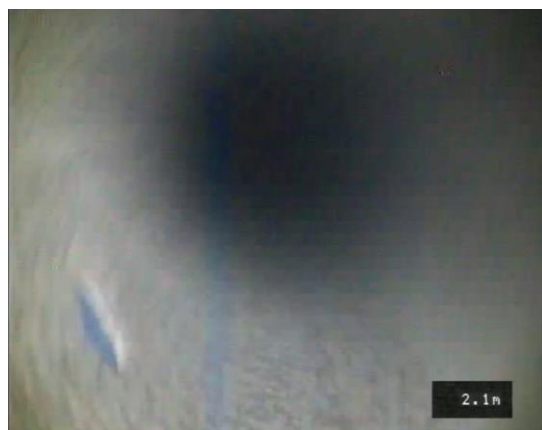
Pressurised CCTV Survey Internal Video Stills and Notes: Direction 1 with flow

Title 1



Image at pipe insertion point

Title 2



Hydrant branch cut out identified

Title 3



Joint image

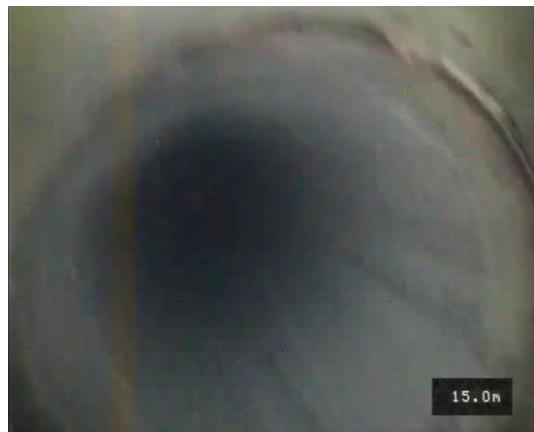
Flowrider Pressurised Pipe Internal Inspection Report

Title 4



Joint image

Title 5



Joint image

Title 6



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 7



Joint image

Title 8



Joint image

Title 9



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 10



Joint image

Title 11



Joint image

Title 12



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 13

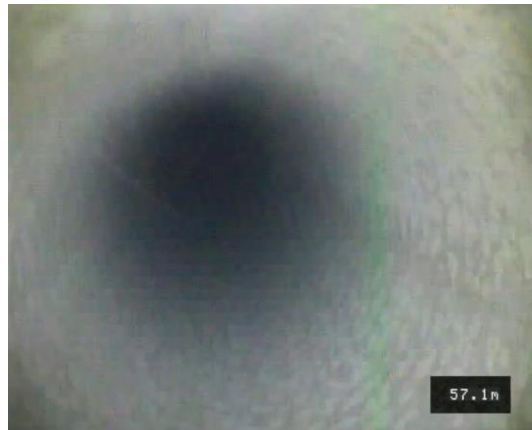


Image of main

Title 14



Joint image

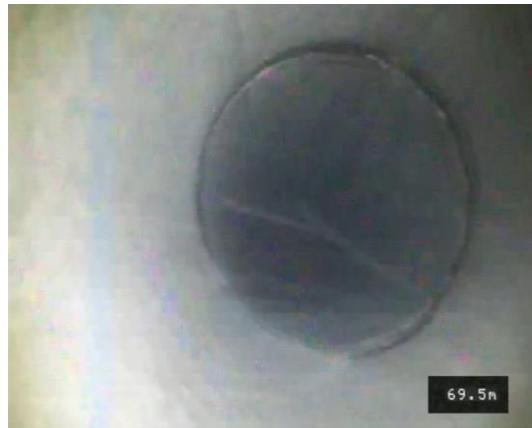
Title 15



Joint image

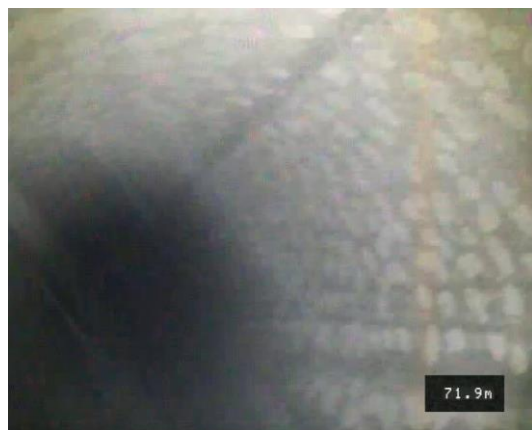
Flowrider Pressurised Pipe Internal Inspection Report

Title 16



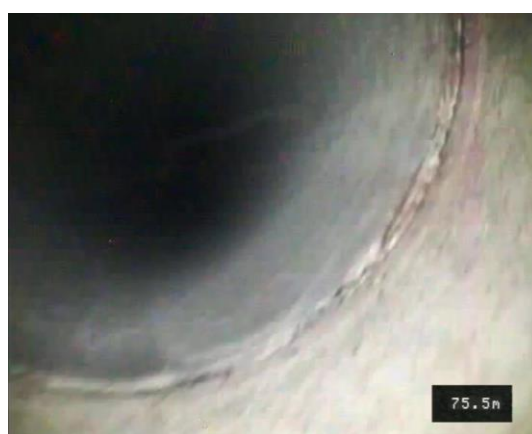
Joint image

Title 17



Pitting of cement lining identified

Title 18



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 19



Joint image

Title 20



Joint image

Title 21



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 22



Joint image

Title 23



Joint image

Title 24



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 25



Joint image

Title 26



Pitting of cement lining identified

Title 27



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 28



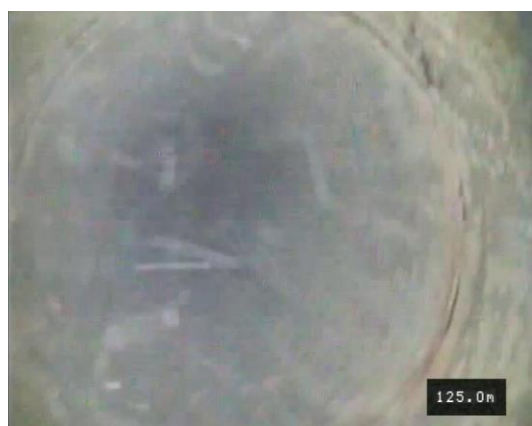
Pitting of cement lining identified

Title 29



Pitting of cement lining identified

Title 30



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 31



Image of main

Title 32



Joint image

Title 33



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 34



Joint image

Title 35



Joint image

Title 36



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 37



Joint image

Title 38



Joint image

Title 39



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 40



Joint image

Title 41



Joint image

Title 42



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 43



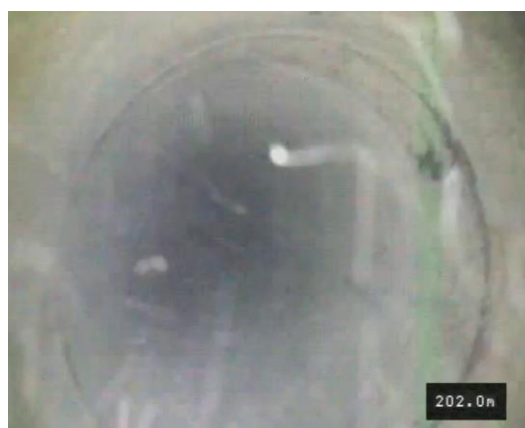
Joint image

Title 44



Joint image

Title 45



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 46



Joint image

Title 47



Joint image

Title 48



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

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Joint image

Title 50



Joint image

Title 51



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

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Joint image

Title 53



Joint image

Title 54



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 55



Joint image

Title 56



Joint image

Title 57



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 58



Joint image

Title 59

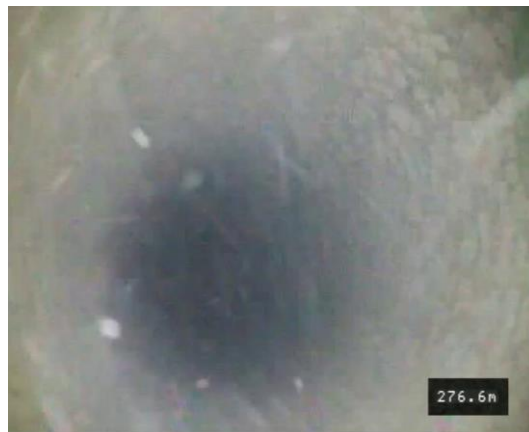


Image of main

Title 60



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 61



Joint image

Title 62



Image of main

Title 63



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 64



Joint image

Title 65



Image of main

Title 66



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 67



Joint image

Title 68



Image of main

Title 69



Joint image

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Title 70



Image of main

Title 71



Joint image

Title 72



Joint image

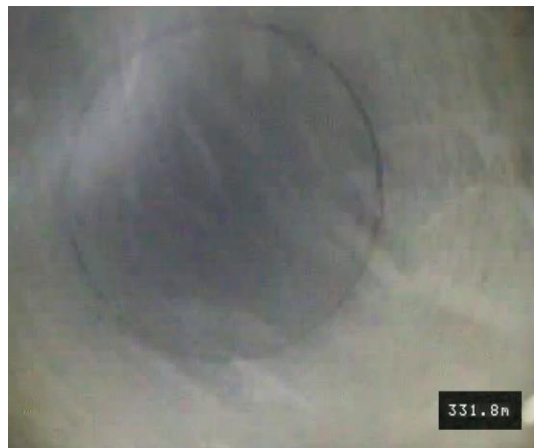
Flowrider Pressurised Pipe Internal Inspection Report

Title 73



Joint image

Title 74



Joint image

Title 75

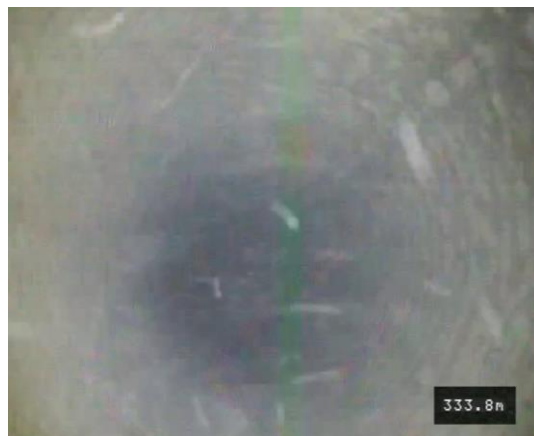


Image of main

Flowrider Pressurised Pipe Internal Inspection Report

Title 76



Joint image

Title 77



Joint image

Title 78



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 79



Joint image

Title 80



Image of main

Title 81



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 82



Joint image

Title 83



Joint image

Title 84



Image of main

Flowrider Pressurised Pipe Internal Inspection Report

Title 85



Joint image

Title 86



Image of main

Title 87



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 88



Drilled cement lining coupon identified

Title 89



Debris in pipe identified

Title 90



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 91



Joint image

Title 92



Image of main

Title 93



Joint image

Flowrider Pressurised Pipe Internal Inspection Report

Title 94



Image of main

Title 95



Joint image

Title 96



Image of main

Flowrider Pressurised Pipe Internal Inspection Report

Title 97



Joint image

Title 98

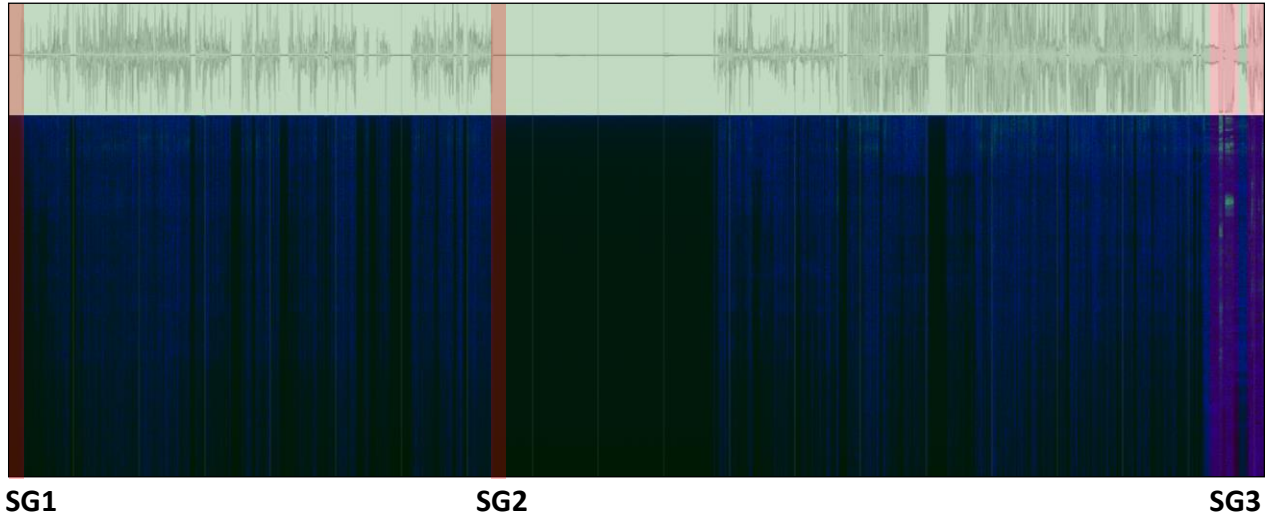


Image of main and end of survey

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Additional Information – Acoustic Scanning Details

Leak analysis using PIPA software



Post Analysis Results

3 clear acoustic band signatures are observed during the post analysis of the recorded inspection footage acoustics:

- SG1 illustrates the sensor being pressurised at the start of the survey
- SG2 illustrates the sensor hydrochute being collapsed remotely during the survey
- SG3 illustrates water injection sound and depressurisation of the launch tube

No other acoustic peaks identified (leaks) during the data post analysis of the acoustic data. PIPA Software identifies leaks and illustrates points of interest with solid red banding (see spectrograph above).

Sporadic sound spikes are also present (sensor drag or contacting pipe wall only).

Possible leak detected during survey undertaken at 3 bar pressure only.

Inspection comments:

A pressurised CCTV inspection was undertaken on a potable water pipeline to ascertain a configuration assessment.

Chapter 8 signage and barriers supplied by API.

Entry was via a DN100 valve.

Entry point was located on a grass verge area.

The camera/cable was fully chlorinated during insertion through a chlorine chamber and standpipe configuration.

Direction 1 with flow direction

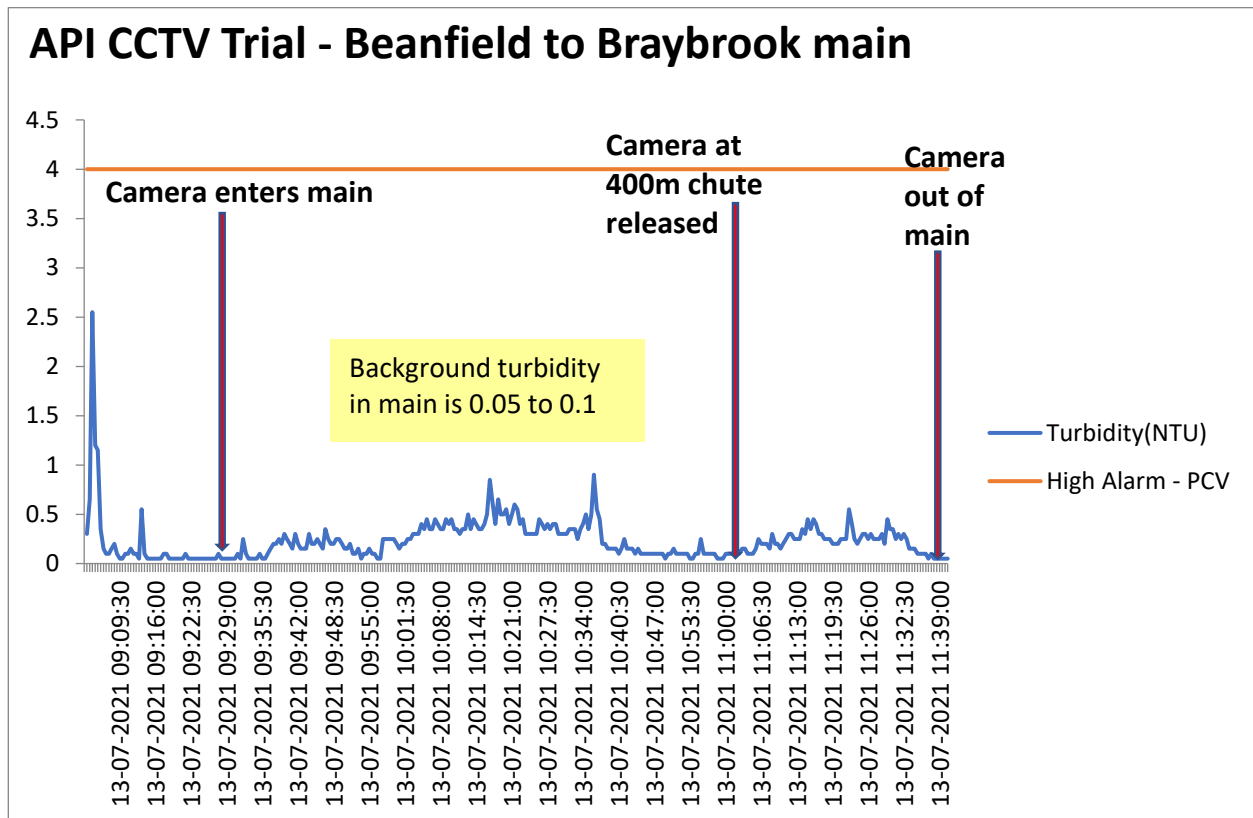
- Low levels of residual sedimentation identified during survey
- Low levels of tuberculation identified within the pipeline (cement lined pipe)
- Low levels of debris identified during survey
- Pipeline appears to be in a good general condition
- Survey ended at 400 metres due to distance being achieved as instructed by the client

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Additional Comments

- The survey was carried out to identify and locate any unknown valves or assets along the 400 metres of potable water pipe section, and also to undertake a leakage sweep.

Turbidity levels monitored during survey and report supplied by client



Turbidity results:

The graph above shows that the turbidity level recorded whilst deploying the Flowrider system remained below level 1. This result has confirmed that using the system is safe and approved for use in potable water mains.

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-End of Inspection Report-

Produced By:	F Orlandi		
Ref:	FO_001	Date:	26/07/2021

Reviewed By:	Tracey Webster		
Ref:	TW_001	Date:	26/07/2021

Approved By:	F Orlandi		
Ref:	FO_001	Date:	26/07/2021

Flowrider Pressurised Pipe Internal Inspection Report



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