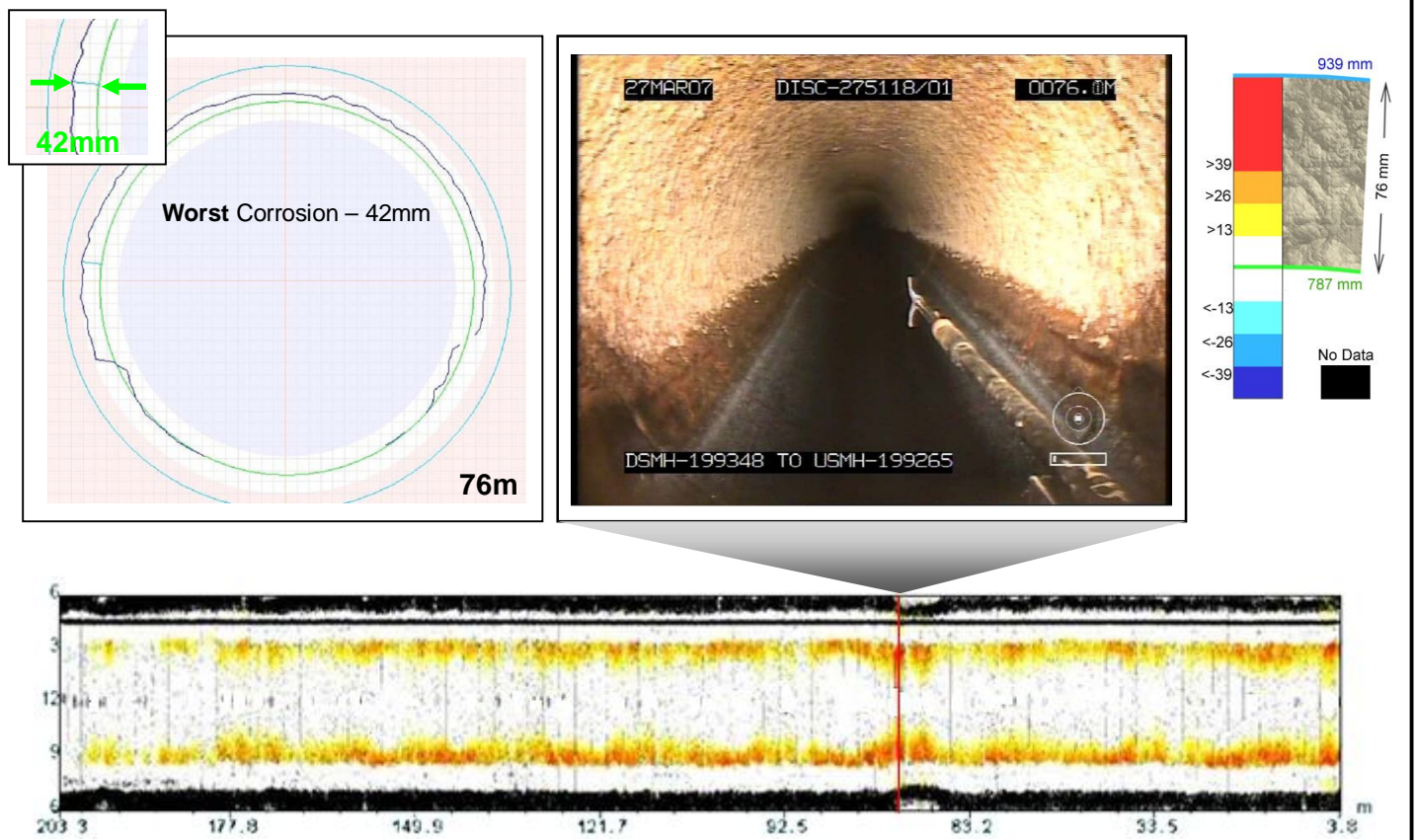


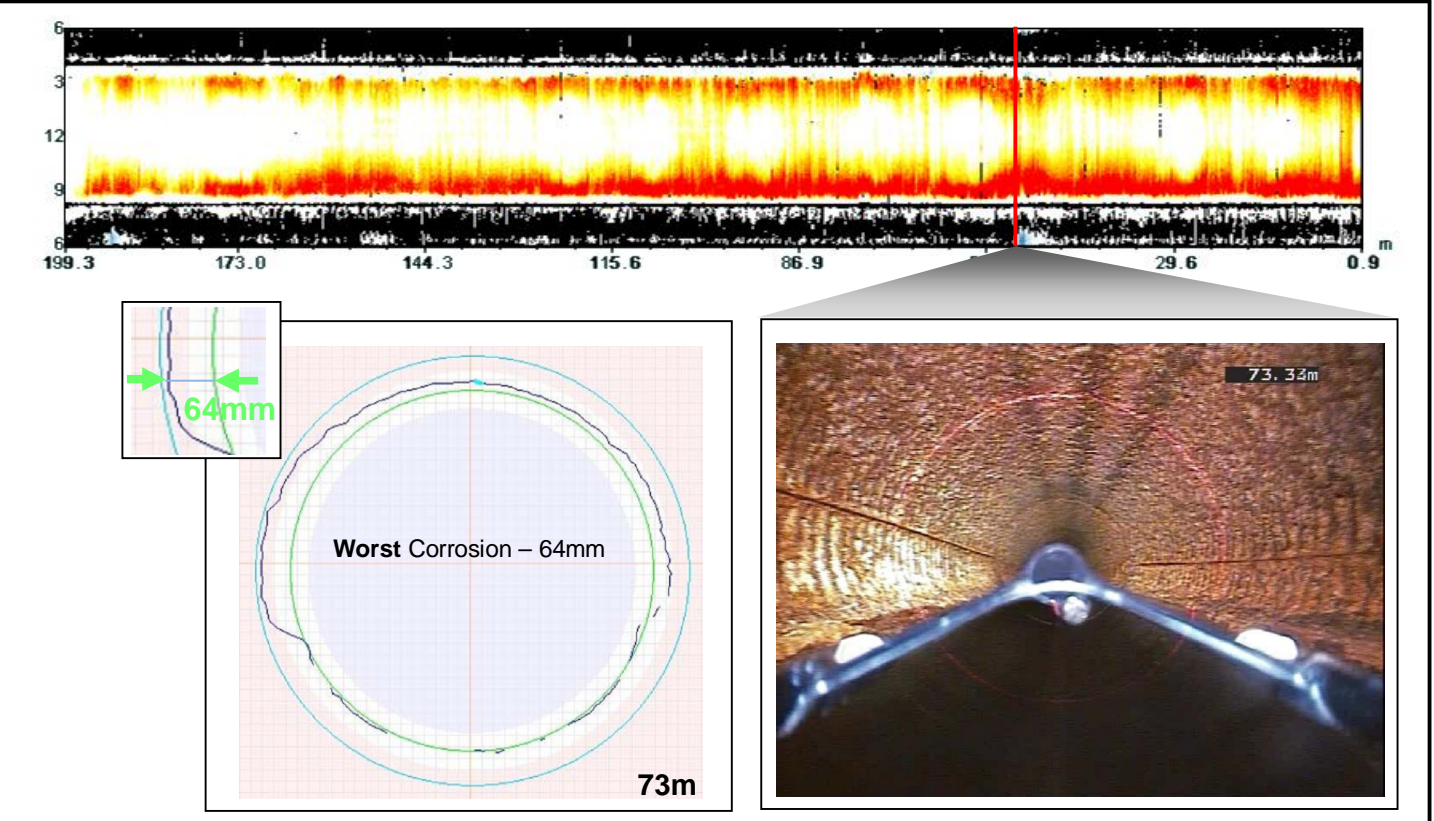
MEASURE ... Pre & Post Cleaning

203172 - Year 1964 - 787mm ID, 939mm OD – Concrete – (200m)

Pre-Cleaning

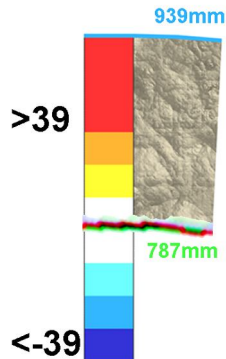
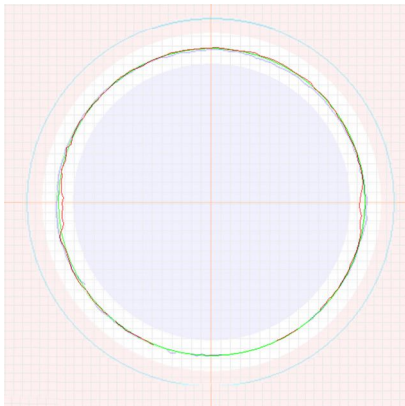


Post-Cleaning



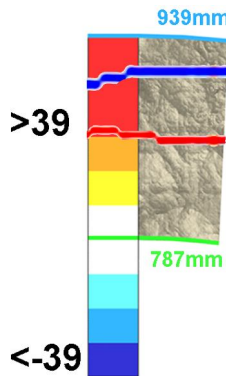
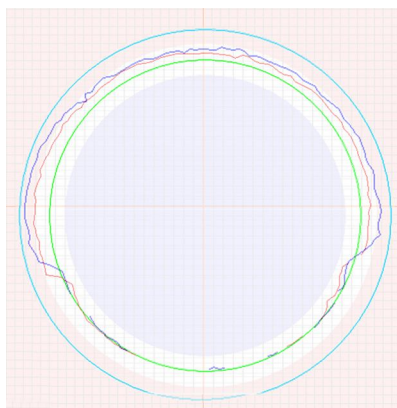
MEASURE ... Pre & Post Cleaning

Comparisons – Pre & Post Cleaning



Findings – Pre Cleaning

- The “match to reference” size is found to be 787mm
- No significant greasy build-up visible on the pre cleaning profile reports, if anything there was a fine layer of dust evident
- Corrosion through the expected rebar is evident over more than 50% of the pipe length.
- Wall thickness assumed to be 76mm - Corrosion to 42mm.



Findings – Post Cleaning

- The match to reference size is found to be 787mm.
 - No concrete removed at this point
 - Heavy cleaning did not reach this part of the pipe
- 0.7 metric tonnes of concrete removed.
- Corrosion through the expected rebar is evident over more than 85% of the pipe length.
- Dark slime covering the invert has not been removed.
- Wall thickness assumed to be 76mm - Corrosion to 64mm.

Key	
—	Pre Clean
—	Post Clean

The 1964 pipes were part of an extensive CCTV/Profiling critical asset inspection process. Minor surface corrosion was logged by the CCTV operator. The 42mm of corrosion identified by the Profiler software was reported upon and it was decided by the authority involved to clean and re-profile the asset.

After comparing the two separate runs it was seen that the same corrosion pattern is clearly evident, however through the cleaning process a significant amount of material had been removed in some cases more than 20mm of pipe wall had been “cleaned away”.

We can be confident with the results as a clear “match to reference” shape and size was found for each run, this reference shape confirms that any measurements taken from the profile are correct.

It is evident that the condition of the pipe identified prior to the cleaning process was a clear indication as to the pipes corrosion levels. Thus potentially the cleaning process was not necessary. This study also shows the potential for the evident corrosion in a pipe to be only an indication of how bad the corrosion levels within the pipe actually are.

This particular pipe was just one of a series of 800m in similar condition, the local authority had no idea the line was in such poor condition, as previous CCTV inspections had either noted minor surface damage or a fat build up. This discovery caused a major rethink in the authority’s rehabilitation spending as the pipe ran directly beneath one of the country’s major infrastructure assets.