



Case Study

Cheslyn Hay Record Diameter Refurbishment

Overview

Sanivar, working with Colus Specialist Projects and CPC have recently completed the first ever 450mm pull through SaniTube installation, a world first of this diameter, on an abrasive main in Cheslyn Hay, Cannock. The pipe could not be replaced using open cut, as its course ran through an industrial estate and under above ground infrastructure, including aquatic tanks and commercial greenhouses.

Client:
Severn Trent Water

Contractor:
Colus Ltd and CPC

Project:
Cheslyn Hay, Cannock

Completion:
September 2022



Challenges

The project posed several challenges:

- The potential for high customer disruption amongst business and residential stakeholders.
- The pipe could not be replaced using open cut, as its course ran through an industrial estate and under above ground infrastructure, including aquatic tanks and commercial greenhouses.
- High cost associations with having the main offline for a considerable amount of time.

Outcome

Sanivar proposed the use of 450mm pull through SaniTube liner, to assist in the refurbishment of a 180m section of 500mm rising main.

SaniTube offered the required level of abrasion resistance but is not in itself a full structural liner despite withstanding pressures of up to 16 bar. The newly launched 450mm diameter liner would inflate to 490mm under 5 bar pressure, sufficient to meet flow requirements. It was then decided to combine the abrasion resistant properties of SaniTube with the structural strength of a CIPP liner.

To restore structural integrity to the main an 8mm Berolina HF liner was used, a conventional CIPP system that adheres to the existing asset but has limited resistance to abrasive or corrosive forces.

After analysing the potential of transferring negative pressure from one liner to the other it was decided that SaniTube offered the optimum protection against both abrasion and negative pressure, as it does not adhere to the relined pipe but sits inflated within the pipe.

The works were started and completed in less than 60 hours. During this time, the team managed to rehabilitate the host pipe and extend its structural integrity by 80 years, as well as installing a unique SaniTube product with a minimum life span of 25 years against the abrasion, which was considerably longer than any other product, and offered the opportunity to remove and reline in the future as needed.

This projects the versatility of SaniTube both as a robust stand-alone lining system and as a complimentary system offering the highest abrasion resistance when used in conjunction with other CIPP lining technologies.



“This complex project demanded an innovative solution and the flexibility of SaniTube made it the optimum choice to provide a total solution that restored structural integrity, provided abrasion resistance and critically minimised costs and customer disruption.”

Tim Farley, Business Development Manager at Sanivar

SaniTube®

SaniTube®, the next generation CIPP pressure linings is a well proven technology that is ideally suited for the trenchless rehabilitation of pipelines across multiple sectors including water, gas, energy and industry.

Most pipe materials can be accommodated including cast-iron, ductile iron, steel, PVC and asbestos-cement pipes in diameters from DN25 to DN400.

Technical Specifications

Temperature	Water, petrol, oil and heating	Up to 70°C / Gas: up to 80°C
Material	Liner	Circular-woven hose made from 100% polyester fibers
	Coating	Extruded, thermoplastic polyurethane and polyethylene

Technical Characteristics

Tensile strength, longitudinal	1000-1500 N/cm
Tensile strength, radial	800-2000 N/cm
Elongation at break, longitudinal	20-25%
Elongation at break, radial	40-50%
Wall thickness	2.6 - 3.5 mm
Diameter	80 - 400 mm
Max. installation length	up to 1500 m

Exact characteristics dependant on pipe material and diameters.

Key Benefits:

- A lining solution for pressurised pipelines (uti 16 bar).
- Can be used to navigate bends of up to 45 degrees.
- 100% chemical-free installation process (no adhesives, resins such as epoxy, etc.).
- Minimises customer disruption through rapid installation.
- A ‘no dig’ solution that mitigates health and safety risks associated with civil works.
- Durable lining solution with a 50-year product guarantee.
- Cost efficiency with install lengths up to 1500 m.
- Regulation 31 for potable water use (pending).

Contact us

01670 700498

www.sanivar.co.uk

Sanivar
Unit 6, Easter Park,
Nelson Park West,
Cramlington, NE23 1WQ

SANIVAR

