PIPELINE REHABILITATION FAQs

Why is the work being conducted?

Asset owners (usually municipal councils and water authorities) are continually assessing their assets to ensure the operational performance of their water, storm water and wastewater systems.

CCTV inspections have revealed a number of assets in your area that are in poor condition, ageing and deteriorating. When this occurs, pipe breaks, overflows, and service interruptions to customers are increasingly likely to occur.

This work will significantly improve the infrastructure for your area, ensuring the assets continue to operate to the required standards.

How are the pipelines rehabilitated?

Pipelines are rehabilitated while they remain in place using a Cured-In-Place-Pipe (CIPP) method. This minimises interruptions to customers, and avoids the need to dig and replace pipes in streets and private property.

- **Step 1**:
  A polyester, resin-saturated, coated felt tube liner is inverted (shown) or pulled into the existing pipeline via access points ('manholes').

- **Step 2:**
  The tube is then pressurized with air, so as to take the shape of the original pipe, and hot water or steam is then used to cure (set) the resin and form a tight-fitting, jointless and corrosion-resistant 'pipe-within-a-pipe'.

- **Step 3:**
  Service lines (to your property) are then restored internally using a robotically controlled cutting device.

Introduced in 1971, the Insituform cured-in-place pipe (CIPP) process is today one of the world's most widely used technologies for rehabilitating pipelines. Insituform manufactures our own CIPP product, and uses proprietary resin formulations to ensure quality control during the entire process. This process is widely used throughout Australia by major water utilities and municipalities.

PIPELINE REHABILITATION FAQs

What is the benefit of using CIPP?

Relining pipes has many benefits including:

- Maintaining the integrity of pipelines
- Deferring the need for infrastructure replacement
- Less disruptive than having to dig and replace the pipes
- More cost effective than replacing infrastructure
- CIPP pipes provide a smooth, joint-less interior and a more efficient flow

What other things does the work involve?

The work may also include:

- Inspecting and repairing maintenance holes
- Inspecting pipelines before and after the work with closed circuit television (CCTV)
- Cleaning of pipelines
- Rehabilitating the pipeline junctions

When will the work occur?

Standard construction hours are between 7am to 6pm Monday to Friday, and 8am to 1pm on Saturday's however this may vary from project to project.

Depending on site specific conditions, night works may need to occur. Affected stakeholders will be notified in advance if night works are scheduled.

The relining process is usually completed within one day however additional work crews may attend the site on multiple days for preparation and close out works.

PIPELINE REHABILITATION FAQs

What type of equipment is being used?

Equipment used will include:

- Multiple large specialised trucks, and other vehicles
- Cranes (not always required)
- Generators
- Compressors
- Various small tools and equipment

Some of the things you might expect to see while our crews are working in your area

PIPELINE REHABILITATION FAQs

What is your notification process?

Notification processes may vary depending on the asset owner's requirements, however standard notification processes include:

- Notification of upcoming works in your area (letterbox/door drop)
    - Usually 2 notifications
- Additional notification to affected properties and requests for access to private property, if required
- Consultation with property owners/occupiers for access to private property, if required
- Notification of scheduled date of works

How will the works impact me?

Care will be taken to minimise any inconvenience to residents, however it's possible you may notice:

- Noise from generators, compressors and equipment
- Work vehicles in your street
- Traffic, or pedestrian changes (on-site controllers and barricades may be used to safely divert traffic and pedestrian from the work area)
- Steam rising from the wastewater system (do not be alarmed as it is not smoke)
- Odour from the wastewater pipeline
- Odour from the relining process, which may smell similar to resin or melting plastic (more information about this odour is available in this pack)

Traffic and Parking

Some traffic and pedestrian changes may be required; however, access will be maintained for commuters and property owners wherever possible.

To minimise disruptions, controls will be in place to safely divert traffic and pedestrians around the work area. These include the use of on-site traffic controllers and barricades to maintain footpath access.

Parking may be restricted near the work site.

PIPELINE REHABILITATION FAQs

Is that smoke?

The CIPP product is set in place with heat, using steam. A 'Steam Stack' is used to direct the steam to minimize the impact on residents and other stakeholders.

This steam may also escape from sewer vents and manholes. Do not be concerned if you notice what appears to be smoke rising from sewer vents in the area as it is only steam.

Will our water supply or wastewater service be affected?

Most customers can continue to use their water and wastewater (sewer) services as usual.

If you do need to limit your use of the water and wastewater service, we will let you know beforehand.

What should I do if odour is inside my home or business?

Odours may be from the wastewater (sewer) pipeline, or from the relining process.

If you notice an odour inside your home or business, try and find out if it is coming from outside through your doors and windows - if so, close them.

If you smell the odour inside your home or business, but not outside, the odour may be entering through your plumbing pipes. In this case, open your doors and windows to the let the odour escape.

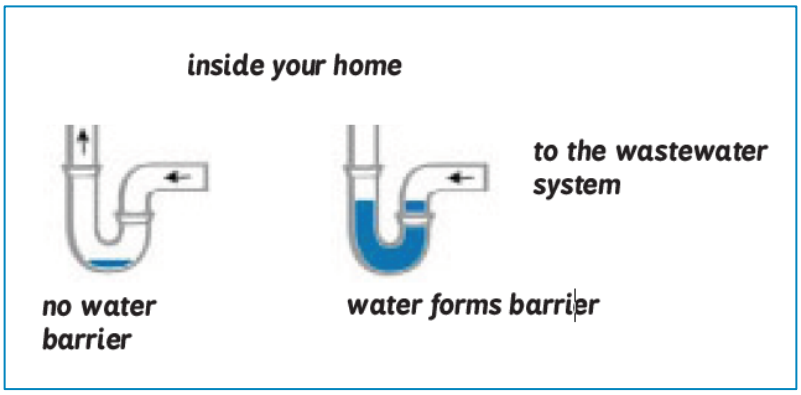
Please note that this is unlikely to happen and should only occur if there is a problem with the plumbing in your home or business.

PIPELINE REHABILITATION FAQs

How can I help prevent odours entering my home or business through my plumbing pipes?

There are some simple steps you can take to prevent odours entering your home or business;

- Your property should have 'traps' on the drains
- The traps hold water, creating a barrier which prevent odours from the pipeline system entering your home
- To prevent odours entering your home or business ensure your traps and drains are filled with water

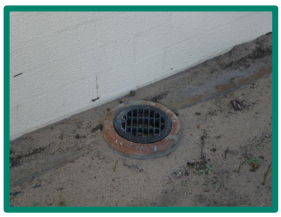


Filling your traps and drains

Run all taps both inside and outside your home or business for at least 10 seconds

Pour at least five (5) litres of water down each floor drain. These may be in your laundry and bathroom

PIPELINE REHABILITATION FAQs



Pour at least five (5) litres of water down any overflow relief gullies. These are drain-like fittings outside

What is the odour?

You may have noticed an odour like that of new plastic during the recent pipe repair process. This odour may be caused by a chemical named ***Styrene***, one of the components of the resin used curing the CIPP process.

You can find more information on styrene in the Styrene FAQ document in this pack.

Where can I get more information about your work?

If you have any questions about this work, please contact Insituform Pacific on;

Phone:

(02) 9638 7000

For more information on the product and process visit website:

killardinfrastructure.com.au/cipp-technologies/

STYRENE FAQs

What is the odour?

You may have noticed an odour like that of new plastic during the recent pipe repair process. This odour may be caused by a chemical named ***Styrene***.

What is Styrene?

Styrene is one of the most common chemicals found in all types of plastics. It's also a component of most resin systems used for Cured-In-Place Pipelines (CIPP).

It is used to make many types household products including bike helmets, car seats, magazine covers and playing cards.

Styrene is also naturally occurring in many foods and beverages such as strawberries, coffee beans and cinnamon.

How is Styrene used in the sewer repair process?

Insituform's product is a resin-saturated felt tube that later hardens into a strong "pipe-within-a-pipe". Styrene is used in the resin that makes up the outside of the new pipe.

Will I smell Styrene odours when Insituform is rehabilitating nearby sewers?

Styrene can be detected by its smell even when there are very small amounts of chemical present (less than 1 part per million).

A typical CIPP installation involves steam escaping from a manhole in the form of a plume or cloud. This brief period of the resin cure process is when heightened levels of Styrene can be traced and you are likely to notice the smell.

Styrene levels drop drastically and dissipate quickly just a few metres away from the CIPP installation point.

How long will the Styrene smell last for?

Styrene odour will naturally dissipate within 24 hours upon completion of the works.

STYRENE FAQs

Do Styrene odours pose a risk to my health or the environment?

The primary exposure to Styrene by humans is by inhalation- i.e. breathing air containing it. Once in the body, Styrene is broken down into other chemicals. Most of these other chemicals leave your body in the urine within a few days. At concentrations of less than 200 ppm there is a fast elimination phase, the concentration of Styrene in the body is halved in 0.5-0.7 hours after entering the body.

The observed effects on humans associated with acute exposure to Styrene include; irritation of eyes, throat and respiratory tract.

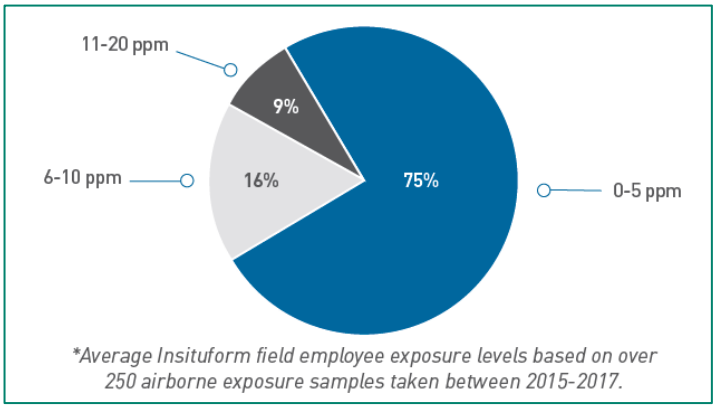
There is no evidence available to suggest that single acute exposure to Styrene will have any long-term effects on humans.

The release of Styrene during typical sewer rehabilitation process generally poses NO health or environmental threats.

Are there standards for Styrene emissions?

Every state, and territory has different requirements for Styrene emissions. These are regulated by bodies such as the Environmental Protection Agency (EPA) and Safe Work.

However, the most common benchmark is 50 parts per million (ppm) for employees working around Styrene. When tested Insituform field employees' Styrene exposure levels over the past three years have consistently been below these standards. In fact, 75 percent of the time, the level of Styrene exposure to our field employees is 0-5 ppm.



Average Insituform field employee exposure levels based on over 250 airborne exposure samples taken between 2015-2017.

We begin to smell Styrene when it reaches levels of 0.1-0.45ppm.

STYRENE FAQs

Where can I get more information on Styrene?

There are many sources to obtain information on Styrene however we have found the most useful to be the following website:
www.youknowstyrene.org