Project overview

What is the Brighton Main Sewer Rehabilitation Project?

The Brighton Main Sewer Rehabilitation Project will involve relining 4.6 kilometres of the existing sewer to ensure it continues to provide the Brighton and Hampton communities with a reliable sewerage service for the next 50 years.

These works will take place along St Kilda Street, the Esplanade and Beach road from North Road Brighton to Orlando Street Hampton.

What will the works involve?

The project is currently at the pre-construction stage. The construction methodology has been confirmed as Spiral Wound in Pipe and Cured in Place Pipe. Both are trenchless methods. Works will involve:

- Reline 4.6km of the existing Sewer along St Kilda Street, the Esplanade and Beach road from North Road Brighton to Orlando Street Hampton.
- Manhole repair and rehabilitation.
- Operational improvements to flow monitoring and control.

Why is the project needed?

Recent CCTV inspections indicate that the existing 100 year old sewer has deteriorated to a condition where it requires rehabilitation to ensure reliable sewerage service. Failure to rehabilitate the sewer could result in sections of the sewer collapsing, disrupting local sewerage services.

What are the benefits of the project?

On completion of the works, the project will deliver the following benefits:

- Continue to provide the Brighton and Hampton communities with a reliable sewerage service.
- Improve the operation of the sewer, minimizing the potential for blockages and odour.
- Extend the life of the sewer by 50 years.
Where will the works be carried out?

The majority of the rehabilitation works will take place around the existing manholes within the road reserve.

We will endeavour to finish the work as quickly and efficiently as possible, which may include multiple work crews.

What is the timing of the works?

The works at each manhole should take about 3-4 weeks to complete. There may be times when works may take longer due to weather or the presence of underground services. We will notify affected residents of any significant changes to the timing of the works via letter box drops or door knocks.

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<th>Milestone</th>
<th>Target Date</th>
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<tbody>
<tr>
<td>Functional Design Start</td>
<td>February 2017</td>
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<tr>
<td>Functional Design End</td>
<td>March 2017</td>
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<tr>
<td>Detailed Design Start</td>
<td>October 2017</td>
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<tr>
<td>Detailed Design End</td>
<td>December 2017</td>
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<tr>
<td>Construction Start</td>
<td>March 2018</td>
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<td>Construction End (Practical Completion)</td>
<td>November 2018</td>
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What are the working hours?

Construction hours will be Sunday to Friday. The intent is to undertake demolition and lining set up works between 7am and 10pm subject to approvals. Lining works will be staged to minimise disruption to peak hour traffic. This means that lining works will be undertaken over a continuous period that will incorporate both day and night shifts.

Why will the works be done work at night?

For us to reline the existing sewer and ensure a safe work environment we need to temporarily plug the existing sewage flows. This is best done at night when the flows are at their lowest.
Is there any risk of the sewer overflowing during the works, especially if you are temporarily plugging the sewer pipe at night?

Plugging sewer mains is a standard practice to complete maintenance and rehabilitation works. A flow management plan will be developed to guide the works and a staff member will be onsite at all times to monitor this activity.

What type of condition is the existing sewer in? Does it pose a risk to public health or the environment?

As the asset manager for the Brighton Main Sewer, Melbourne Water is responsible for monitoring the condition of sewer through regular inspections and monitoring.

Recent CCTV inspections of the sewer have shown that it requires rehabilitation to ensure reliable sewerage service.

Due to Melbourne Water's proactive asset management approach, the current condition of the sewer does not pose a risk to public health or the environment.

Road and travel impacts

Will there be traffic and access impacts?

The works will involve accessing the existing manholes within the road reserve.

There will be some changes to traffic, access and parking to ensure the safety of our workers and the community. We will develop traffic management plans to minimise the impact on traffic, access and parking.

We will provide advance notification about traffic, access and parking impacts prior to starting work at each location. Minor detours will be in place for drivers, pedestrians and cyclists. Please be careful around work areas and observe new signs for the safety of other road users and site crews.

Will there be impacts to parking?

As the manholes are within the road reserve some street parking will be temporarily unavailable. We will provide local residents with advance notification of traffic and parking impacts so you can make alternative arrangements.
Will there be impacts to the Bay Trail?

The width of the Bay Trail will be reduced due to the easement required for the pipeline. Users will need to remain vigilant and courteous to other users to minimise impacts. When and where required, pedestrian management will be in operation at key points along the Bay Trail to ensure safety for all users.

Rehabilitation works – construction methodologies

What will sewer relining involve?

Rather than sewer replacement, the life of existing assets can be extended by relining. Relining has a lower direct impact on the community, and lower indirect financial cost to the community.

Relining technologies (see diagrams on the follow page) have been in existence for 50 years. Due to the differences in sewer construction and shape, more than one relining technology is required, including:

- Slip-lining using spiral wound systems - Used for circular pipes. The relining material is delivered on a spool as a flat strip. It is spooled into the manhole, jointed together at the edges, and pushed into the host pipe. ‘Plug and Release’ to manage sewerage flows.
- Cured In Place Pipe (CIIP) – Used for circular and non-circular pipes. Consists of a flexible tube that is pulled into place, inflated, and then cured with heat or light. ‘Bypass Pumping’ to manage sewerage flows.

The existing sewerage flows need to be accommodated during the relining works. The methods include:

- Plug and Release – The sewer is partially plugged to utilise the available storage within the sewer and control the flow. Once the available storage has been exhausted, the plug is removed.
- Bypass pumping – Pumps are installed in an upstream manhole and an overland pipeline is installed to the downstream manhole.
TRENCHLESS TECHNOLOGY METHOD 1 - Spiral wound-in-place sewer liner

- Existing manhole
- Groundwater table
- 15 metres
- Plug on sewer main
- Spiral wound PVC sewer liner
- Existing Sewer Main to be retained and restored
Will there be odour from the rehabilitation works and bypass pumping?

Working on an operational sewer means there could be some odour associated with the works. Despite being unpleasant, the odour will not have any impacts on public health.

Measures will be taken to minimise the release of odours during the works.

**Bypass pumping**

**What is bypass pumping?**

Bypass pumping involves connecting a temporary pipe to an upstream manhole and diverting the flows to another manhole located further downstream. This leaves a section of the sewer with no flows running through it, making it safe to complete rehabilitation works.

It is a common technique used when completing sewer rehabilitation works as it provides safe access to the sewer and allows local sewerage services to keep operating at all times.

**When will you use bypass pumping?**

Bypass pumping will be used when project crews are rehabilitating the sewer using the Cured In Place Pipe methodology. This will be in place from South Road, Hampton to North Road, Brighton. The bypass pipeline will be installed in 2 separate stages to minimise the impact on the community.

**Where will bypass pumping take place?**

The bypass pipeline will run along beside the Bay Trail Shared User Path. The pipe is manufactured from heavy duty HDPE plastic and will be secured in place using clamps and brackets. The pipeline will be monitored 24/7 by security and work crews.

The easement required for the bypass pipe is approx. 600-700mm. This will reduce the available space on the path for users.

**Will the bypass pumping be noisy?**

There will be some noise associated with this activity as generators will be used to power the pumps. We will locate generators away from properties where possible. Generators will be housed inside noise attenuating panels and secured within fencing. It is expected that any noise will have minimal impact on the community.
Is there any risk of sewage leaking out of the bypass pumps?

We do not anticipate any sewage spills from bypass pumping activities. The bypass pumping system will be monitored and controls provided to minimise any potential for spills.

What will manhole rehabilitation works involve?

Manhole rehabilitation works could involve removing the existing ladders and associated items within the manhole, coating the inside of the manholes with a protective coating, and replacing the ladders. Like the sewer relining works, this will ensure that the manhole provide many more years of service.

Impacts to land and property

Do you need to remove any trees?

It is unlikely we will need to remove trees as part of the works. However, we may need to undertake some trimming or alterations where trees are located in close proximity to the existing manholes.

We will be undertaking an arborist assessment to determine if there will be any impacts to trees or vegetation. We will inform local residents of any impact to trees or vegetation prior to starting works at each location.

Will there be noise?

The works will involve the operation of plant and equipment, and generators to power bypass pumping equipment.

We will work closely with the local community to minimise these impacts as much as practicable.

Will there be any impacts to my property?

The works will involve accessing the existing manholes within the road reserve. Where the work is expected to impact on access to private property, we will work with the owner to make alternative access arrangements.

How will you protect the cultural heritage of the area?

We understand that Brighton is one of the oldest settlements in Melbourne and has a number of buildings and structures that are heritage listed. We do not
anticipate that our work will have any impact on heritage listed buildings in the area.

There are some locations where we will be working near heritage listed buildings. Prior to starting works, we will work with the owner of these buildings and Council to make sure that our work protects the historical value of Brighton.

The Esplanade and Beach Road are busy roads, how will you make sure the businesses can stay operational?

We will work closely with Council, Brighton Chamber of Commerce, Brighton Traders Association and businesses along the project alignment to identify ways to minimise the impact on businesses.

Where can I get more information?

For more information about the project, please call 1800 870 729, email Brightonsewer@melbournewater.com.au or visit yoursay.melbournewater.com.au/sewerupgrade