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Construction contract awarded to John Holland

Melbourne Water is pleased to announce the recent award of the \$150+ million construction contract for the Melbourne Main Sewer Replacement (MMSR) to John Holland Pty Ltd. John Holland is one of Australia's largest and most diverse specialist contracting businesses, with current projects in all sectors including road, rail, tunnelling and mining.

John Holland will join designers, GHD and project manager, Connell Wagner as members of the MMSR project team working with Melbourne Water to deliver the project.

Construction is scheduled to commence in August 2008 with site preparation works at Fennell Reserve and also on the banks of the Yarra River, adjacent to the Charles Grimes Bridge.

Construction works for the MMSR will include the replacement of approximately 2.3km of the existing Melbourne Main Sewer from Docklands in the north to connect with the Hobsons Bay Main Sewer in Port Melbourne. The MMSR will be constructed using a Tunnel Boring



Machine (TBM) with much of the activity taking place underground. Works will also include the construction of six vertical shafts and the crossing of the Yarra River using cofferdam construction.

Towards the end of the project, there will be the construction of some 2.5km of new local branch and reticulation sewers to connect the existing sewerage system into the new Melbourne Main Sewer.

Site establishment to commence at Fennell Reserve

The main construction site for the project will be located at Fennell Reserve, on the corner of Evans and Ingles streets, Port Melbourne, adjacent to the light rail line. This shaft site was selected as the main site for the project in order to minimise impacts on residential areas.

Construction is due to commence at Fennell Reserve in August 2008, and initial works will involve utility relocations, vegetation and tree removal, temporary paving of the area to minimise dust, installation of site buildings and erection of a 2.4 metre hoarding (fence) around the perimeter. Picnic tables and benches currently located within this area of the Reserve will be temporarily removed.

At the end of the project, reinstatement works will be undertaken in accordance with Council approved landscape plans.

The Tunnel Boring Machine (TBM) will be launched from Fennell Reserve where it will head south and will be recovered from the Swallow Street shaft site. The TBM will then be reinserted at Fennell Reserve shaft and travel north to the South Wharf shaft site at the Yarra River.

As nearly all major tunnelling activities occur from this site, the bulk of the excavated material will be removed from here and trucked to approved disposal locations.

Evans Street itself, between Boundary Road and Ingles Street, will be incorporated within the boundaries of the construction site and will be closed to through traffic until construction is completed in 2012.

Managing the environment during construction

At some of the project sites it will be necessary to remove trees and other vegetation. A plan for tree removal has been developed in consultation with the City of Port Phillip which also includes landscaping and revegetation plans for the end of works in the affected areas.

Environmental studies and assessments have been undertaken during the design phase to confirm that the route of least disturbance has been selected.

A detailed Environmental Management Plan will be developed for the project, which will set out how construction is to take place and how potential environmental impacts arising from construction will be managed. The plan will include specific measures to address



a range of environmental requirements including air quality management, noise and vibration, dust and waste management and management of groundwater and contaminated soil.

All plans will be written in accordance with EPA Victoria guidelines and other relevant regulatory guidelines.

Once project works are complete, landscaping and reinstatement works

will be undertaken at each of the sites. Landscaping plans have been agreed with Port Phillip City Council for the Fennell Reserve, Swallow Street and Johnston Street shaft sites.

More information will be provided regarding the management of particular environmental impacts, and will be available on our website.



Additional works in local streets

In addition to the construction of the shafts and the main sewer tunnel, it will be necessary to undertake works in some residential streets.

This includes temporary bypass pumping arrangements in several locations to enable works to take place on the existing Melbourne Main Sewer. While some sections of the bypass pipes will be buried there are small sections where these pipes will be above ground. Reticulation works will also be required to connect the existing local sewers from the old sewer to the new replacement sewer. Trenchless techniques will be used

where possible to minimise the impact on the community. These works are scheduled to take place towards the end of the main tunnel construction work.

There will be some disruption to local traffic as the connections are made as partial closures of local roads will be required.

More information will be communicated closer to works occurring.

Crossing the Yarra River

A major component of the MMSR is the crossing of the Yarra River, upstream of the Charles Grimes Bridge. The crossing will take place from the South Wharf adjacent to the Melbourne Convention Centre construction site, to the North Wharf west of Shed 5.



Image: Circa 1923 source unknown

The river crossing will be completed by way of a three staged cofferdam construction, commencing from the south bank and progressing north. This will ensure that two-thirds of the river remains navigable to river traffic at all times.

River traffic management, buoys and signage will be set up in accordance with Parks Victoria requirements and will be in place at all times during construction to ensure the smooth flow of river traffic. Advance notice of proposed changes will be communicated to river users to ensure awareness of project works.

Preparation works for the crossing are scheduled to commence in August 2008.

Significant planning and consultation with relevant authorities has been

undertaken to design works to minimise the potential impact on river users and the health of the river.

The cofferdam construction will involve installing steel sheet piling to create a closed area in which to work. Some river silt will be removed to allow for the concrete pipes to be laid under the bottom of the riverbed. These pipes will be secured into place and backfilled to the existing riverbed level. The sheet piling will be removed to allow construction of the next stage.

Strict environmental controls in accordance with the EPA, Melbourne Water and Parks Victoria requirements will be implemented and maintained throughout the duration of the works, to protect the health of the waterways and aquatic life. Excavated river material will be transferred to shore, via a barge,

where it will be trucked to an approved disposal site.

When the original Melbourne Main Sewer was laid across the Yarra River in 1894, the riverbed was significantly lower at this point. It was built using cast iron pipes, which were riveted together on the bank and then filled with water so that the pipe would sink into a trench that had already been excavated in the riverbed. While things didn't go according to plan, eventually the sewer was installed and has been functioning satisfactorily since then.

Detailed fact sheets and information will be available in coming months, providing further information on this exciting phase of construction.

Answering your questions

If you have any questions or concerns relating to the Melbourne Main Sewer Replacement, please contact our toll free community information line on **1800 734 558**.

You can also contact the project team via email to: melbournemain@melbournewater.com.au

For further information about the project including copies of previous community newsletters, please visit the MMSR page on Melbourne Water's website: melbournewater.com.au/melbournemain