

Malabar Wastewater Treatment Plant Improvement Projects

Community update June 2019

Sydney Water is improving the reliability of the Malabar Wastewater Treatment Plant (WWTP).

Project Update

Sydney Water engaged the Alliance “4Malabar” in 2014 to complete major upgrades to the plant. This Alliance is between Sydney Water, John Holland, UGL Engineering and GHD. The work by the Alliance at the Malabar Wastewater Treatment Plant is progressing well.

This year we have:

- continued to improve the safety of electrical assets across the plant
- finished cleaning and nearly finished refurbishing Digester 3
- starting cleaning Digester 4 and planning its refurbishment
- continued removing old equipment and cabling
- finished replacing covers and handrails in the underground primary sedimentation room to improve safety and access to this area
- finished installing ductwork from the biosolids building to the underground odour control facility to improve odour management
- finished demolishing the decommissioned biofilter and annex
- improved lighting and circuitry around the plant

Remaining Work in 2019 by the 4Malabar Alliance

2019 has been a busy year for us so far, with only a few more months of the Alliance projects to go. We are scheduled to finish the Alliance projects by late 2019.

Remaining work includes:

- finish refurbishing Digester 3 and process optimisation
- cleaning and refurbishing the final Digester 4
- ongoing optimisation of processes which continue to improve the quality of biosolids
- electrical studies to optimise plant protection against faults and minimise process impacts.

Other work onsite

Sydney Water aims to continually improve its assets for reliability, safety and environmental compliance. Additional projects onsite outside of the 4Malabar Alliance include:

- waste gas burner pipework renewal for improved reliability
- renewable energy initial options assessment and concept design
- primary sedimentation tank overhauls and scraper upgrades underground.

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Update on Digester 3 work

Cleaning and refurbishment of Digester 3 is almost finished

Cleaning of Digester 3 is complete and the refurbishment being done in parallel and is almost finished. This refurbishment work involved installing mixing systems, pipework, painting, and valve replacement. This work was needed to ensure the digester is reliable, efficient and capable of improving biosolids quality. It will also generate more biogas for renewable energy cogeneration power systems. This work will be finished within the next few weeks.



Figure 1 Refurbished roof of cleaned and almost finished 3rd digester

Improving Odour Management Update

What was the situation?

A biofilter was located next to the Biosolids building. It locally treated odour from the Biosolids building and sludge storage and handling equipment.

What has changed?

A new duct has been installed that takes the odour from above ground to the plant's underground odour control network for treatment at the plant's main odour control facility. The existing biofilter has recently been demolished.

Why is it needed?

The biofilter was a source of odour complaints from our community. This is because of its design and old technology. It is located close to our property boundary and discharges the treated air close to the ground.

When planning for the biofilter refurbishment work, we identified a better way to treat odour from the biosolids building, sludge storage and handling equipment.

Removing the biofilter and installing the new ductwork from the biosolids building to the underground odour control network is a more effective way of managing odour than the current facility. The plant's main odour control facility is located further away from residents and businesses and uses different processes that can better treat odour. The ductwork installation is complete and the biofilter has been demolished. There is a significant reduction in odour in that area because of this work. This will continue to improve as the newly refurbished digesters are brought back online and continue to improve the quality of the biosolids.



Figure 2 Installed ventilation ductwork on biosolids building and area where biofilter previously was

Digester 4 cleaning and refurbishment update

Digester 4 has been taken offline and has started the cleaning process. In the meantime, planning for the external refurbishments has begun and work will start within the next few weeks.

We expect to remove more than 1,000 tonnes of material from the digester, that has collected over 10 years. The upgraded screens installed as part of the project are expected to reduce this build up in future. When the removal of this material is complete, internal conditions can be assessed and refurbishment can start.

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Waste Gas Burner Project update

This project has started and is progressing with the installation and testing of pipework, instrumentation and valve arrangements on the existing Waste Gas Burners. The current arrangement is being updated to be in line with the latest specifications to improve safety and operational requirements. The work has started and should be completed by late 2019. We recently received a noise complaint that we believe was due to older parts of this arrangement that are in the process of being replaced. This issue will be rectified by the proposed upgrades.



Figure 3 Waste Gas Burner Pipework Upgrades

How will this work affect you?

Sydney Water has done an environmental assessment of the designs for the new and ongoing work and have determined minor or no additional impact on the environment, local residents and businesses during construction and operation.

Our construction work hours are from 7 am to 6 pm Monday to Friday and 8 am to 1 pm on Saturdays. All work is inside the plant boundary.

We assessed potential impacts including noise, odour, ecology and visual amenity, and found that:

- there will be no increase in odour because of the new work but there may be minor visual impacts from the renewable energy work being explored. Waste gas burner and digester work will have minimal odour or noise impact and will be contained to the site.
- primary sedimentation tank overhauls and scraper upgrades will have minimal impacts and are fully contained underground.
- Throughout the project, we will check our work to ensure that the visual, ecology, noise and odour impacts are consistent with the environmental assessments. If there are any additional impacts, or impacts are greater than originally identified new mitigation measures will be implemented.
- Residents and businesses close to the plant may notice some increased noise and traffic during works. We'll make every effort to minimise disruption and will have environmental controls in place.
- We'll plan our work to avoid or minimise any potential impacts on the community and to ensure we continue to meet our license requirements. If you notice any odour or noise during this time, please call Sydney Water on 13 20 90.

How are we managing impacts?

We'll continue to minimise work impacts on you by:

- keeping to construction working hours
- notifying the local community before doing work that could be noisy and out of those hours
- reducing potential odour impacts by implementing odour management plans and improving odour control systems
- notifying the local community about the nature and timing of work that could increase traffic, odour or noise impacts
- minimising disruption caused by deliveries to the plant during school peak periods by restricting heavy vehicle movements from 8 am to 9.30 am and 2.30 pm to 4 pm.

Contact us

To know more about the Malabar Wastewater Treatment Plant Improvement Project:

- for enquiries call 13 20 92 (Monday to Friday from 8.30 am to 5.30 pm)
- email malabarwwtp@sydneywater.com.au
- for 24 hour emergency service call 13 20 90 (24 hours 7 days)