

# North West Treatment Hub

## Keeping our waterways clean



## November 2025 update – Riverstone

As Sydney's North West continues to expand, Sydney Water is investing in critical infrastructure to support new housing developments.

The Riverstone Water Resource Recovery Facility (WRRF) is undergoing a major upgrade to ensure it can meet the needs of new homes and families, protect the environment and provide reliable wastewater services for decades to come.

This project is part of Sydney Water's North West Treatment Hub program, which also includes upgrades at the Rouse Hill and Castle Hill WRRFs. Together, these initiatives are delivering the vital infrastructure needed to support our region's future.

### What's happening at the Riverstone WRRF?

The North West Hub Alliance - made up of John Holland, KBR, Stantec and Sydney Water - is delivering a range of upgrades to modernise the Riverstone WRRF. These include:

- **A new grit management system** to remove sand and debris from wastewater, protecting equipment and improving treatment process efficiency (see next page).
- **New biosolids treatment infrastructure** including innovative carbonisation technology, to reduce waste and create reusable by-products like biochar, which can benefit agriculture and promote environmental health.
- **Upgraded inlet works** to handle larger volumes of wastewater as new homes and developments connect to the system.
- **A Waste Activated Sludge (WAS) thickening building** to reduce the amount of sludge – the semi-solid residue produced during the treatment process - improving efficiency and lowering costs.
- **New electrical switchrooms** to power the upgraded systems.



### What's happened so far?

We have made great progress on key upgrades to the Riverstone WRRF. Work is well underway on the inlet works, the WAS thickening building and the electrical switchrooms, which will act as the hub for managing and distributing power across the facility.

In addition we have made significant headway on the grit vortex, which will improve the reliability and efficiency of wastewater treatment.



Switchroom site establishment and earthworks



Walls take shape with scaffolding removed and smooth finishes

### What is a grit vortex?

A grit vortex is a smart piece of engineering used in wastewater treatment to remove heavy materials like sand, gravel, and small stones before the water moves on to further treatment. At the Riverstone WRRF, the new grit vortex is designed to meet increased demand, with the existing one serving as a backup. At 4.85-metres high, the structure required extensive scaffolding for safe access, while ensuring it remains water tight with good hydrophilic seals to prevent leakage and protect the environment.

#### How it works

As wastewater enters the grit vortex chamber, it spins in a circular motion, similar to water swirling down a drain. This motion causes heavier particles to settle at the bottom, while lighter materials and water continue through the system. The collected grit is then safely removed and disposed of.

#### Why this matters

If not removed from the process early, grit can cause major issues such as clogging pipes, wearing down equipment, and reducing system efficiency. By using a grit vortex, treatment plants like Riverstone can improve their reliability, reduce maintenance, and ensure wastewater is treated effectively for the benefit of the community and the environment.



Grit vortex – breaking ground, site establishment and earthworks

### Project benefits

- **Supporting new housing:** The upgraded wastewater system will manage increased demand as new homes and developments connect to the network, ensuring reliable services for our growing community.
- **Safeguarding the environment:** Cleaner, more efficient treatment processes will help protect local ecosystems and maintain the health of nearby waterways.
- **Promoting sustainability:** Advanced biosolids treatment will transform waste into valuable by-products, reducing landfill and contributing to a greener future.
- **Ensuring reliability:** Modern systems will make the facility more resilient, reducing the risk of breakdowns or overflows and providing peace of mind for the community.

### North West Hub Alliance wins sustainability award

The North West Hub Alliance has been honoured with the 2025 Sustainability Project of the Year at the Faculty's Awards of Excellence – a fantastic achievement recognising their commitment to making a real difference in the way this project is delivered.

This Australian award highlights how the Alliance has gone above and beyond, weaving sustainability into every step of their work: from choosing suppliers, to designing plans, and throughout the construction process. Some of the standout features that caught the judges' eyes include:

- Insisting on sustainability as a key factor in picking all suppliers, ensuring every partner shares their values.
- Using clever, environmentally friendly materials, such as Sense600 steel (which is made entirely from scrap metal and boasts a unique, smart design), as well as low-carbon concrete and biofuels.
- Embracing digital tools to track and report sustainability progress, giving everyone a clear view of how the supply chain is performing.
- Aligning their work with ten of the United Nations Sustainable Development Goals, showing a genuine commitment to global progress.

This award is a testament to the Alliance's innovative thinking and their drive to leave a lasting, positive impact on both the industry and the wider community.



Alliance representatives and the award

### Upgrading the electricity network to power Riverstone's future

In the coming weeks, we will begin important upgrades to the electricity network along Bandon Road and Riverstone Parade. This work involves installing new 11kV high-voltage electrical cables to power the Riverstone WRRF and support the future carbonisation unit, which will help make the facility more sustainable.

The upgrades will take place in stages over the next six months at various locations, including Bandon Road, Bourke Street, and Riverstone Parade. As part of this work, we will also be installing a new feeder connection to strengthen the local power supply. To complete this work safely, there will be some temporary traffic changes:

- **Northbound traffic** on Riverstone Parade (towards Vineyard Station) will remain open, with traffic switches in place.
- **Southbound traffic** on Riverstone Parade (towards Riverstone Station) will be detoured.

We will also need to carry out trenching, which may cause some increased noise during the day. In some cases, out-of-hours work may be required to meet road network requirements.

#### Why this matters

These upgrades are essential to powering the modernised Riverstone WRRF, which will support new housing developments, protect nearby ecosystems, and ensure reliable wastewater services for the community.

By strengthening the local power supply, we are ensuring the facility can operate efficiently and reliably for years to come. The future carbonisation unit will also help reduce waste and create reusable by-products like biochar, which can benefit local agriculture and contribute to a more sustainable future.

We understand that construction can be disruptive, and we are committed to keeping the community informed every step of the way. Regular updates will be shared before work starts and as it progresses, so you will know what to expect.

Thank you for your patience and understanding as we deliver this important work to support the future of Riverstone and its growing community.



North West  
Treatment Hub







## Meet our people



### Meet Jason McKenzie – One of the people behind the Riverstone WRRF upgrade

Every major project relies on a team of passionate and skilled people working behind the scenes, and Jason McKenzie is one of them. With a double degree in Civil Engineering and Computer Science from UNSW, Jason joined John Holland's graduate program to turn his love of problem-solving into real-world impact. Now in his second year, he's playing a key role in the Riverstone WRRF upgrade—a project that will support new housing developments, protect local ecosystems, and ensure reliable wastewater services for the community.

For Jason, being part of the Riverstone WRRF project is incredibly rewarding. "It's amazing to see something go from an idea on paper to real infrastructure that benefits entire communities," he says.

Jason is just one of the many talented people working hard to deliver the Riverstone WRRF upgrade. Together, the team is building essential infrastructure that will support the growing community, protect the environment, and make a lasting difference for future generations.

## In other news

### New wastewater pressure main

Sydney Water is installing a new wastewater pressure main under Bandon Road and Chapman Road, between O'Connell Street and Old Hawkesbury Road in Vineyard, to help service the growing community. Construction will be completed in the coming months, and then we'll connect the new pipe to the system. This work will be done at night when the system is at low flow. Traffic changes will be in place. We will write to the local community before we commence any night work. To find out more, please contact the Confluence Water community engagement team on 1800 943 119 or [confluence@sydneywater.com.au](mailto:confluence@sydneywater.com.au).

### Christmas shutdown

Work at the Riverstone site will shut down for two weeks over Christmas and New Year. The last working day will be Friday 19 December 2026 and work will resume on Monday 5 January 2026. For any emergencies during this time please call 13 20 90.

## Interpreter service



If you need an interpreter, please call **13 14 50**

Arabic | Chinese (Traditional) | Chinese (Simplified) | Greek | Korean | Vietnamese

مترجم إلى بحاجة كنت إذا أعلاه بالرقم اتصل

如果您需要口譯員，請撥打上面列出的電話號碼

如果您需要口译员，请拨打上面列出的电话号码

Εάν χρειάζεστε διερμηνέα, καλέστε τον αριθμό που αναφέρεται παραπάνω

통역이 필요한 경우 위에 나열된 번호로 전화하십시오.

Nếu bạn cần thông dịch viên, hãy gọi số điện thoại được liệt kê ở trên

## Want to know more



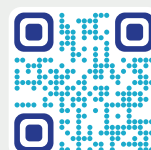
[NorthWestTreatmentHub@sydneywater.com.au](mailto:NorthWestTreatmentHub@sydneywater.com.au)



**1800 060 584**



[sydneywatertalk.com.au/north-west-treatment-hub](http://sydneywatertalk.com.au/north-west-treatment-hub)



**North West  
Treatment Hub**

**Sydney  
WATER**