

VACUUM DRAINAGE INSTALLATION A FIRST FOR WA

Perth-based Johnson & Co Plumbing & Gas, along with Vacuum Toilets Australia, has installed and commissioned the first commercial vacuum drainage system of its type in WA as part of the refurbishment of the former Rydges Hotel, which will re-open as the InterContinental Hotel, on Hay Street in the Perth CBD.



THE project design brief required basement waste water drainage for hotel kitchens and staff amenities. Due to limitations of the structure preventing the removal of the basement slab, typical gravity drainage and pump pits could not be installed.

The only viable solution was vacuum drainage, as the pipework needed to be installed and suspended in the ceiling voids and wall cavities. Because a vacuum system uses air to transport the waste water, it can lift sewage and waste water up and into the ceiling voids without any problems.

Designers turned to the Jets vacuum system, distributed by Vacuum Toilets Australia, knowing it had a long and successful track record in the marine industry and hundreds of land-based installations in other parts of the world.

It is also the first vacuum sanitary system in Australia to achieve WaterMark Certification and a 6-star WELS rating.

An added benefit of the Jets vacuum drainage system was the small diameter of the pipes required (50mm), which took up less space in the wall cavities.

A Blucher push-fit stainless steel pipe system was used, providing Johnson & Co Plumbing & Gas installers with complete flexibility and an easy way to negotiate existing services retained on site. Such service pipes and ductwork

could easily be avoided by going under or over them.

Custom fabricated grey water interface buffer tanks servicing the sinks and floor drains were located in the wall cavities, while the raised floor system (170mm in height) concealed all floor drains connecting to the grey water tanks and allowing the gravity drains to interface with the vacuum drainage network.

All waste water in the kitchen is collected and discharged via the one vacuum pump connected prior to the on-site grease arrestor. High transport speeds assist to minimise blockages in the vacuum pipe network.

Vacuum Toilets Australia said the company was proud to have partnered with Johnson & Co Plumbing & Gas and head contractor Built on the challenging installation. The team at Johnson & Co said the new technology allowed them to complete the installation with great success despite the issues posed due to the retrofit requirements on site.

The project teams believe the installation will be a showcase for change in waste water disposal for commercial building in Western Australian. Not only does the Jets vacuum drainage system deal with the sorts of hydraulic challenges faced in many such projects, but it has a low environmental impact.

The luxury hotel is due to open in October.