

Legion House - Sydney, Australia



The glass lift and stair contrast the old brick wall nicely, while providing a modern entry

Jets™ vacuum toilets:

- 12x 50M model

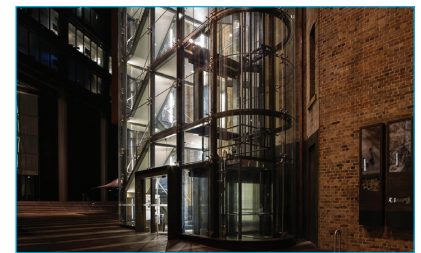
Vacuamarator™ units/pumps:

- 2x 15MB pumps

Other details:

- Originally built in 1902
- Heritage listed building
- Recently refurbished by Grocon and GPT Group
- Off-grid, zero carbon building

Legion House is part of a larger real estate project, where Grocon and GPT Group joined forces in developing sustainable offices in the heart of Sydney. Taking the Legion House into the 21st century came with its own, unique challenges. But Grocon had used Jets™ toilets before, and so a vacuum sanitary system quickly became part of the design.



"Legion House will set a new benchmark for the creation of sustainable city precincts"

GPT Group CEO and Managing Director
Michael Cameron

Challenges

- Water balanced designed required minimal water use throughout the building.
- Two new office floors were to be added to the top of the building.
- The refurbishment had to be carried out with minimal impact to the building due to its heritage listing and protection status.
- Not enough sun and wind available for power generation in downtown area.

Jets™ solution

- Using just 1 litre of water per flush, Jets™ vacuum systems reduce the volumes of water and sewage associated with toilet flushing by up to 90%.
- The flexible installation possibilities of the Jets™ vacuum system allowed toilets to be installed in the two new office floors with ease.
- Small-diameter vacuum piping and the ability to run piping above, around or under obstacles enabled Grocon to install water saving Jets™ vacuum toilets as needed without compromising the building's integrity and status.
- Power is now created on-site through biomass gasification, while rain water is harvested for use in the vacuum toilets and water saving fixtures.



Two compact Jets™ 15MB Vacuamarator™ pumps generate the vacuum needed to operate Jets™ vacuum toilets in Legion House, while also providing redundancy should one pump fail. Run time is automatically distributed between the two pumps for maximum reliability.

Results

Grocon used Jets™ vacuum toilets in its Pixel building which opened in 2010, and as such the company is no stranger to Jets™ technology. In other words, Grocon's decision to use the very same system in Legion House, with the building's particular challenges and requirements, is a very bold statement about their trust in the **flexibility and reliability of vacuum toilet technology**.

Grocon and its financing partner GPT Group are both outspoken believers in sustainability, and have stated that they planned for Legion House to be one of the most sustainable buildings in the world - taking it one step further from the results achieved in the Pixel building.