



RANGEVIEW DEVELOPMENT, PAPUA NEW GUINEA

CASE STUDY



THE CUSTOMER

The Rangeview Commercial & Residential Estate constructed by Lamana Development Limited. Lamana Development Limited is a growing privately owned property developer based in Port Moresby, Papua New Guinea.

Lamana Development's main focus is quality building construction projects with a particular focus on the construction of luxury apartment units, commercial office buildings, industrial suites, and high quality hotels in Papua New Guinea and around the Pacific.

In addition to developing a chain of premier hotels and executive apartments, Lamana Development is also involved in the manufacturing of affordable quality steel framed housing with international accreditation, and employs more than 580 highly skilled expatriates and national employees.

THE WATER CHALLENGE

The water in the area is known to contain an elevated sediment loading that can very quickly cause issues such as blockages in appliances, tapware, etc.

The goal was to provide filtration solutions that could effectively address the sediment issue for both the commercial shopping precinct and for the residential townhouse development.

Usage for the commercial precinct could be up to 15.5L per second (930L per minute) whilst the residential side could be up to 5L per second (300L per minute). The solution was not only required to remove the sediment found in the water, it would also need have minimal flow restriction to ensure the highest of flow rates.



THE SOLUTION

Puretec worked with Lamana Development Limited to create the right filtration solution for both applications, ensuring that the sediment issue was addressed with maximum flow.

The IAB automatic backwash screen filter systems utilise differential pressure to initiate backwashing and the SSBH stainless steel housing with bag filters are fitted with a differential pressure device to communicate with an external alarm system to notify when the bag filters require replacement.

Commercial Solution

1

Coarse Sediment Filtration.

To address the larger particles 2 x IAB80F automatic backwashing screen filtration systems were installed (in parallel). These systems provide initial particle filtration down to 100 micron.

2

Further Sediment Filtration.

The IAB80F systems were followed by 3 x SSBH-2-75-316 stainless steel housings fitted with 5 micron bag filters to further filter down the particles (in parallel).

Residential Solution

1

Coarse Sediment Filtration.

To address the larger particles 2 x IAB65F automatic backwashing screen filtration systems were installed (in parallel). These systems provide initial particle filtration down to 100 micron.

2

Further Sediment Filtration.

The IAB65F systems were followed by 2 x SSBH-2-50-316 stainless steel housings fitted with 5 micron bag filters to further filter down the particles (in parallel).

IAB SYSTEMS

The IAB65F & IAB80F have been specifically designed for the filtration of cold drinking water predominately in civil applications but can also be used for the protection of water distribution lines in technological applications such as heating and cooling systems, industrial installations etc. Impurities such as sand, rust flakes, lime deposits and coarse material can damage the water distribution lines and appliances (pipes, valves, mixers, faucets, washing machines, etc.) the installation of a protection filter is the most simple and efficient alternative to avoid costly maintenance.

Designed for mains and rainwater applications. Puretec IAB is an automatic self-cleaning filter, robust and compact, with a brushing system for the cleaning of the filter screen and a discharge valve for dirt. These filters are fitted with pressure gauges for monitoring any pressure drops across the filter screen.

- Program backwash intervals from hours to days 12/24/36/48 hours.
- Single touch button manual override to backwash on demand at any time.
- Stainless steel net filtering surface is resistant to mechanical shock and pressure gradients.
- Cleaning brushes are equipped with Silver to inhibit bacterial growth.
- Simple initial set up.
- Set and forget cycles.
- The stainless steel body means it's tough and resistant to mechanical shear stresses.
- High strength Trogamid discharge valve.
- 100um filter screen.
- Two dry contacts for external equipment such as monitoring, solenoids etc.
- Includes differential pressure switch.
- Twin pressure gauges to monitor pressure drop.
- Flanged connections.
- Equipped with a mechanical discharge solenoid valve.



SSBH FILTERS

The Puretec SSBH-2-50-316 & SSBH-2-75-316 stainless steel filter housings offer a variety of solutions for large scale, heavy-duty filtration needs. Simple to install and maintain, these housings are ideal for schools, restaurants, farms, institutions and industrial use.

Unlike cartridge filters or strainers, all the contaminants are captured within the bag and do not pass into a process stream when a bag is replaced.

An economical bag filter can be used to improve the life of more expensive downstream filters and is often placed first in a filter train. Considerable savings can be made for a modest investment.

- Low cost, high volume nominal filtration.
- 316 stainless steel non-coded housing as standard polished internally and externally.
- Quick release clamp for simple bag removal from the top of the housing.
- Ideal for the filtration of water, effluent water, recirculation water.
- Pre UV or RO equipment and cooling tower applications.
- Can withstand temperatures up to a maximum of 75°C.



MAINTENANCE

A well-designed filtration system pays back the initial investment by reducing maintenance costs year on year.

Sediment from the street is a common cause of fouling to pipework, plant and equipment, leading to costly maintenance and unhappy tenants. The Puretec whole building filtration system avoids these expenses.

Maintenance of Puretec filter systems is easy by design, with much of it already done for the customer due to the IAB systems automated backwashing with differential pressure activation. The final stage bag filters have a high sediment holding capacity, and the quick-release housings make the filter changes a breeze.

For all water treatment solutions/recommendations call our water specialists on **1300 140 140** (AU) **0800 130 140** (NZ).

