

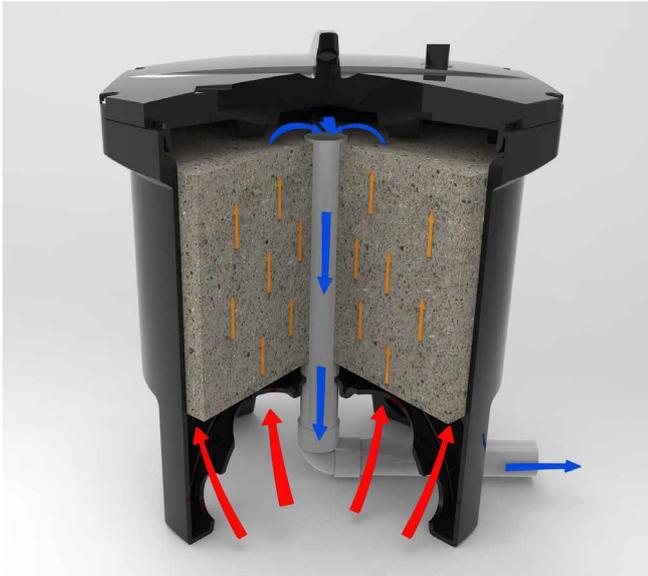
# SPELFilter®

Cartridge filter for tertiary stormwater treatment



**spelstormwater**  
joy in water

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## APPLICATIONS

- Car Parks and Shopping Centres
- Council Depots
- Industrial Estates
- Heavy Vehicle Maintenance
- Airport Aprons & Tarmacs
- Transport Depots & Loading Bays
- Tunnels
- Highways & Transport Corridors
- Recycling Yards

SPELFilter is a cartridge filter system that incorporates an upflow treatment process that maximises surface treatment area. Flow through the filter cartridges utilises a self-regulating siphon which results in a low maintenance and high performance stormwater treatment. The automatic backwash at the end of each storm event further lengthens the lifespan of the filter.

Hydraulic pressure forces water through the filter media — causing a constant velocity throughout the filter area realising a consistent media contact time and therefore treatment.

Upon completion of a treatment cycle, the filter backwashes and effectively dislodges particulates from the filtration layers. This re-establishes filter media porosity. The dislodged particles then accumulate away from the filter media allowing easy removal during maintenance.

## FEATURES

The media cartridge provides a significantly greater surface contact area to footprint ratio than other filters. With a flow rate of 3L/s per cartridge and underground installation, the SPELFilter provides excellent removal efficiency whilst maintaining site surface yield.

- No moving parts, generating a true siphon effect
- 91% TSS, 75% TP and 58% TN removal
- Small footprint
- Inorganic filter media (doesn't leach nutrients)
- Can be deployed in various drainage structures such as manholes & vaults
- Contains no moving parts





## HOW IT WORKS

The SPELFilter has an upflow treatment process, that maximises surface area. The benefit is excellent pollutant removal in a small footprint.

Hydraulic pressure forces water through the filter media, discharges through the centre tube and out through the outlet collection manifold.

Upon completion of a treatment cycle, each cartridge backwashes and effectively dislodges particulates from the filtration layers. This reestablishes filter media porosity. The dislodged particles accumulate on the vault floor for easy removal during maintenance. SPELFilter's patented design has no moving parts and generates a true siphon effect.

A SPEL Stormceptor Class 1 upstream of the SPELFilter in the treatment train greatly increases the life cycle interval of the SPELFilter as the SPEL Stormceptor Class1 removes the larger gross pollutants, coarse sediments, total suspended solids and hydrocarbons, enabling the SPELFilter to target fine particulate matter and nutrients.



## BENEFITS

### PROVEN SAND FILTER PERFORMANCE

The uniform size silica-sand filter media provides for higher removal efficiencies than coarser types of media. SPELFilter media is inorganic – it doesn't leach nitrogen and other nutrients.

Each SPELFilter automatically backflushes under gravity. The backflush clears most sediment particles from out of the the media and back into the vault floor, which allows the hydraulic conductivity from degrading throughout its service life. No moving parts are involved, which increases reliability. The SPELFilter cartridge design life is in excess of 5 years.



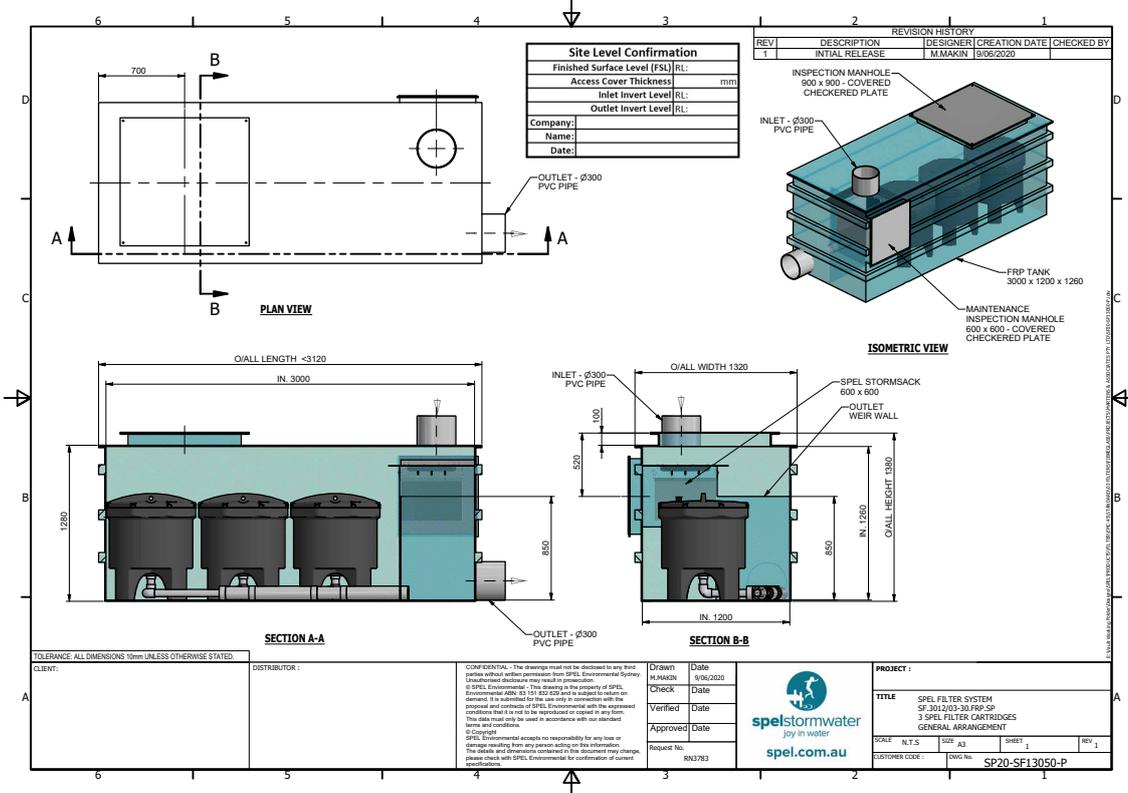
### FLEXIBILITY

Due to the greater surface area and high flow capacity, combined with the modular cartridge design, the SPELFilter systems can be deployed in a variety of structures including manholes, precast vaults, or cast-in-place structures.

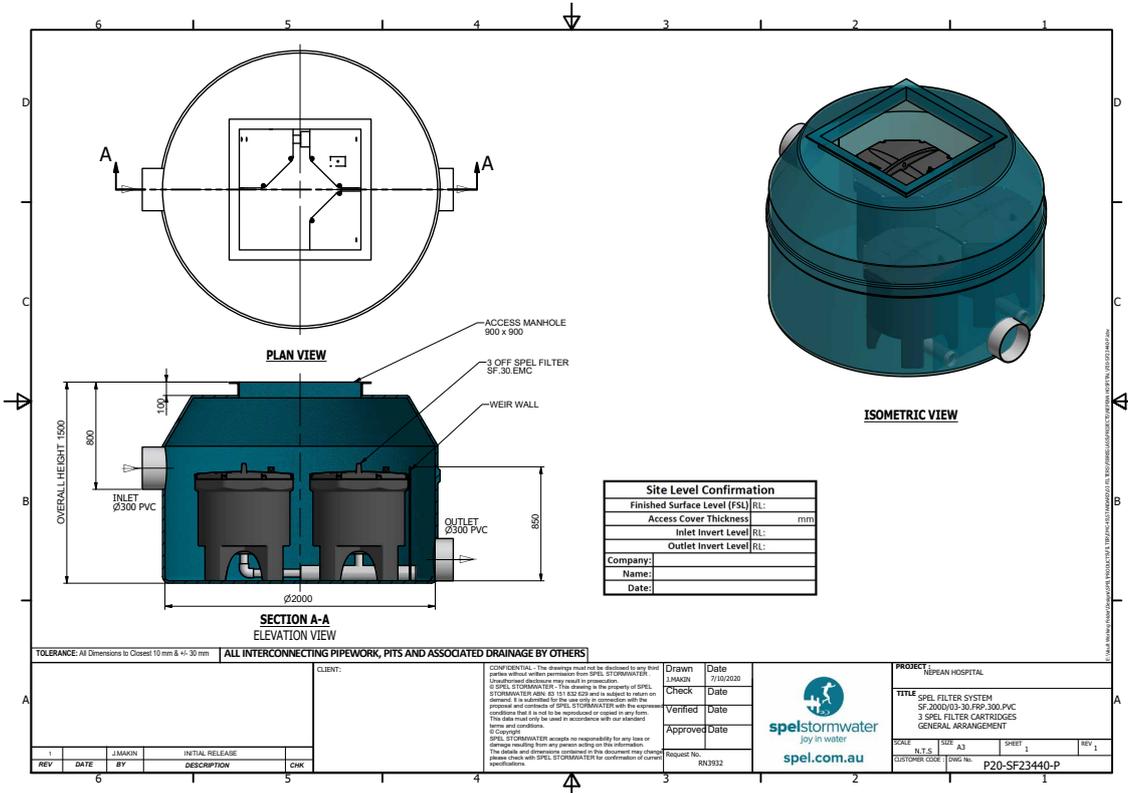
Each system is optimised to suit your specific site and local authority requirements by qualified and experienced professionals.

# DRAWINGS

## Rectangle Fibreglass Installation

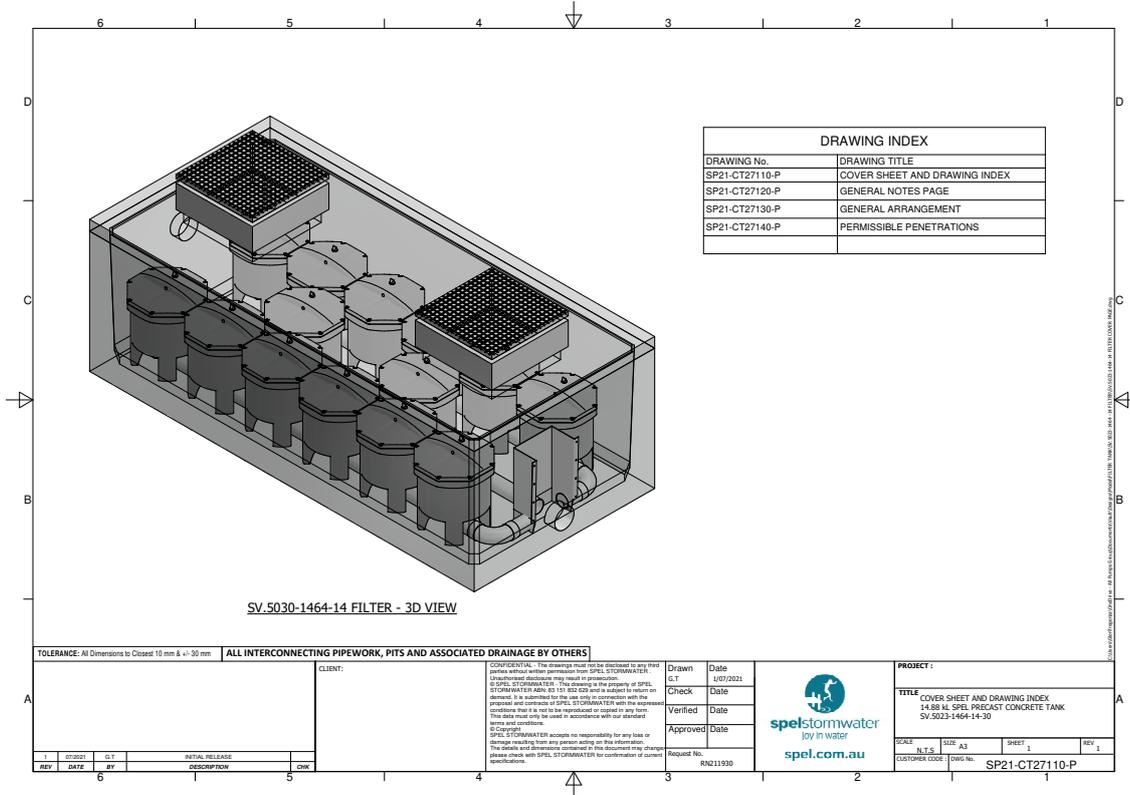


## Round Fibreglass Tank Installation

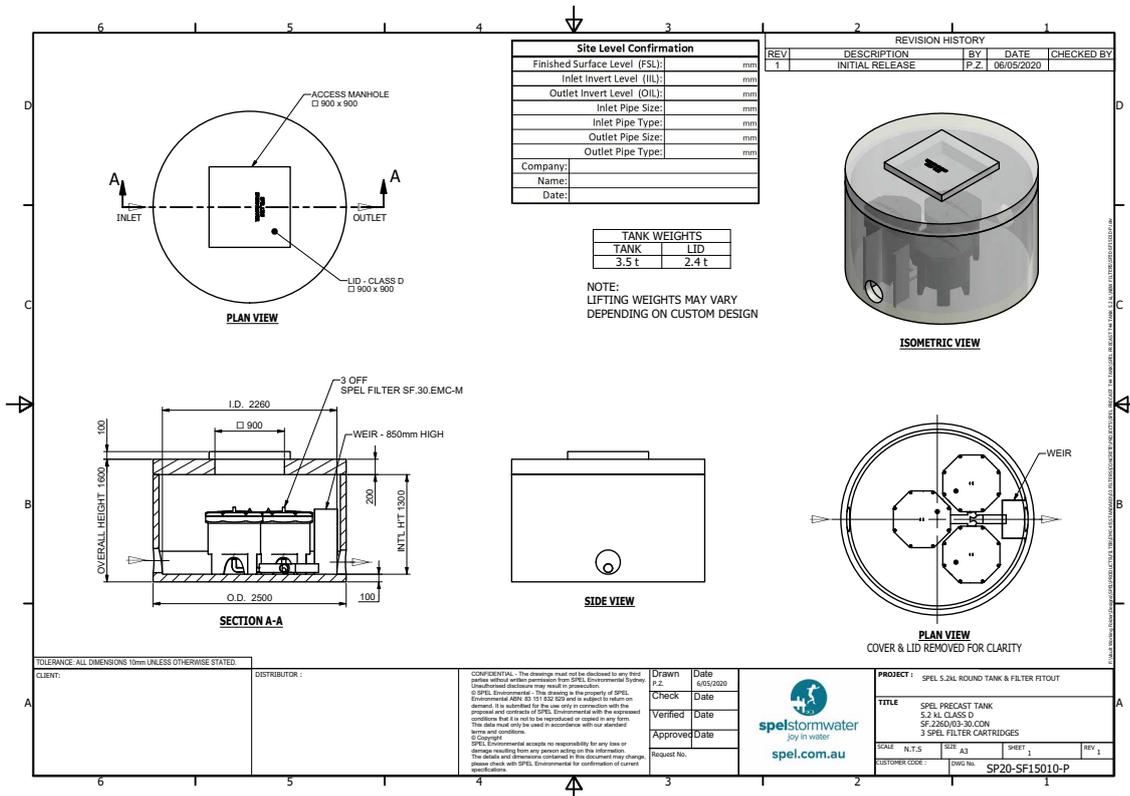


# DRAWINGS

## Rectangle Concrete Installation

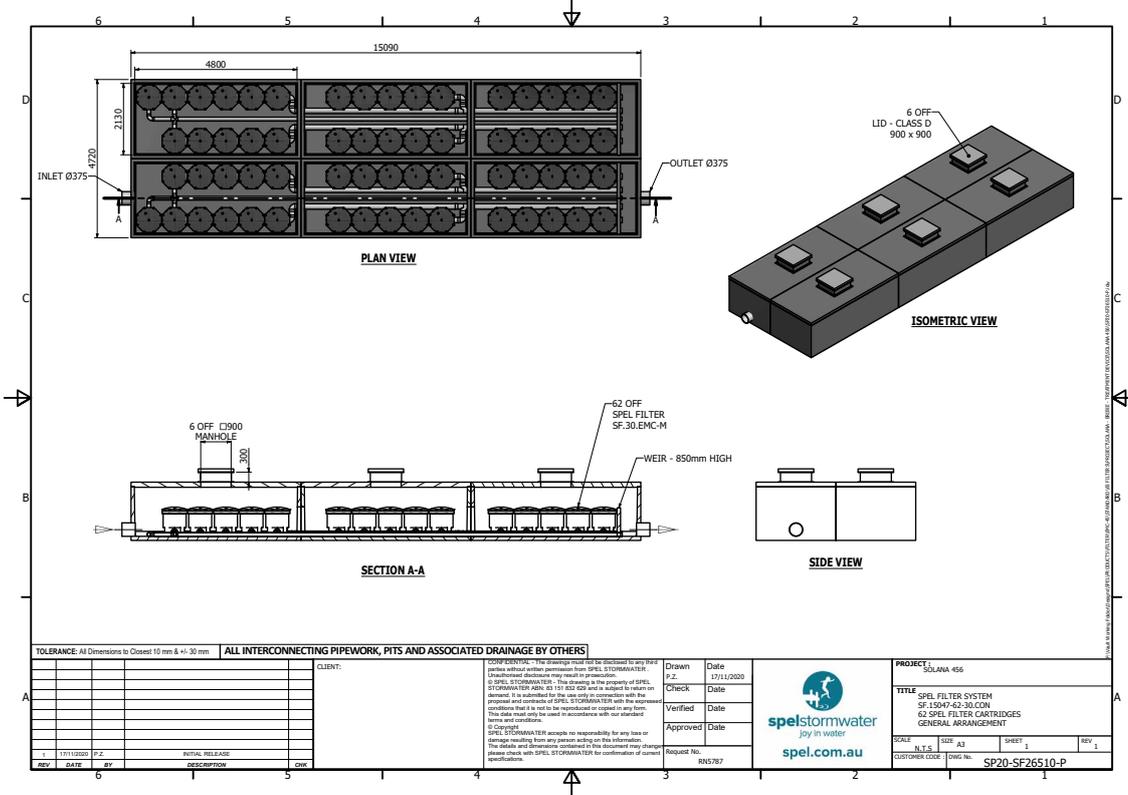


## Round Concrete Tank Installation

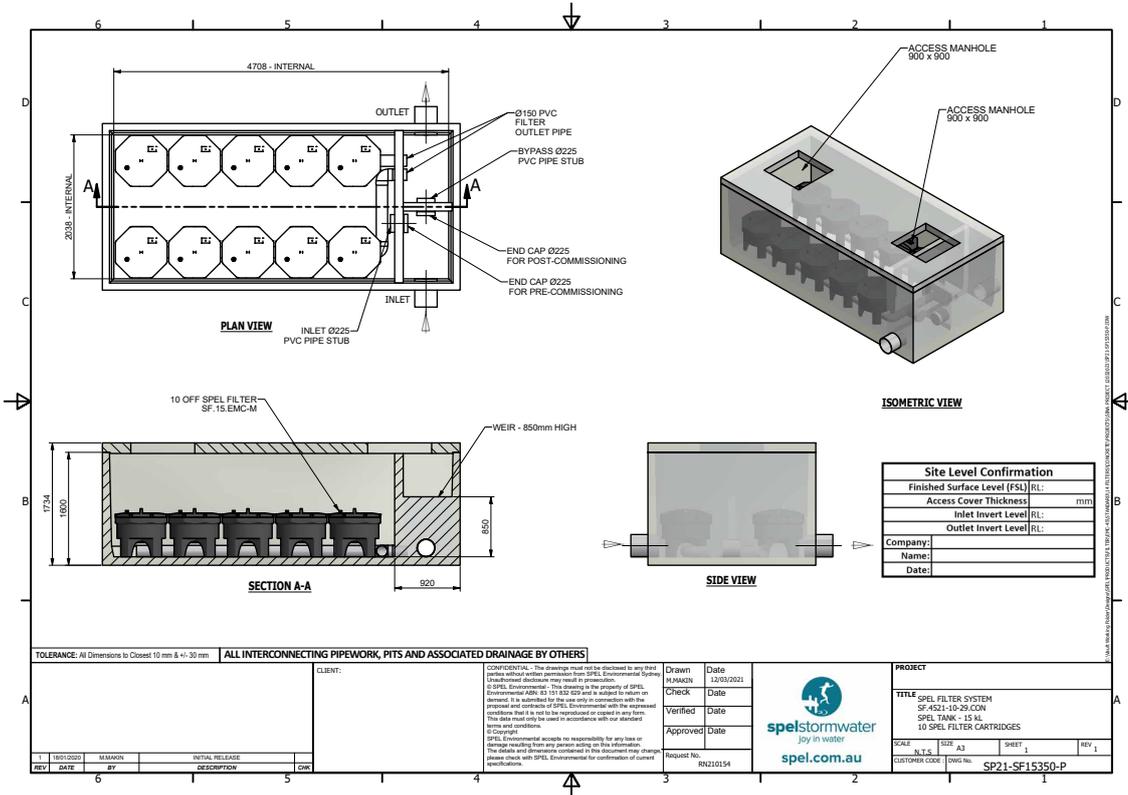


# DRAWINGS

## Modular Filtration Tank Installation



## Internal Bypass Arrangement Tank



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We believe clean water is a right not a privilege and we work to ensure a joy in water experience for you with your children and grandchildren.



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