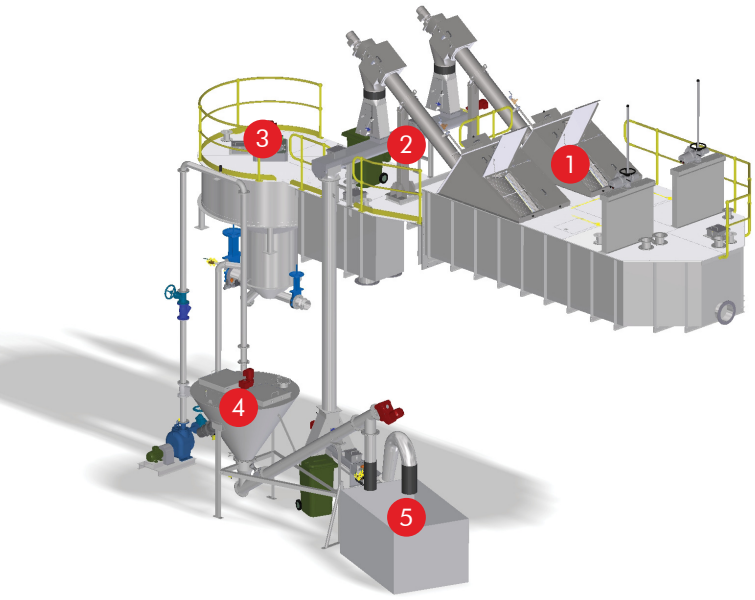
SPIRAC®
Solid Handling Solutions

WATER RECYCLING FACILITY - SARINA, AUSTRALIA

PRE TREATMENT AREA/INLET WORKS

SPIRAC was asked to provide a prefabricated package treatment plant for the SWRF Preliminary Treatment Area (PTA). The plant was designed such that it can be supported on galvanised steel support beams elevated approximately 5m above ground level, to enable flows to gravitate through downstream process units. The grit pump, grit classifier and screenings washer/compactor are installed on a concrete slab at ground level. The PTA assembly is prefabricated and transported to site in such a manner that minimises installation and requires bolted connections only.



SPIRAC PRODUCTS USED

1. Two DRUMGUARDs™
2. SPIRAC Screenings Conveyor
3. SPIRAC Grit Vortex
4. SANDWASH™
5. SPIROWASH® Compact

FEATURES & BENEFITS

- Complete screening, grit capture and washing system
- Custom design and layout to suit client specific requirements
- Space saving solution
- Low capital cost, low power consumption & low wash water usage
- Prefabricated – reduced installation time on site
- Few moving parts therefore low maintenance
- Simple/reliable operation due to low head loss
- Effective across a wide flow
- Simple automatic control for great flexibility

SCOPE OF WORK

Raw sewage enters the inlet flow splitter of the PTA assembly. The sewage enters the inlet flow splitter section of the PTA assembly, and pass over a fixed weir into a chamber feeding the two fine screen channels. The fixed weir is high above floor level to create an inlet chamber to dissipate the energy of incoming sewage.

In the event that neither fine screen is available, raw sewage passes over a second, higher, fixed weir (fine screen emergency bypass) and be diverted to the manual bypass screen channel. The two fine screens work in a duty/standby configuration to remove solids larger than 2.0 mm in two dimensions from the incoming flow. Each fine screen channel contains an electrically actuated penstock upstream of the fine screen. The penstock is in the closed position when its corresponding fine screen is in standby mode. The fine screens is capable of switching to duty/duty mode if sewage levels upstream of the fine screens reach a predetermined level.

Screenings captured by the fine screens discharge to a horizontal screenings conveyor located above the fine screen channels and manual bypass screen channel. The screenings conveyor transports screenings to the screenings washer/compactor via a drop chute. The screenings washer/compactor wash and compact the screenings before depositing them into a combined screenings and grit bin.

System also includes a manual bypass screen. Screened sewage passes from the fine screen channels to the vortex type grit tank. The installed grit pump withdraws grit slurry from the grit tank and pump it to the grit classifier. The grit classifier washes and separates the grit, and transfer it to the combined screenings and grit bin.