

PROTECTING FARLEY'S WWTW ADVANCED MBR USING HUBER INCLINED DRUM SCREENS

CASE STUDY



The Farley WWTW was recently upgraded to reduce nutrient loads discharged to the Fishery Creek, which is a tributary of Wallis Creek and the Hunter River. The upgrade will also increase capacity to meet population growth and to produce a treated water quality that will enable water reuse which will reduce reliance on potable water within the region.

An advanced nutrient removal process including membrane bioreactor (MBR) was selected for the project. Hydroflux Epco supplied the fine screens in order to protect the MBR system installed downstream.

Considerations - MBR Pre-Screen Applications

- Size the MBR screens to match the MBR itself
- Install downstream of the inlet works (post primary screening and grit removal)
- Consider flow conditions and hydraulic impact on the design when standby screens are put into operation together with the duty screen
- Consider a solid design with redundancy on recycled water infrastructure (i.e. washwater supply)

Expertise – HUBER Rotamat® Inclined Drum Screens

- Well proven technology, multiple installations across Australia dating back to 2006

- High screening capture of 94%, protects the membrane downstream
- Robust drum design; perforations are cleaned via spray water
- Integrated screenings conveyors and compaction
- Suited to capacities up to 300 L/s. Larger applications suited to the HUBER Liquid Drum
- All stainless steel construction



Farley STP – Installation Details

Hydroflux Epco has integrated HUBER Inclined Drum Screens to numerous MBR applications around Australia.

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Several of Australia's largest MBR based plants have HUBER Equipment installed with references dating back to 2006.

| Item | Value |
|---------------------------|---|
| Model | HUBER RPPS/2200/2 Inclined Drum Screens |
| Number of Units | Two (2) |
| Drum Diameter | 2200mm |
| Aperture | 2mm perforations |
| Capacity | 450 L/s per unit |
| Materials of Construction | 316SS |
| Final Screenings Content | Integrated screenings washing and compaction to achieve a screenings content of 40%DS |
| Solids Outloading | Includes a horizontal screw conveyor with bypass capability |