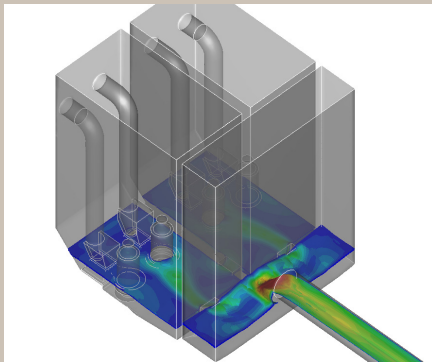
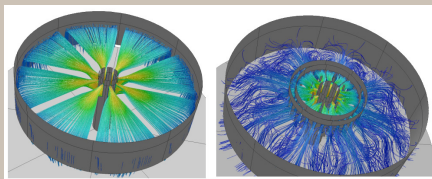


“Where will our knowledge take you?”

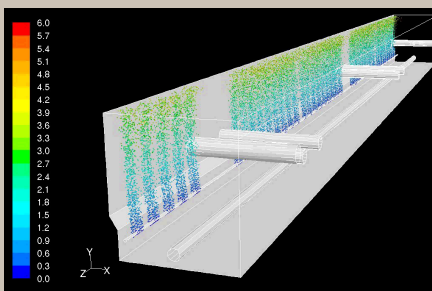
# Computational Fluid Dynamics (CFD) In Water Environment



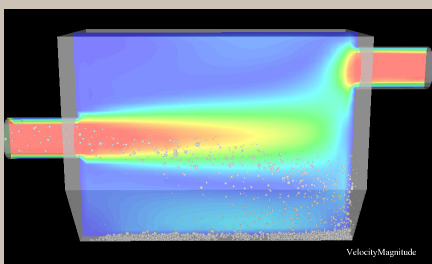
Underground waste water pumps station flow analysis.



Energy Dissipaters Design Validation Flow path lines coloured by velocity magnitude Original Design(Left) and EDI implemented design(Right)



Aeration in a basin. Air bubbles coloured by velocity magnitude



Gravity separation process for the suspended solid particles in a separator tank. Water velocity contours with particle distribution.

## Waste Water Treatment

Within the waste water industry BMT WBM has extensive experience working for project engineers, design engineers and system engineers who require specialist CFD analysis to assist them to validate designs improve the performance efficiencies and solve critical and complex flow problems.

Typical CFD applications are aimed at minimizing the risk of under-performance or over-design during the early concept and detail design stage. Such examples include assessments of underground sewer junctions, transfers, sewage pump stations, and waste water process and treatment designs.

Our specialist CFD services has been used for detailed mixing and settling performance evaluations and for determining flow optimization for existing and new waste water treatment systems. BMT WBM's CFD capabilities has successfully been applied to a wide range of waste water treatment applications to predict the performance of clarifiers, aeration tanks, digesters, sedimentation tanks, and mixing tanks.

By utilising BMT WBM's visual CFD results, engineers and designers have a greater opportunity to make quick and confident decisions early based on the scientific data. This saves potential re-construction costs, improved performances and minimized risks during operations.

The CFD experience included the following key service area:

- 3rd part review on waste water treatment component design
- Underground waste water channel, junction, vortex drop flow analysis
- Energy Dissipater Inlet Design for Clarifiers
- Waste water pump station flow design assessment
- Settlement tanks and basin design assessment
- Waste water pump station design assessment

To communicate with a CFD specialist at BMT WBM please contact:

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