



Horizon Jersey, Discharge Application – Groundwater Treatment System Method Statement

Groundwater will be required to be removed at times during the deep basement excavation. Groundwater monitoring and modelling has been undertaken to inform the construction methodology. A pumping system including pre-treatment will be installed capable of treating between 10m³ and 20m³ of effluent an hour.

Encountered groundwater (effluent) will be pumped via submersible pump, the submersible pump will be raised off the base of the excavation to avoid excessive removal of solids. The submersible pump will have a mesh guard filter to prevent solids from being removed. The effluent will be pumped to a holding tank, this tank will have weir compartments that will allow sediment fines to settle at the base of the tank.



An example of a settlement tank is illustrated above.

Sediment fines will be removed from the holding tank overtime via a dedicated drain valve. These fines will be tested and disposed of at La Collette.

The effluent will then be pumped through a sand filter containing a filter media, which will remove any additional suspended fines, a sampling point will be located in line after the sand filter to monitor the quality of the effluent discharge and provide early notification of when the filter requires maintenance.

A back up filter will be used during maintenance periods to ensure the effluent treatment system remains operational. The sand filter will likely be cleaned by backwashing with clean water. The sand filter will remove fines resulting in a clear effluent.

Following the sand filter the effluent will be pumped to the soakaway for discharge.

A diagram of the treatment system is detailed below:

