

**Discharge Permit - DP(B)2018/08/01 Horizon Development De-watering**  
**Application Overview**

The discharge will be for trade effluent (groundwater pumped from deep excavations) during the construction of Horizon Jersey. The deep excavation works are programmed for commencement early November 2018.

The application includes all groundwater chemical analysis undertaken to date from boreholes installed within the Horizon site area (which give an indication of the likely water quality of the trade effluent) as well as plans showing the contractor's compound, soakaway and monitoring borehole location.

We will install a soakaway within the contractor's compound area between Radisson Blu Hotel and the Les Jardins Car Park. To closely monitor the groundwater in this area we propose to install a monitoring borehole. Baseline quality data will be taken from this borehole prior to commencement of discharge, and the borehole will be used to monitor the impact on local groundwater quality throughout the soakaway operation. A specification for the borehole is below:

**Monitoring Borehole Specification**

Location of the borehole is to be within the contractors compound approximately 35m from the proposed soakaway location. The position of the borehole is detailed within the drawings in **the application**.

Drilling Rig Type	<b>Cable Percussion (potentially with RC follow on)</b>
Borehole depth	<b>Advanced to at least 3m within the shallow bedrock deposits (assume 17mbgl)</b>
Pipe Spec.	<b>50mm HDPE (0.5mm slotted sections)</b>
Installation	<b>Borehole to be screened 1m above groundwater level to base of borehole</b>
Filter media	<b>Washed silica sand 1-2mm</b>
Bentonite	<b>1m Bentonite plug at base of borehole</b>
Headworks	<b>Lockable raised top hat cover with bung. Painted Concrete ring to be placed around the top hat cover as added protection and to maintain access for monitoring.</b>

- Monitoring will be undertaken on a monthly basis throughout soakaway operation.
- Chemical testing of the groundwater samples will include the following determinands:
  - Arsenic
  - Cadmium
  - Chromium
  - Copper
  - Lead
  - Mercury
  - Nickel
  - Selenium
  - Zinc
  - Total Polyaromatic Hydrocarbons (TPH CWG)
  - Polyaromatic Hydrocarbons (PAH 16)
  - pH
  - Sodium
  - Chloride