## Combining Groundwater and foul Sump Pumps

**It is not recommended!**

Drainage systems should be designed in accordance with relevant codes and standards to convey satisfactorily drainage to an appropriate point of discharge.

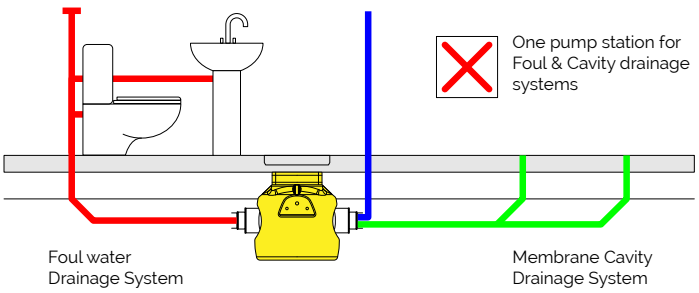
Basement pumps are designed to only take ground or foul (grey) water. The reason for this approach is to reduce risk.

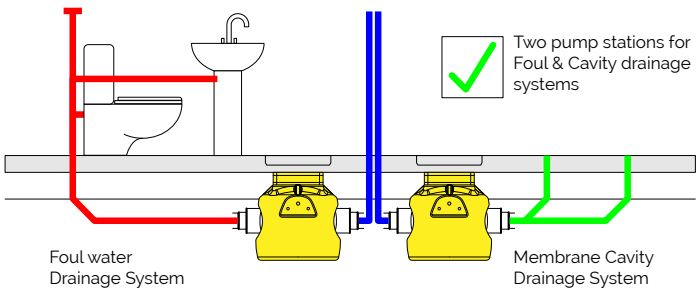
Combining groundwater from a cavity drained waterproofing system directly into a foul system, either foul sump pump system or foul drains, **is NOT RECOMMENDED or ADVISED.**

Because of the risks involved, we advise that groundwater from the cavity drainage system is sent to its own groundwater dual pump station, incorporating a high-water level alarm, along with consideration for power failure with the inclusion of a power backup system.

There is no cost or technical benefit in using a foul system to deal with both foul and groundwater in basement situations.

**Figure 1. Anti Flood Loop**




**Why you shouldn't combine Groundwater and Sump Pumps.**

- The principal risk involved would be surcharging the foul system and potential backflow entering the cavity drained waterproofing system and odour. The non-return valve on a foul sump pump will stop odour returning from the discharge pipe work, however the foul waste in the sump will still allow smells and gases to escape behind the cavity membrane system installed.
  The inclusion of traps between the cavity drainage system and the foul system will also only function in part, and particularly only if it were to remain full of water.
- If the foul pump was to stop working, then appropriate action can be taken to stop the use of facilities discharging into the foul system. The exception to this is groundwater, groundwater entering a structure cannot be controlled. A Type C, Cavity Drained Protection System is a controlled drainage system, which allows moisture or running water to travel behind the installed membrane system.
- If the foul system has surcharged or failed, then groundwater cannot drain into the sump, the only outcome of this the basement or below ground structure FLOODING.
- Foul sumps are not considered as reliable, as groundwater sumps.

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