

## Geoenvironmental - Groundwater and Nitrates

### Groundwater Risk Assessments

With the ever-increasing need for housing and a shortage of available land, the use of Brownfield sites has become vital. As part of the rejuvenation of Brownfield land, a contamination risk assessment needs to be undertaken to establish the if any contamination is present, or the extent of it. As part of this, a Groundwater Risk Assessment must be undertaken.



The Groundwater Risk Assessment is used to evaluate the potential for a pollution linkage and to consider the level of risk through a phased approach:

- A Phase 1 Desk Study – This identifies if there is a risk of contamination and whether this may affect the groundwater
- A Phase 2 Site Investigation – If Phase 1 has identified that the groundwater may be at risk, then analysis of the soils and direct sampling of the groundwater can be undertaken
- A Phase 3 Remediation Strategy - If Phase 2 confirms the presence of contamination it may be appropriate carry out a Detailed Quantitative Risk Assessment (DQRA). Using this process, it is possible to predict methods of dispersal and degradation, allowing development of site specific assessment criteria or remedial targets, which will be protective of both human health and controlled water receptors.

### Cemetery & Foul Water Discharge Assessments

Cemetery and Foul Water Discharge Assessments follow the same principles as a Groundwater Risk Assessment. The difference is, Ground & Water will assess the risk posed to controlled water by the pollutant you are introducing. This can include: organics, heavy metals and nitrates. Following the assessment we can provide design guidance on depth, type and location of proposed burial sites or preferred arrangements and mitigations for a foul water discharge.

<https://www.gov.uk/guidance/cemeteries-and-burials-groundwater-risk-assessments>

## Nitrate Budget Assessments

Natural England's "Advice on Achieving Nutrient Neutrality for New Development in the Solent Region", was introduced in 2019 and has been recently updated to Version 5 in June 2020. Since its publication there has been the requirement for new developments in Hampshire, to provide a nitrate budget and to prove that the development will not be further contributing to the eutrophication of the Solent and Chichester Harbour.

Ground & Water can provide Nitrate Budget Assessments for residential developments in accordance with Natural England's Guidance, no matter how the development's wastewater is proposed to be discharged. Alongside this, we will also provide recommendations for how to mitigate or offset the nitrate budget should the development be resulting in an increase in nitrate being discharged to the catchment.

We will work with you to make sure that nitrates will not be preventing you from getting your development through planning.

**If you require any of the services described above, please email:**

**[enquiries@groundandwater.co.uk](mailto:enquiries@groundandwater.co.uk)**

**or call us on 0333 600 1221**