

## Toolbox Talk Details

Title	E05 - Pumping, over-pumping and washing down plant
Reason	Construction activities often create water contaminated with content harmful to the environment. If you know how to contain and manage contaminated water, you will avoid causing pollution.
Outline	This talk covers the types of activity and some control measures.

## Contaminated water

1. Excavations often require dewatering, such as the removal of ground or rainwater, which may contain silt and other contaminants (for example, chemicals left over from previously developed brownfield sites).
2. Silt is composed of fine particles of soil that, when mixed with water, create mud that can be washed off sites into nearby watercourses, harming wildlife and humans.
3. Bentonite is a type of clay that swells and gels when dispersed in water. The use of bentonite can lead to spillage around operational and mixing areas. Bentonite, in a liquid form, is highly polluting if it enters watercourses.
4. Water from washing down plant and machinery is likely to contain not only contaminants from site movements but also oils and greases from under the vehicles and, if invasive plants are present, it may help to carry them elsewhere.

## Control measures

1. Plan all activities carefully, including the use of settlement tanks, lagoons, grassed areas, hay bales or silt socks, and always have contingency plans in place. Check with your supervisor that consent has been given to discharge liquids to the proposed location.
2. Regular monitoring arrangements should be put in place and followed to ensure control measures are fully implemented.
3. Consider installing cut-off trenches or silt fences to prevent run-off.
4. Wash-down water must be contained, treated, and checked to prevent a pollution incident.
5. When using bentonite ensure there are no spills of the dry powder or granules, or leakage onto the ground of the mixed material. If it does spill, it must be cleaned up immediately.
6. Monitor weather forecasts and check regularly to ensure there are no leaks or build-ups of contaminants in the system being used.

## Precautions

1. Do not pump, over-pump or discharge without prior approval from the relevant environment agency, and do not alter discharge arrangements without approval.
2. Do not leave pumping operations unattended unless you are authorised to do so by your supervisor.
3. Do not strip land, unless it is necessary, as vegetation reduces silt run-off.
4. Do not leave bentonite in the open air or ignore spillages.
5. Do not wash down vehicles, except in designated areas, or release water through grips.
6. Do not allow water into drains, gullies, ditches or watercourses, without approval.

Revision Date	Assessed By	Signature
January 2021	Michael Reddan	