



## Avoiding the legal, financial and environmental consequences of concrete washout

- Increasing concern about wash water produced at concrete plants and construction sites
- Recovery of suspended cementitious solids using flocculants dosed by high accuracy Qdos pumps
- Resulting sludge pumped by Bredel hose pumps into a skip or sludge storage tank

There is increased awareness of technology that can help concrete plants and construction firms meet growing demand for wash water disposal, without suffering legal, financial or environmental consequences. Qdos chemical metering pumps and Bredel hose pumps are proven in tough applications such as construction sites, aggregate and concrete production plants.

### Alkalinity issues

Water contacting freshly exposed or poured concrete takes on an alkaline pH (circa 13) due to chemical reactions between the water and free lime particles within the cement.

At a typical concrete plant, up to 12,000m<sup>3</sup> of water is consumed every year, which means that the washing down of machinery, equipment and transportation vehicles becomes problematic.

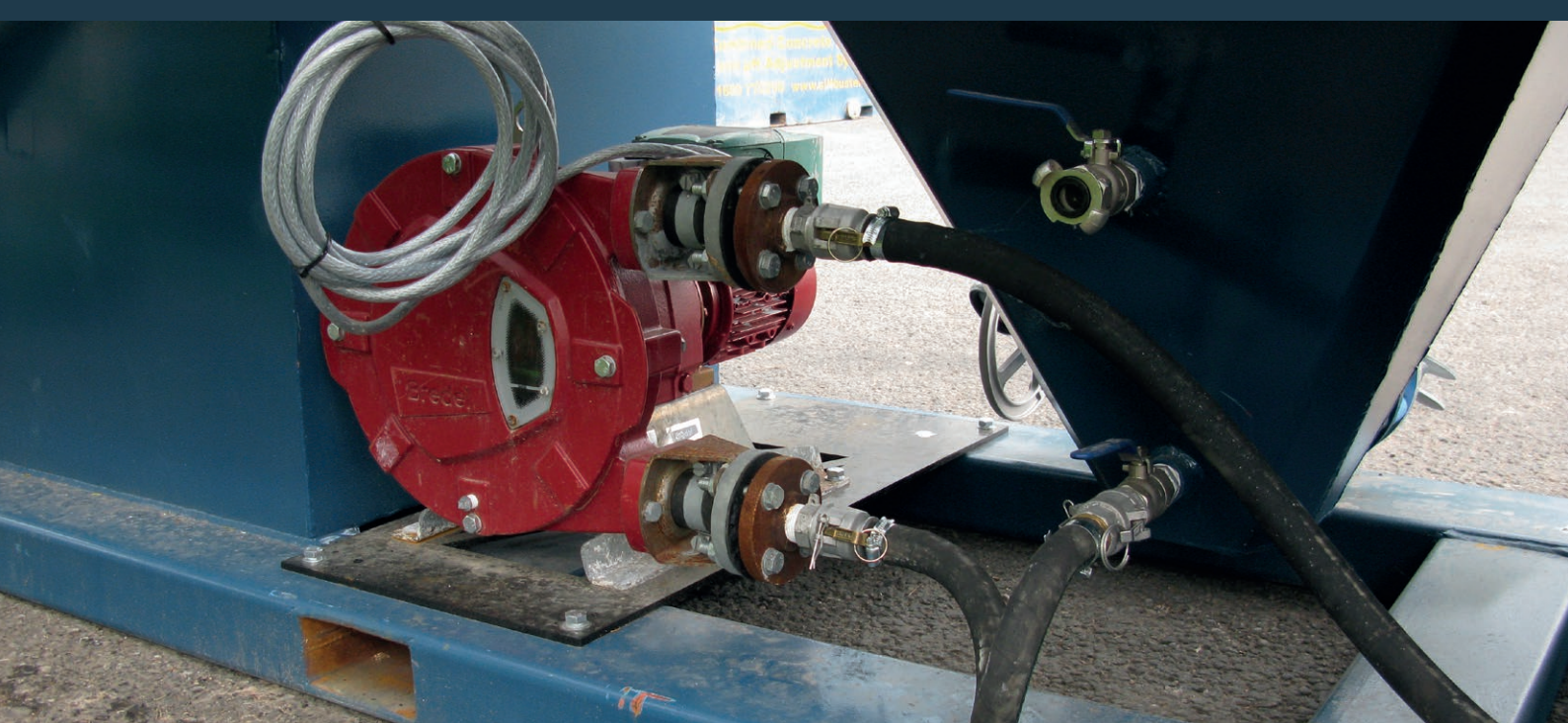
### Harmful effects

While most are familiar with the dangers of acids, highly alkaline substances such as concrete wash water can be just as corrosive, and if left untreated can cause concrete burns, damage to vegetation and the surrounding ecosystem.

Suitable provision should be made for the washing out of concrete mixing plant or ready-mixed concrete lorries. Such washings cannot flow into any drain or watercourse. Ready-mixed concrete trucks should not be allowed to wash out anywhere other than the areas designated for the purpose.







## Proven solutions

Initial pH adjustment is performed to maximise the precipitation of solids and the treated water passes through a lamella clarifier. This process is followed by the recovery of suspended cementitious solids using flocculants dosed by high accuracy Watson-Marlow Qdos chemical metering pumps.

Following treatment, settled solids from the water collect in a hopper where the resulting sludge is then pumped by Bredel hose pumps into a skip or sludge storage tank for further separation and reuse of the sand and aggregate.

The level and type of solids in the sludge varies greatly, but does not impact the capacity of the hose pumps, which can transfer up to 80% solids in suspension. Furthermore, flow is entirely independent of suction and discharge conditions.

*To learn more about our solutions for your applications please contact your local sales company:*

**[wmftg.com/global](http://wmftg.com/global)**



**WATSON  
MARLOW**

Fluid Technology Group