



Water-Saving Initiatives and Monitoring of Embodied Water

Water-Saving Initiatives

The Whitechapel team installed a drainage system to capture rainwater from the working platform over the East London Line and vehicle deck. The use of captured rainwater on-site has significant benefits in the reduction of embedded energy in water and minimising the use of potable water in construction.

Rainwater is captured on the working platform and then gravity fed via a sediment interceptor into retention tanks with a capacity of 14,000 litres. The re-used water is then used on site for wheel washing and damping down.

This has been installed at Durward Street Shaft (see below) and due to its success, another one has been designed.

Benefits

Using a combination of waterless urinals, dual flush toilets, and low flow taps with the water harvesting has resulting in a savings of 1,621,013 litres of water per year which gives a cost savings of in excess of £12,000 over the 6 years of the project.

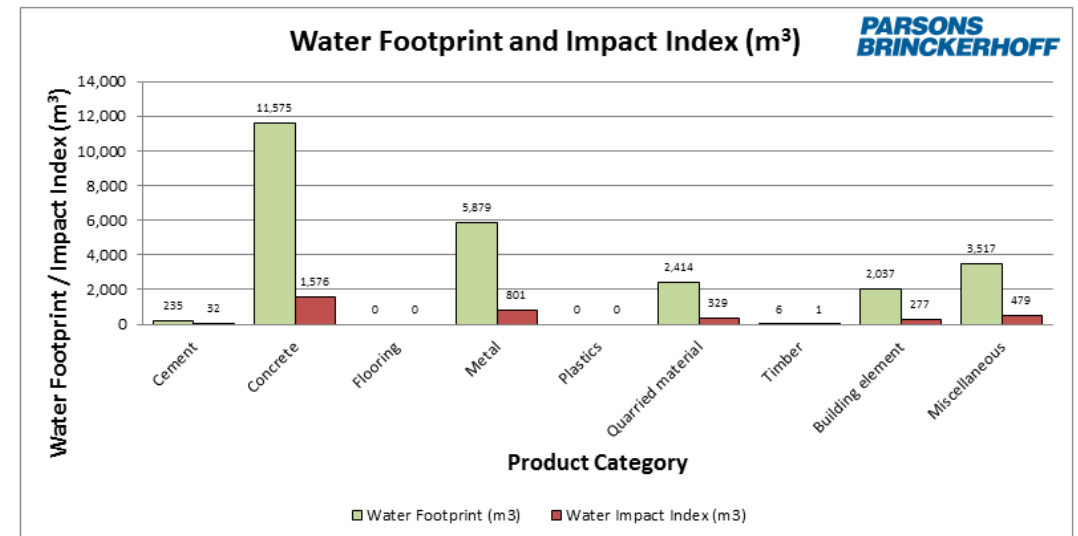


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Embodied Water

Furthermore, C512 has implemented water footprint and impact monitoring for the embodied impact of water in the materials used.



The Water Impact Index is produced by multiplying the volumetric water use (Water Footprint, m³) by the water stress of the source area (%). Hence, actions should focus on reducing the Water Impact Index rather than the basic Water Footprint.

Note that 0.0% of the Water Footprints had "unknown" water stresses and were therefore omitted from the Water Impact Index figures.

The graph shows the actual water usage compared to the measure of the water scarcity where the material is sourced from. This allows the contractor to choose materials that would have less impact on the surrounding area in terms of water use. This is especially important for concrete and metal which have the most embodied water.