

Residential

Uncategorized

## Cambridge – Clay Farm (The Quad 2013)

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### Rainwater Harvesting / Greywater Recycling CAMBRIDGE - CLAY FARM (THE QUAD 2013)

The Clay Farms project

Cambridge City Council 'Clay Farms' project is a development with 208 homes and commercial accommodation. The residential accommodation is arranged in a grid of quads surrounding a park at the heart of the site.





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Aquality worked with AECOM on a Code for Sustainable Homes (CfSH) Strategy for this project, for over a year, to come up with a water-efficient solution to this unique layout.

Each quad consists of 23 homes ranging from one to three bedroom apartments and family houses. Each home has a private patio garden. In the heart of each quad is a moat that can store and attenuate rainwater.

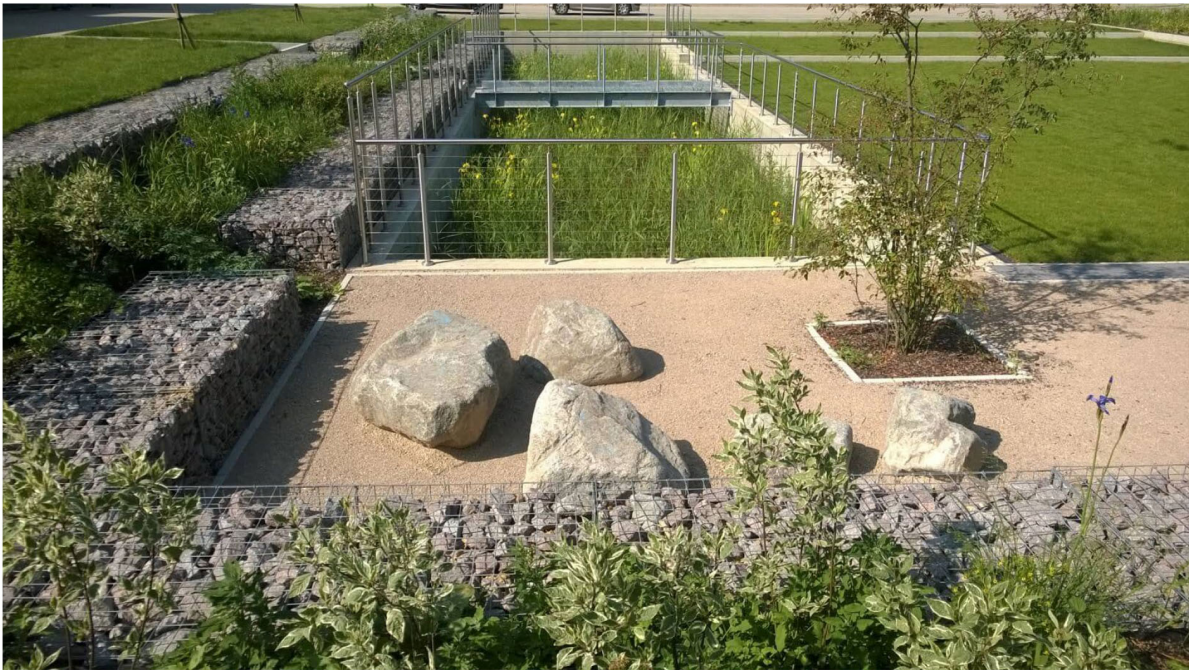
As the design asked for CfSH level 5, the water consumption had to be reduced to 80 litres per person per day – quite a tough ask.

### Design, Supply and Install

AECOM and Aquality, working together, devised a centralised rainwater harvesting system. The design allows for capturing, not only the roof rainwater, but also the surface water from the hard standing and roads.

For the detailed design Hill Construction employed Aquality and the M&E contractor TClarke commissioned Aquality to provide and install the rainwater systems for the total project.






### The System – Full of Bright Ideas

The rainwater is pre-treated in a reed bed before it enters a 240m<sup>3</sup> in-situ concrete tank. From there the water is pumped into a small holding tank installed in a central plant room. The water is polished and then transferred into a break tank, which also includes an emergency mains water top-up. A triple booster pump set then pumps the water to all WCs in the development through a dedicated non-potable water pipe network.

The rainwater harvesting is fully remote controlled including pressure measurements, water quality monitoring and fault reporting allowing remote diagnostics and maintenance on demand.

This sustainable development also includes high level fabric efficiency, approaching Passivhaus standard. They will be super insulated, air-tight and mechanically ventilated with heat recovery. Another example of professional water management at work.



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