

OUR ONLY WORLD

Design Competition – Water Bottle Filling Station

Background. The need to reduce the manufacture and sale of single use plastics is now well known and the provision of water bottle filling stations at strategic locations is a proven measure to reduce the volume of single use plastics being recycled, sent to landfill or discarded as waste.

Our Only World invites undergraduates or graduates studying for design and/or engineering degrees (or equivalent) to participate in a competition to produce a novel prototype design for a water bottle filling station. Two such filling stations have been installed in Cornwall and together they have already delivered over 14000 litres of water. It is intended to roll out the installation of similar filling stations at suitable locations throughout Cornwall. To maximize the benefit to local communities the prototype filling station is intended for manufacture by a local company. Our Only World is seeking the support of a prestigious sponsor to judge this competition and the successful student should benefit, not only from experience gained from the design exercise, but also from interacting with the sponsors and the potential manufacturers.

Specification The filling station will fill sports bottles of differing sizes and types in a hygienic manner and with a minimum of waste water. There should be no spillage or leakage from the filling station. The station will fill a single bottle, with minimum user intervention, and the fill time should be a minimum of 20 *seconds* for a 500 ml bottle (to prevent misuse). The filling station will be free standing and floor mounted on a hard surface, or pad. The filling station will operate without external or internal power sources and the water will be metered by the filling station. The water supply will be derived from the potable mains and will not require filtration. The design may include a supply filter if this is deemed necessary to protect the equipment.

Due consideration should be given to minimizing the servicing and cleaning requirements of the filling station and to maximizing the useful life cycle of the station.

The filling station may be used at external sites, by the sea, and should be vandal proof, weatherproof and corrosion resistant. Materials of construction should be selected to keep manufacturing costs to a minimum whilst meeting the requirements of external siting in a harsh environment. The filling station should be designed to provide equal access to persons with disabilities, wheel chair users and persons of all ages.

The filling station should be designed in such a way that it may be used to display advertisements, or other signage. For this reason, the design should be eye catching but, in keeping with the environmental aims, should also blend with the surroundings.

Application procedure. Interested students may apply by email to ouronlyworld@outlook.com or download an application form from www.ouronlyworld.org.uk. The closing date for applications is 1/3/19 and the final date for submission of designs will be 1/5/19.

The competition organisers will provide technical advice, or clarifications, when required and will be contactable throughout the competition.

Assessment Designs will be assessed and given a point score in accordance with the following criteria:

Conformity with the specification	5 points
Functionality	5 points
Appearance	5 points
Suitability for manufacture	5 points
Cost of production and operation	5 points

Total **25 points**

The winning design will be chosen from the top five point scoring designs, and the judges' decision will be final.