

1 Introduction

This technical note intends to provide the information required from the planning condition number 11 related to the rainwater harvesting at 294-295 High Holborn, WC1V 7JG (Application ref: 2017/1827/P, dated 15th August 2018), consisting of a building ranging from basement level to the 8th floor, comprising a retail unit at ground floor level (shell only), offices at 1st and 2nd floor, and 10 No apartments from 3rd to 8th floor.

2 Condition

Condition no. 11 states:

“Prior to commencement of any development above ground level other than site clearance & preparation details of the feasibility of rainwater recycling proposals should be submitted to the local planning authority and approved in writing. The development shall thereafter be constructed in accordance with the approved details.”

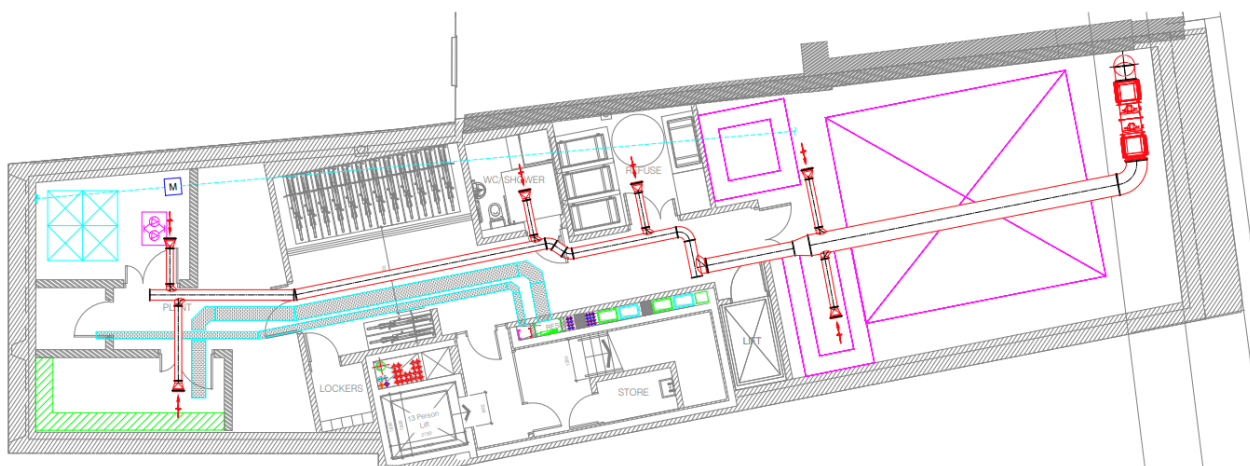
Reason: To ensure the development provides adequate on-site renewable energy facilities in accordance with the requirements of policies CC1, CC2 and CC3 of the Camden Local Plan 2017.”

3 Response

The feasibility of including a rainwater harvesting system has been considered in detail for this development in the following aspects:

1. Practical Design Constraints

The introduction of a full commercial sprinkler system into the development has meant the basement areas are now converted from retail space to mechanical and electrical plant including a large 80m³ water storage tank exclusively for the use of the sprinkler system. There is therefore insufficient space to accommodate the water storage tank and associated equipment necessary for rainwater harvesting. See sketch below:



2. Low Annual Rainfall

Based on average annum rainfall figures for London and the relatively small footprint of the building, the development produces only approximately 150 m³ of rainwater per annum.

This means the tank would need to be topped up with mains water for a significant portion of the time, making the system redundant.

3. Uneconomic

Based on Thames Water's combined water and discharge tariff of £2.28/m³ the annual saving will be approximately £342.00.

The extra capital cost for installing a suitable system including tank (6000 litres), pumps, filters, controls, valves and pipework is estimated to be in the order of £12,000.00.

Based on a simple payback approach the capital cost only would be recovered in 35 years and if maintenance, plant replacement and energy costs were included then the costs would never be recovered.

4. Efficient Water Outlets

The emphasis on this project is to provide efficient water outlets in order to achieve the requirements of Condition 14 – Water Efficiency. The development shall achieve a maximum internal water use of 105 litres/person/day, allowing 5 litres/person/day for external water use. The details of how this target will be achieved are included in the Pre-Implementation Review of the Sustainability Plan.

It has therefore been concluded that the inclusion of a rainwater harvesting system is not feasible for this development.

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