...sustainable building services solutions

# camden goods yard

## rainwater harvesting strategy

consultancy engineering business environment

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## 1.0 INTRODUCTION

Camden Goods Yard is a mixed-use development located next to Camden Market in Camden Town Centre (a metropolitan centre). The site is a former Morrison Supermarket and external car park.

The development is for St. George West London Ltd and comprises the demolition of the existing Morrisons Supermarket and Car park on the site and the construction of a new mixed use scheme providing approximately 644No apartments; tenant facilities including Gym & Swimming Pool; offices; workshops; retail units and a new Morrisons Supermarket with car parking facility.

The following document reviews the requirements for Rainwater Harvesting at the Camden goods yard development and sets out the strategy by which the requirements will be satisfied.

 



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## 2.0 RAINWATER HARVESTING

The following document reviews the requirements for Rainwater Harvesting at the Camden goods yard development and sets out the strategy by which the requirements will be satisfied.

### 2.1 Planning Requirements

Rainwater Harvesting is to be provided in accordance with planning condition 53 which states:

"Prior to the commencement of the building envelope of Blocks B and F, details of the rainwater recycling proposals relating to the relevant block shall be submitted to the local planning authority and approved in writing. The development shall thereafter be constructed in accordance with the approved details."

### 2.2 Standards

The rainwater harvesting system shall be designed to satisfy the above planning condition and the flood risk assessment which requires the reuse of portions of stored rainwater for irrigation.

The system shall be designed in accordance with The British Code of Practice for Rainwater Harvesting Systems – BS EN 16941-1:2018.

### 2.3 Client Requirements

The Berkeley Group document titled "Our Vision - Guidance for design team consultants" dated May 2016 – April 2018 sets out a commitment for integrated water management, with guidance to incorporate a method for harvesting rainwater for re-use.

The guidance does not define the storage requirement by volume and as such the provision of rainwater harvesting to supply the irrigation systems for the external areas and the Urban farm has been set out by the client as the extent of the system.

### 2.4 Conclusion

The flood risk assessment and the clients brief require rainwater harvesting systems to supply irrigation water in buildings B and F. There is no scale of provision or run off rate reduction stipulated.

To meet the brief, rainwater harvesting plant has been provided in Block F at basement B1 serving the external irrigation watering points and on block B roof to serve the Urban Farm irrigation systems.



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## 3.0 SYSTEM DESCRIPTION

### 3.1 Block F

A 12,000L Rainwater harvesting tank is located in the B1 rainwater harvesting plantroom. The tank takes 400m$^2$ of roof area which is approximately 15% of the total roof area.

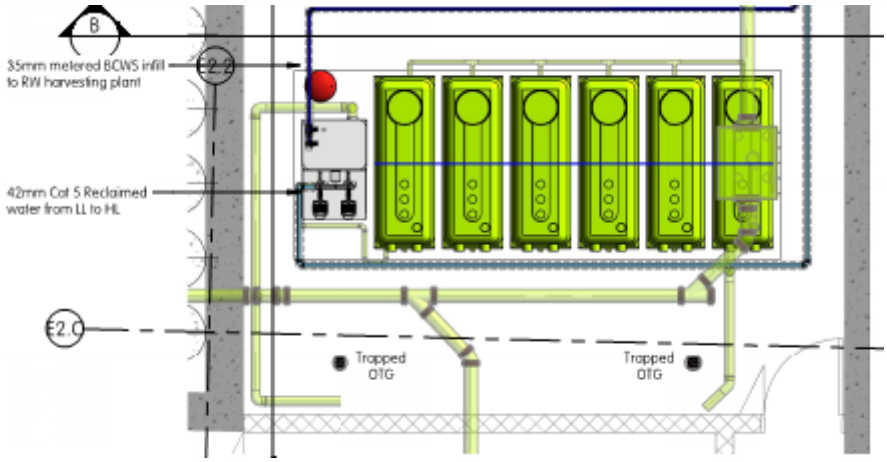
Based on a rainfall intensity of 0.061 l/s the run off rate reduction from building F is 24l/s.

When the rain water harvesting tank is full the discharge is diverted to the attenuated rain water system.

A packaged booster pump set with mains top up serves the external irrigation watering points.

The flow rate of 1.5l/s is based on the following assumptions conformed by SGNL for the irrigation system.

- One hose is used at a time
- Flow rate to be based on industrial/commercial use




### 3.2 Block B

A 3000L Rainwater harvesting tank is located in each of the 3N° Urban farm plantrooms providing a total storage of 9000L. Each tank tanks 120m$^2$ of roof area giving a total of 360m$^2$ which is approximately 15% of the total roof area. Based on a rainfall intensity of 0.061 l/s the run off rate reduction from building B is 22l/s.

When the rain water harvesting tank is full the discharge is diverted to the attenuated rain water system.



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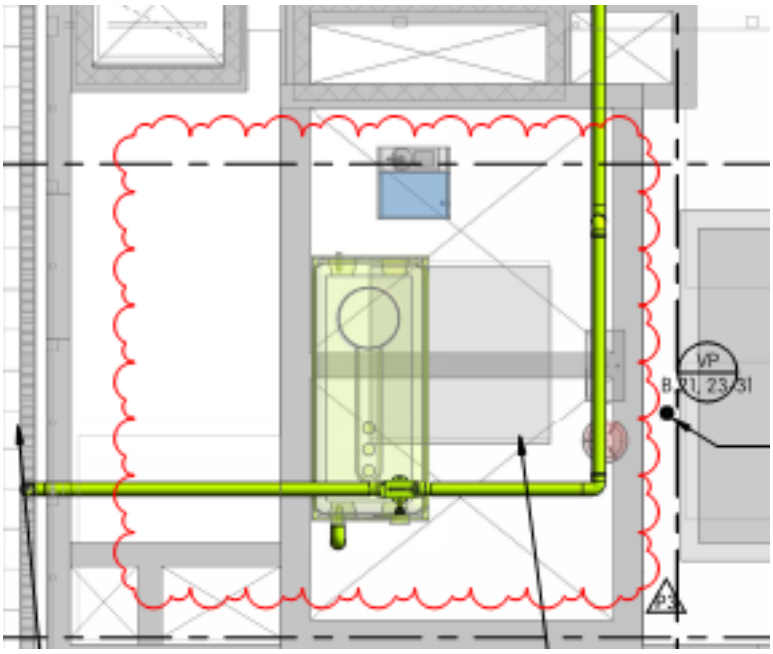
A packaged booster pump set with mains top up is located in each of the plantrooms serving the Irrigation watering points The Urban farm irrigation requirements are currently undefined therefore the plant is subject to change.




### 3.3 Regular Maintenance Requirements

- Filter cleaning: 3-4 times a year when and if needed
- Tank inspection: yearly – sediment cleaning only when significant (~5cm)
- Pump inspection: every 6 months
- Pressure vessel: every 6 months
- Mains water back-up: yearly
- General inspection for leakage and wear & tear: every 6 months



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