



File Note       Waste Water / Drainage Strategy  
Reference       LPA Ref. 2015/3605/P – Appeal Ref. APP/X5210/W/16/3147078  
Project         GREAT RUSSELL STREET – Basement Hotel

## **Introduction**

The following document details the basis of design and operation strategy for the waste water management system at 112A Great Russell Street. This Strategy is written for hotel waste water only, the existing drainage system deals with rainwater and surface water discharge.

The project is to convert two basement parking floors into hotel accommodation. The floors are located on levels B – 4 & B-5. There will be a total of 166 bedrooms, comprising 76 at -4 and 90 at -5.

## **Drainage**

The hotel accommodation shall be provided with a new dedicated drainage system for waste water. The system shall be installed complete with a new utility connection located in Adeline Place into which the hotel waste water shall be pumped.

The water installation within the hotel has been designed in compliance with BREEAM guidelines to minimise water consumption thereby helping to reduce the demands placed on the drainage infrastructure.

The principle source of waste water is the hotel guestroom comprising W/C's, showers & sinks. Other back of house areas that will produce waste water are sinks, W/C's, refuse areas, air conditioning condensate etc.

The hotel drainage system consists of multiple macerator pump units distributed across the floor plate of basement level B5. Each macerator pumping station is provided with run and stand-by pumps to ensure system resilience. Waste water from adjacent rooms is gravity fed via drainage pipework into the local macerator pump, all the B-5 macerator pumps pump waste water into a centralised GRP tank also located at basement level B-5.

All waste water drainage from Basement level B-4 shall be gravity fed directly into the centralised GRP tank on Basement Level B-5

From the centralised GRP tank waste water is pumped up to below street level where it is discharged into the sewage utilities network. To ensure resilience of service the main GRP tank is supplied with stand-by pump with auto change over facilities. The pumped discharge rate is fixed at 8l/s.