

CASE STUDY

SDS

Water
Infrastructure
Systems

Premier Inn, Faversham

SDS grey water recycling system helps hotel chain to achieve sustainability goals.



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→ SDS SYSTEMS

SDS WaterBank® grey water recycling system.

→ CLIENT

Antony Grice.

→ END CUSTOMER

Whitbread.

→ PROJECT

A new mixed-use development, adjacent to the M2 motorway, in Faversham, Kent, comprising of hotel, supermarket and housing.

→ PURPOSE

To construct and fit out a new, timber-framed, 84-bedroom "Premier Inn" hotel, including restaurant and bar.

→ BRIEF TO SDS

To help achieve the customer's sustainability targets through efficient water management.

→ TIMING

October 2021 (Opening Date).

→ PROJECT BACKGROUND INFORMATION

The £6.1 million three-storey hotel is built on former agricultural land and provides 3,000 m² floorspace.

→ PROJECT OBJECTIVES

To minimise the impact the development's requirement for the supply and disposal of water will have on the local environment and existing infrastructure.

→ PROJECT REQUIREMENTS

To reuse the grey water collected from showers, wash basins and baths for the purpose of flushing all of the property's WCs.

→ SDS PRODUCT FEATURES

This installation represents the introduction of SDS's uniquely designed grey water on-demand recycling system, which will support the hotel's water supply, and reduce disposal, by up to 3m³ per day. The system's compact dimensions and built-in multiple functions, which would normally each occupy their own space, facilitate its installation within both new build and pre-existing buildings, and in locations where traditional grey water recycling systems would be too large to consider.

Grey water storage is achieved by means of an underground 4.4m³ tank, which incorporates a submersible pump capable of delivering up to 2m³ per hour. Only the plant items, which take up just 5m² of space and include a 1,000 litre break tank and treated water distribution pump-set, are located above ground.

The system features dry block chlorine dosing, making it safer under COSSH regulations and easier to replenish, store and maintain than the more traditional, liquid chlorine dosing units.

The system was assembled off site, minimising the usual site installation requirements. Installation largely consisted of the connection of incoming and outgoing connections, connection of overflow to drain, electrical supply and integration of chemical dosing.

During periods of routine maintenance and servicing, and indeed for any periods of shutdown, the grey water recycling system can be switched to enable water to be supplied through the mains water feed to the treated water storage tank, therefore bypassing the grey water supply.

→ ISSUES OVERCOME

A smaller than traditional system, including underground tanks for collected and treated water, was installed to meet the limited plant space available in the building for grey water recycling and to help fulfil the client's drive for sustainability.



Sam Burgess, Water Reuse Manager, SDS, said:

"SDS has developed a new compact grey water recycling system specifically for smaller hotels. Previously available systems were too large for many of Premier Inns' needs and therefore prohibitively expensive, whereas this new system allows grey water recycling to be implemented in the company's more compact hotels and to be retrofitted to many of the existing properties. This initiative supports the parent group Whitbread's 'Force for Good' sustainability programme whereby it intends to achieve net zero carbon emissions by 2050 at the latest."