

Case Study

WASTEWATER HEAT RECOVERY (WWHR)

Case identifier

GYMBOX FARRINGDON

Country

UNITED KINGDOM (UK)

Building category

NON-RESIDENTIAL

Building subcategory

SPORTS FACILITIES

Type of Intervention in which the WWHR was installed

DEEP RENOVATION (E.G., RENOVATING MANY BUILDING ELEMENTS)

Occupancy and Hot Water Use

THE AVERAGE USAGE IS 23.82 TIMES EVERY DAY, WITH 5.5 LITRE/MIN OF WATER, AND A DURATION OF 5.25 MINUTES PER SHOWER.

WWHRS Application Description

- Installation type**

Centralised. Several drains connected to each WWHRS.



Facilities Information

- Sewage drainage**

Black water from toilets is not mixed with grey water from showers, bathtubs and sinks.

- Domestic hot water system configuration**

Centralised gas fuelled system providing heating and hot water for multiple building spaces including gym.

- Hot Water-using Bathing Appliances in the building**

39 showering cubicles.



- Type of product**

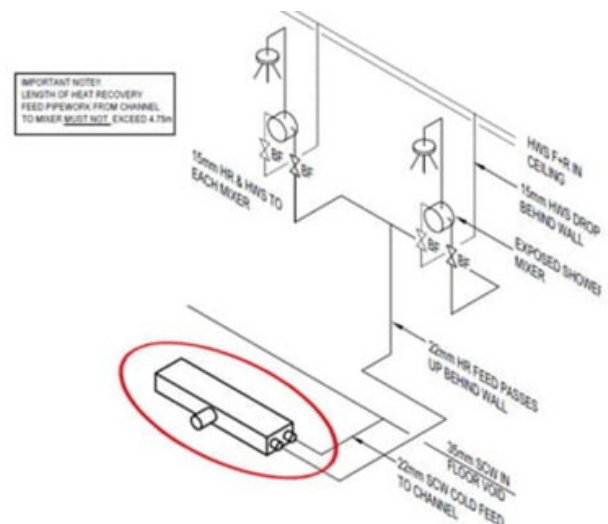
Horizontal, embedded in the tray.

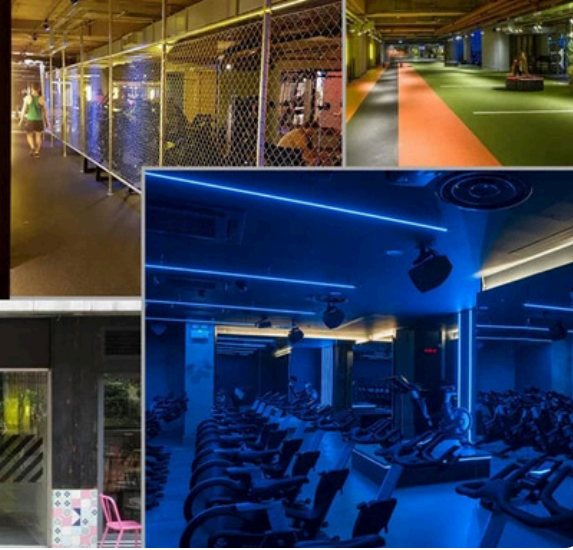
- Brand and model of installed WWHRS**

Recoup Drain +.

- Hot water-using bathing appliances connected**

A WWHRS device is shared for every two showers. The heat of every shower is recovered.





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- **Scheme connection type**

Scheme B.

- **Installation Process**

The Recoup Drain+ is positioned under the shower outlets central to the two. The floor is prepared with a recess for the Drain+ to sit into with space to make the relevant connections at the sides or ends of the unit. The waste out is connected to the building sewerage. The cold mains connected to the lowest of the end connections and the preheated water connection (the highest) is connected to the cold outlets on both shower mixers. Once connected pipework is protected and the space around the recoup Drain+ is back filled.

- **Maintenance Actions**

No planned maintenance, Cleaning is likely to be required by lifting out drain cover components and removing any build up from the trap.

WWHRS Performance Data

- **Have there been measurements of the operational performance of WWHRS?**

Yes.

- **Operational efficiency of the heat exchange**

38.6% rated efficiency.

- **Payback period of the installation**

The cost of each shower recovery unit is approximately 625€. Over 18 months after Gymbbox Farringdon reopened, over 11k€ annual savings of operational cost are demonstrated.

- **Lifetime**

Over 20 years.