

Case Study

WASTEWATER HEAT RECOVERY (WWHR)

Case identifier

KINGDOM INITIATIVES

Country

UNITED KINGDOM (UK)

Building category

RESIDENTIAL

Building subcategory

SINGLE-FAMILY HOUSES

Type of Intervention in which the WWHRs was installed

NEW BUILDING DESIGN

Occupancy and Hot Water Use

TYPICAL FAMILY USE



WWHRs Application Description

- **Installation type**

Decentralised. A single drain connected to each WWHRs.

- **Type of product**

Passive vertical. Pipe-in-pipe.

- **Brand and model of installed WWHRs**

Recoup.Co.UK Pipe + HE.

- **Hot water-using bathing appliances connected**

Grey water shower drain in main bathroom.

- **Scheme connection type**

Scheme A.

- **Installation Process**

The Recoup Pipe+ HE is installed on the floor below the shower connected to it. Shower waste water is connected to the top, and the bottom is connected to the buildings sewer water. Cold mains water is connected the bottom of the pipe using standard pipe and fittings. When in use the preheated water is connected to the top of the unit and then to the cold side of the shower and water heater.

George McLaughlin, Contracts Manager for Tom Findlay commented that the Recoup Pipe+ HE “is easy to install, and the instructions for use, very easily laid out. Procurement is easy from National suppliers, with Branches local to the area of the project currently working on”. He added “The product also benefits from requiring no commissioning and no specific tools which cuts down on costs from a site point of view” and that “the quiet operation of the system will benefit the home owner/ tenant which is another plus point in installing the Recoup system”.

- **Maintenance Actions**

No maintenance is required, drain cleaning solutions can be used in the unlikely event of a blockage.

Facilities Information

- **Sewage drainage**

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

- **Domestic hot water system configuration**

Decentralised. Combi boiler heating system providing heating and hot water for the property.

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

1 ensuite and 1 main bathroom.

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WWHRS Performance Data

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

No.

- **Operational efficiency of the heat exchange**

67% rated efficiency.

- **Payback period of the installation**

The payback period is affected by a number of parameters, flow rate, number of daily uses, length of shower. The estimated payback time is between 3 and 8.

- **Lifetime**

Between 30 to 60 years.