

**GS RENEWABLE CASE STUDY**

---



**HOTEL ISAACS, CORK,  
IRELAND**

## HOTEL ISAACS, CORK, IRELAND

### BACKGROUND

Hotel Isaacs is situated in a protected Victorian building located in the heart of Cork City, Ireland. Built in 1860 as a confectionary factory, it was damaged by fire in 1902 and restored to become a tobacco warehouse and later on, a youth hostel before its owner transformed it into an elegant and unique hotel in 1994. It now houses a fashionable wine bar and multi-award-winning fine-dining restaurant set around a spectacular waterfall.

The owner wished to future proof the building by reducing energy-input and carbon emissions of the entire complex in accordance with the EU's Nearly Zero-Emission Building (NZEB) standard.

### PROJECT CHALLENGES

- Space limitation to implement a new heating, cooling and hot water system without trading-off the ambience of the hotel
- The need to protect the integrity and historic features of the building while implementing new renewables systems
- Switching to a new system with minimal disturbance to guests
- Regulating the temperature of guest rooms and common areas where temperatures vary depending on the direction the rooms/areas faced especially during the seasonal periods throughout the year

### SOLUTION

- GS Renewable was consulted by Hotel Isaacs on the approach to take for switching to renewables for heating, cooling and hot water of the hotel and its 11 individual self-serviced apartments
- With the challenges of its historic structure, our team recommended our bespoke heat pump plant room solution to meet clients requirements
- Aligning with the need to reduce energy input for our client, the solution involved recovering waste energy output from existing hotel features such as the waterfall to power two Viessmann Vitocal 350-G Ground Sourced Heat Pumps. This enabled the hotel to now regulate the temperature in the bedrooms, restaurant kitchen while producing hot water for the building as a free by product
- GeoClimaDesign AG BLUEMAT capillary tubes were implemented in parts of the hotel where needed to help regulate the temperature and mechanical ventilation of the rooms, as well as facilitating pressurised water for the first time
- GS Renewable engineering team built strong rapport with Hotel Isaacs Operations team to ensure that the schedule for transforming Hotel Isaacs to an energy efficient hotel had minimal impact on the guests stay
- Installation of monitoring software app by our maintenance team will help to analyse, refine and optimise the operation of our bespoke heat pump plant room our client



## RESULT

- The commissioning of our bespoke heat pump plant room enabled our client to move forward on meeting the EU NZEB requirements
- The commissioned heat pump plant room now saves approximately 258 tonnes of CO2 emissions on an annual basis while ensuring a positive stay and experience for the guests and visitors of Hotel Isaacs throughout the year
- The innovative system created by our design team won ACR Journal & Heat Pumps Today - Non-Domestic Ground Source Project
- Installation of software app will enable our service maintenance team to analyse, refine, optimise and mitigate to retain optimal energy efficiency throughout the building

