Case study

Sleep Eco Hotel 37 Richmond Rd, Worthing, BN11 1PW

Overview

Owners: Andy Sparsis/Proto Group

Type: Detached Converted Victorian Wash House

Age: 1910

Beds: Nine

Walls: Brick

Residents: Hotel users

Key features

Smart building

Room Habitation Monitoring Sensors

Carbon neutral heating, cooling and hot water

Ground source heat pump

Waste recycling

Introduction and approach

Sleep Eco Hotel sits in the town centre nestled amongst many civic properties providing grandeur to the surrounding areas. The site originally built as a grand, overengineered wash-house has been returned to its 1910 civic status. Historically it's been a school, a library and even a vaccination centre. Originally 2 large halls and a first floor, it's now a 9 room Eco Hotel imaginatively set up and run by entrepreneur and restauranteur Andy Sparsis. There have been no visible structural changes only enhancements, decorations and restorations.

Sleep's commitment to sustainability extends to operational efficiency, facilitated by advanced automation systems. The building understands when a guest enters the main entrance, seamlessly activating the heating or cooling in the room and turning on the hot water, all initializing before the guest reaches their room. Additionally, the ground source heat pump system minimizes carbon

emissions during operations by reclaiming most of the energy already used. This twinned with Eco Navi Habitat Sensors monitor movement and guest body temperature, depending on guest numbers and movement will adjust not only direction of heat but levels of power. The success of this project can be attributed to its low carbon footprint and fully automated systems which are invisible to its users.

The future of low carbon operated smart buildings will be achievable if seen to be without compromise to the users and the developer. Sleep will save tens of thousands of pounds year on year whilst delivering an intuitive guest or user experience, proving that environmentally smart buildings are cheaper and easier to build and run. Sleep are honoured to contribute to the preservation of heritage while pioneering sustainable hospitality practices and are delighted to share what they have learned so far along their journey.

Energy efficiency measures

Converting the site into many separate areas and corridors, and more importantly to a hotel that needed to have separate soundproof, fireproof luxury rooms, required expert craftsmanship and innovative construction techniques. The foremost challenge was achieving a B-grade Energy Performance Certificate (EPC) when the building had not qualified previously for any rating due to its

poor upkeep. Further contributing to the challenges to improve performance was the importance to retain the architecturally important original windows to include the vast glassed window facade and surrounding windows.

Heating and hot water

Panasonic ECO I EX MF3 Heat Recovery with DX Coil

All rooms have carbon neutral Panasonic simultaneous heating and cooling with Room Habitation Monitoring Sensors, which monitor room temperatures and make sure they are not heating or cooling empty rooms. Once guests have left, all electricity and extra heating or cooling is then disconnected.

To achieve their goals, Sleep teamed up with Brighton University and the Green Growth Fund UK, who are helping them provide complete carbon neutral heating, cooling and hot water to the building using ground source heat pump technology.

Insulation

Walls – The property has been over engineered to a level agreed as Server usage. The 147mm thick walls used to build the rooms along with 100mm Rwa45 sound block insulation results in minimal temperature movement all year round.

Windows – Architecturally important original windows have been retained.

Smart ventilation (see link to Carbon Reduction Scheme document at end of case study)

Lighting – All lighting in the building is LED and all the public areas are lit by 12v DC neon lighting resulting in the very highest efficiency lighting. The public ways are also controlled by movement inferred sensors accurately only lighting areas where there is movement.

Waste – Sleep have teamed up with Recorra, one of the UK's leading recycling companies, to re-use most of their waste and they provide data sheets every month to guests on exactly where and how their or other guests' waste was processed.

Renewables and low carbon technology

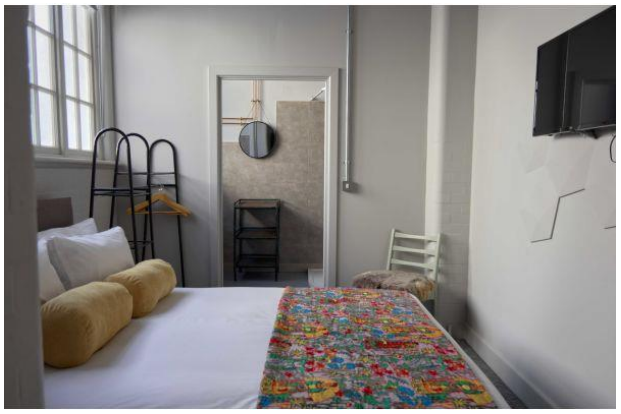
They have applied to STEM low carbon Kent award scheme and hopefully will be the 1st in Worthing to be awarded a blue, silver or gold award plaque. STEM project are also working with them to produce management activities specifically to reduce carbon.

Electricity

Everything is electric-powered, meaning 13 fewer tonnes of carbon a year. Sensors that turn off lights and heating when rooms are empty are part of the eco-friendly design.

Fully electric-powered via ground source heat pump - Panasonic ECO I EX MF3 Heat Recovery with DX Coil

Smart technology used to control heating and cooling.



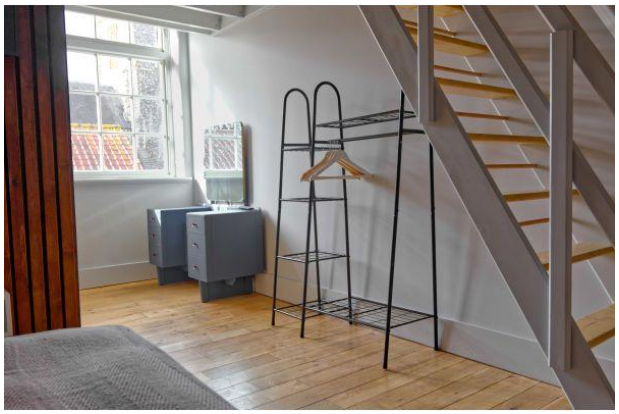
Carbon emissions

The development and future running of the site will make savings of 12 tons of carbon every year. In symbiosis with many other measures, the property will far exceed the 20 % Co2 reduction minimum target set.

The Panasonic heating and cooling system will save 12 tons of carbon every year, and with Econavi habitat sensors in every room they can reduce any waste of utilities.

Water Conservation

Sleep work with their laundry company to only use non-biological and plant-based washing products. They also ensure that laundry is done on short cycling wash loads to considerably reduce wasting water.



Other sustainable measures/ lifestyle decisions

Their aim is to continue working with UK government programme LoCASE and the Green Growth Fund UK and partners like Brighton university to continue to be greener and as close to carbon neutral as they can, allowing visitors to feel good about their carbon footprint when they stay with Sleep.

Eco All-Natural Face and Body Wash Spa Dispensers are in all the shower/bathroom pods. In all rooms, toilet paper is non bleached and produced with zero carbon from bamboo.

Guests are provided with parking locations and a digital interactive map. Those with fully electric vehicles receive 50% off local parking.

Local Partner Charity Working

SLEEP is developing relationships with local charities (in particular Turning Tides), recognizing the high numbers of homeless people in Worthing. Their small contribution is to offer every guest an opportunity with a push notification to donate a minimum of £1 when paying for their stay.

Professionals/projects/ materials related to this case study

Partners in this project are:
Brighton University, Clean Growth Fund UK and LoCase Kent

Waste management -
https://www.recorra.co.uk/

PLEASE SEE CARBON REDUCTION SCHEME DOCUMENT FOR MORE INFORMATION:
file:///C:/Users/Owner/Documents/TTW/EOH%202026/Case%20Studies/Sleep%20Hotel/Carbon%20Reduction%20Scheme%20-%20Sleep%20Hotel.pdf

https://www.sleepecohotel.co.uk/

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