

# Everbright Hotels Presentation



**EVERBRIGHT**  
HOTELS



Westmorland  
& Furness  
Council

A great place to live, work and thrive.

## Our Values



Ambitious



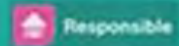
Inclusive



Outcome focused



Collaborative



Responsible



Needs-led



Ecologically aware

# WELCOME

  
**THE GEORGE**  
HOTEL

  
**ROSSETT HALL**  
HOTEL  
★★★★

  
**THE WILD PHEASANT**  
HOTEL & SPA

  
**STONECROSS MANOR**  
HOTEL & LEISURE

  
**LLANDUDNO BAY**  
HOTEL

  
**THE BELMONT**  
BOUTIQUE HOTEL LLANDUDNO



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**Sebastian Gudek**



Rossett Hall Hotel  
Acquired August 2015





Wild Pheasant Hotel & Spa  
Acquired December 2016





Stonecross Manor  
Acquired January 2017



The George Hotel  
Acquired January 2018





Llandudno Bay Hotel  
Acquired July 2021



Belmont Hotel Llandudno  
Acquired September 2021





The Queens Hotel Llandudno  
Acquired March 2022





Llandudno Boutique  
Acquired March 2022





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**Current condition of  
Llandudno Queens Hotel**





# Pilot Project – Llandudno Bay Phase 1

**Decarbonisation is an integral part of our business strategy  
- via reduction of power consumption and use of Green Energy  
initiatives**

- 61 Bedrooms.
- 1,800 sqm of floor space.
- 95% of the central heating system being electric radiators.
- 50% of the hotel hot water system being electric, 50% gas supplied.
- Insufficient water inlet led to upper floor rooms not receiving water when busy.
- No Contracts in place for Electricity & Gas

Prior to closure:

Costs of Electricity & Gas                      £107k

Re-opening quotations:                              £300k

## Objective

- Target the following areas to start the Net-Zero journey.
  - Cut business running costs
  - Offer better services to the public.
1. Central Heating & Hot Water Systems
  2. Electric supply voltage
  3. Innovative Green Energy solutions to reduce CO2 and running costs
  4. PV carports to generate clean energy for EVs and premises
  5. Innovative EV charging and parking solutions open to members of the public as well as hotel guests.



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## Central Heating & Hot Water Supply

BSI calculated CO2 savings and energy costs for Llandudno Bay Hotel April 2022 – March 2023

Energy contract costs - electricity £0.21 / kWh, gas £0.055 / kWh



### Central Heating and Hot Water supply cost

Year	CH & HW Running Cost	% Reduction
2021-2022	£106,471	n/a
2022-2023	£27,827	73%
2023-2024	£14,248	87%



### Central Heating and Hot Water supply CO2 emission

Year	CH & HW CO2 Emission	% Reduction
2021-2022	112,762 kg	n/a
2022-2023	109,858 kg	2.57%
2023-2024	17,498 kg	84%



### Projected CO2 emission Saving Rate for 2023/2024



(A projected 84% decrease from 2023/2024)

Central Heating  
& Hot Water  
Systems

Actual CO2 savings and energy costs for Llandudno Bay Hotel April 2022 – March 2023

Energy contract costs - electricity £0.21 / kWh, gas £0.055 / kWh

Annual GAS Energy Demand in kWh, Energy calculation based on BSI

Hot Water – 161,170 kWh,  
Central Heating - 316,789 kWh,  
TOTAL: 483,959 kWh

Actual gas usage between 01.04.2022 (88,137m3) - 31.03.2023 ( 52 weeks)

32,479 m3, 362,465 kWh, £19,935.00

**12 months Average GAS Usage**

**£383.00 / week**

**£11.07 / m2 / year**



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**25% + GAS** usage and **CO2 reduction** vs. Standard GAS CH System

## What have we done to achieve these additional savings?

- Installation of copper / aluminium **THERMATE** low flow temperature radiators 45-50°C (70-75°C typical commercial setup with steel radiators)
- **THERMATE** radiators reduced Central Heating Water qty from 2,500 L down to approx. 600L – 75% less
- Reduction of Hot Water storage temperature from 65-70°C down to 50-52°C
- Reduction of the boilers working temperature from 75°C down to 50-52°C – increasing the efficiency of condensing boilers.

### Starting your CH system

1kWh of gas - £0.055

### 2500L of water

Temp from 14°C to 75°C

177kWh used / £9.73

200kW boilers - 56min

### 600L of water

Temp from 14°C to 50°C

25kWh used / £1.38

200kW boilers - 8min





# Central Heating & Hot Water Systems

**25% GAS** usage and **CO2 reduction** vs. Standard GAS CH System

## What have we done to achieve these additional savings?

- Installation of multizone Central Heating controllers with window sensors and individual wall thermostats to control radiators – 98 zones.

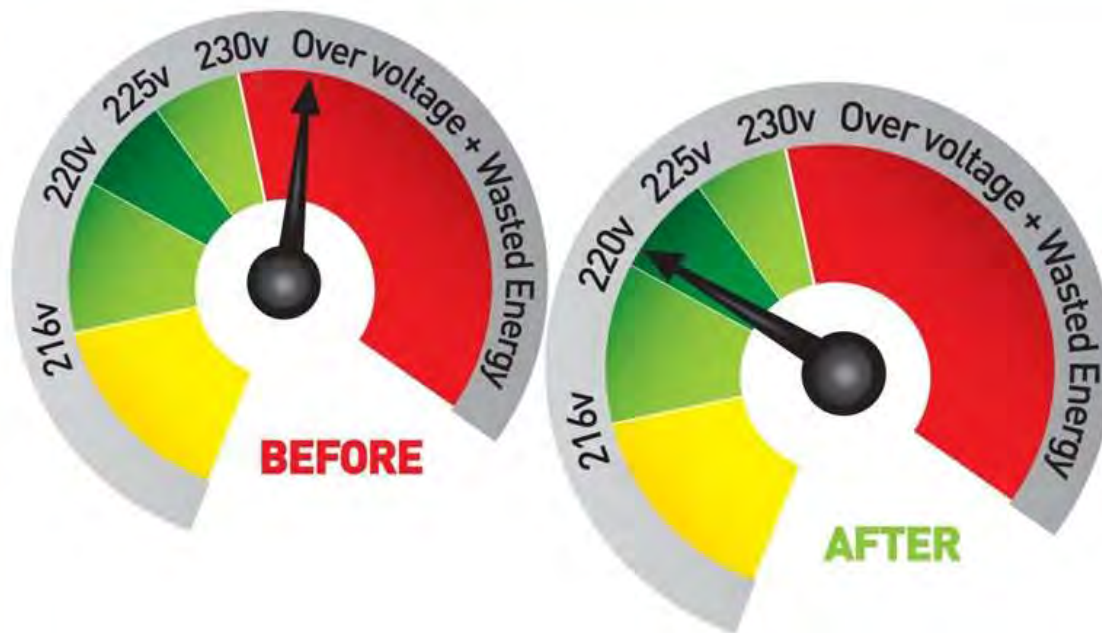


LBH GF Left, 1st FL Middle	
Room118 Room Occupied	21.0 °C Act: 21.3 °C   rH: 40 %
Room119 Room Occupied	21.0 °C Act: 21.1 °C   rH: 41 %
Room120 Room Occupied	21.0 °C Act: 20.1 °C   rH: 41 %
Room121 Room Occupied	21.0 °C Act: 21.1 °C   rH: 43 %
1ST FL Hallway Middle Hallway/ Stairs @18°C	18.0 °C Act: 21.3 °C   rH: 40 %
GF Restaurant Public area @ 21°C	21.0 °C Act: 21.0 °C   rH: 44 %
GF Bar Public area @ 21°C	21.0 °C Act: 21.1 °C   rH: 44 %

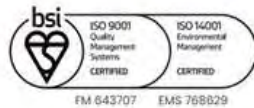


The Belmont Hotel in Llandudno has been selected to create the first in the UK commercial size system made of Thermodynamic Panels to provide Hot Water and to contribute to the Central Heating System. Thermodynamic panels are coming with 25+yrs lifespan and are virtually maintenance free, unlike ASHP.

An ideal solution also for smaller properties, holiday homes and log cabins. The planning application has been granted by Conwy Council in May 2023.



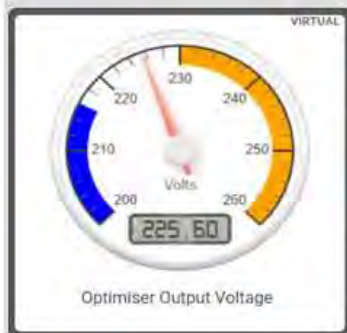
Voltage Optimisation



## The Solution

### eco-max Voltage Optimisers

- Your equipment works efficiently at around 220v. Supplying over this voltage is wasting energy.
- UK electricity is supplied up to 253v, so you are currently paying for wasted energy.
- eco-max 'Optimises' the voltage supplied to your electrical equipment **reducing its energy consumption up to 19%**, saving you money, energy and carbon.



35.9°C  
Optimiser Temperature

27.5°C  
Ambient Temperature

VIRTUAL  
7.30 %  
Current Calculated Energy Savings



Optimising  
ECO-MAX Output Status

VIRTUAL  
£9940108  
What Total kWh Cost Would be Without Eco-Max

VIRTUAL  
£9224420  
Actual Total kWh Cost With Eco-Max

OK  
Communication 38s ago

Normal  
ECO-MAX Alarm Status

VIRTUAL  
£715688  
Total Savings Made Since Install Date

VIRTUAL  
382326 kg  
Total CO2 Saving Since Install

+3197018756750  
Device phone number

Auto  
ECO-MAX Key Switch

Normal  
ECO-MAX Temperature

VIRTUAL

20498712 kWh  
Input Multifunction Meter

L1: 244.9 V	862.5 A 0.990
L2: 245.1 V	845.0 A 0.980
L3: 245.7 V	830.1 A 0.980



- The Llandudno Bay and Queens Lodge Hotels in Llandudno have been selected to create the first in North Wales PV carports.
- Generate green energy to EV chargers located at both properties.
- This is an ideal solution for public car parks, where free electricity can be generated and sent to the EV chargers as well as to the grid or properties nearby.
- Both hotels have now been granted planning applications. (May 2023).



## *So, what's happened at The George?*

Energy saving radiators installed when the hotel October 2023

An energy efficient plant room installed

Over 60 multizone central heating system to be added in January 2024

This will deliver an approx. 35-40% energy / CO2 saving against our current system usage .

It will also help to increase a comfort of clients as it's a new, reliable system.



Planning application submitted for PV carports to be installed in the car park at the rear of the hotel.

Planning application submitted for 6 fast 22kW EV chargers which will to boost hotel revenue going forward - electric cars to park for free while charging.

Approx. 14 carpark spaces to be covered by PV system generating just under 50kWhp of energy for the hotel and EV chargers.

We are also looking at installing 250kW battery on site to reduce CO2 and energy usage by the hotel (early days yet as costly).

- Planning application submitted for Thermodynamic panels system to be installed at the rear carpark providing over 60kW of energy for hot water and central heating generation.
- This system will make hot water generation virtually free of charge for the hotel across the year - powered by PV system - and support central heating system over winter season - estimating cost and Co2 further reduction by 90-95% on hot water supply and about 30% on central heating system .
- On completion we are expecting to cut our CO2 energy usage on hot water generation by 90-95% and about 50-60% on central heating running costs and CO2 emissions.

## CO<sup>2</sup> & Carbon Emissions

Rising Energy  
Prices

Cost Of Living Crisis

High Electricity  
Bills

Climate Change

Wasted Energy

Thank you for your time

Any Questions ?



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