

**IDENTIFY - IMPLEMENT - IMPROVE**

# ANNUAL CARBON FOOTPRINT REVIEW

**The Battlesteads**

**2019**



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An aerial photograph of a coastline. The left side of the image shows the ocean with vibrant turquoise and deep blue waves. The right side shows a dark, almost black, sandy beach. The waves are breaking, creating white foam that contrasts sharply with the dark sand and the blue water. The overall composition is split vertically between the sea and the land.

# EXECUTIVE SUMMARY

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# EMISSION SUMMARY

Jan – Dec 2019		Difference to Base Year (2013)	
30,133 kg CO <sub>2e</sub>		- 55,899 kg CO <sub>2e</sub>	
Equivalent to:		Equivalent to:	
 <p>3 family car trips around the equator</p>	 <p>Carbon Footprint of 5.2 UK citizens</p>	 <p>Growing 932 tree seedlings for 10 years</p>	 <p>22 747 flights from London to New York</p>

# GHG INVENTORY

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# GHG INVENTORY

Emission source	Unit	2013 (Base Year)	2014	2015	2016	2017	2018	2019
Calor (LPG) Gas	KG CO2e	21,627	25,076	27,964	27,342	28,139	24,897	23,393**
Biomass (Scope 1 relevant)	KG CO2e	0	3,044	5,379	4,325	4,310	5,001	5,006
<b>Scope 1 total</b>	<b>KG CO2e</b>	<b>21,627</b>	<b>28,120</b>	<b>33,343</b>	<b>31,667</b>	<b>32,449</b>	<b>29,898</b>	<b>28,339</b>
Hotel Electricity (Ecotricity)	KG CO2e	53,514	8,730	0*	0*	0*	0*	0*
Lynwood Electricity (Ecotricity)	KG CO2e	8,494	1,690	0*	0*	0*	0*	0*
<b>Scope 2 total</b>	<b>KG CO2e</b>	<b>62,009</b>	<b>10,420</b>	<b>0*</b>	<b>0*</b>	<b>0*</b>	<b>0*</b>	<b>0*</b>
Water supply	KG CO2e	783	911	749	502	587	587	587
Water treatment	KG CO2e	1,613	1,876	1,542	1,032	1,207	1,207	1,207
<b>Scope 3 total</b>	<b>KG CO2e</b>	<b>2,396</b>	<b>2,787</b>	<b>2,291</b>	<b>1,534</b>	<b>1,794</b>	<b>1,794</b>	<b>1,794</b>
<b>REPORTING TOTAL</b>	<b>KG CO2e</b>	<b>86,032</b>	<b>41,327</b>	<b>35,634</b>	<b>33,201</b>	<b>34,243</b>	<b>31,692</b>	<b>30,133</b>
Outside of Scopes (Biomass)	KG CO2e	218,608	257,093	407,536	330,900	339,341	332,054	320,309
Avoided emissions (Solar)	KG CO2e	0	0	0	-6,521	-10,835	-11,540	-10,660
Location based approach - Electricity	KG CO2e	62,009	29,530	32,547	34,420	34,945	38,723	38,976
Emissions per room night	KG CO2e/RN	22.4	9.7	6.4	5.8	5.7	5.3	4.9



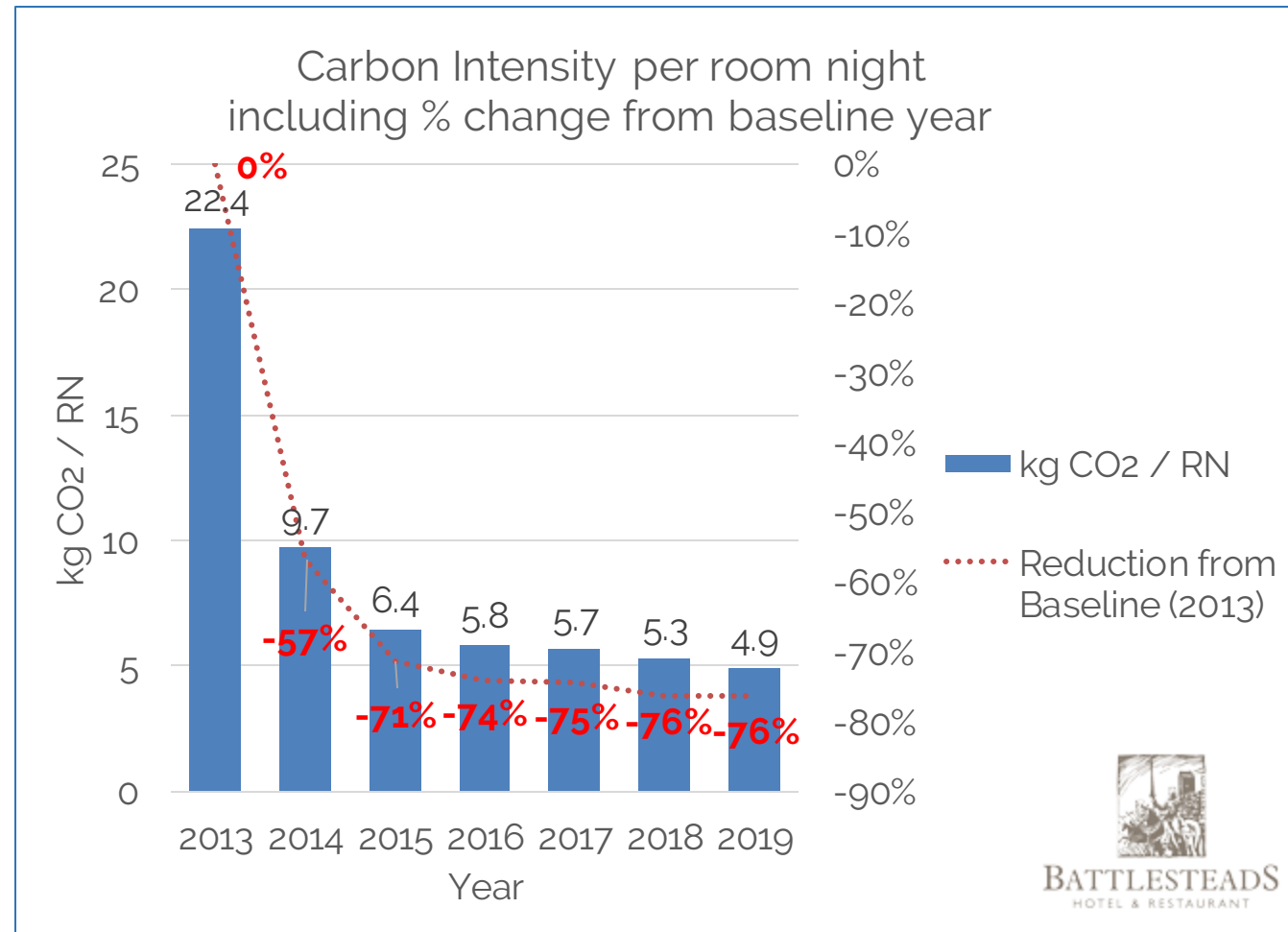
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- \* Ecotricity started offering 100% Renewable electricity since 2015, which is why the emissions are 0 from this point onwards
- \*\* Calor gas was estimated for November, December 2019 using 2018 figures due to lack of data



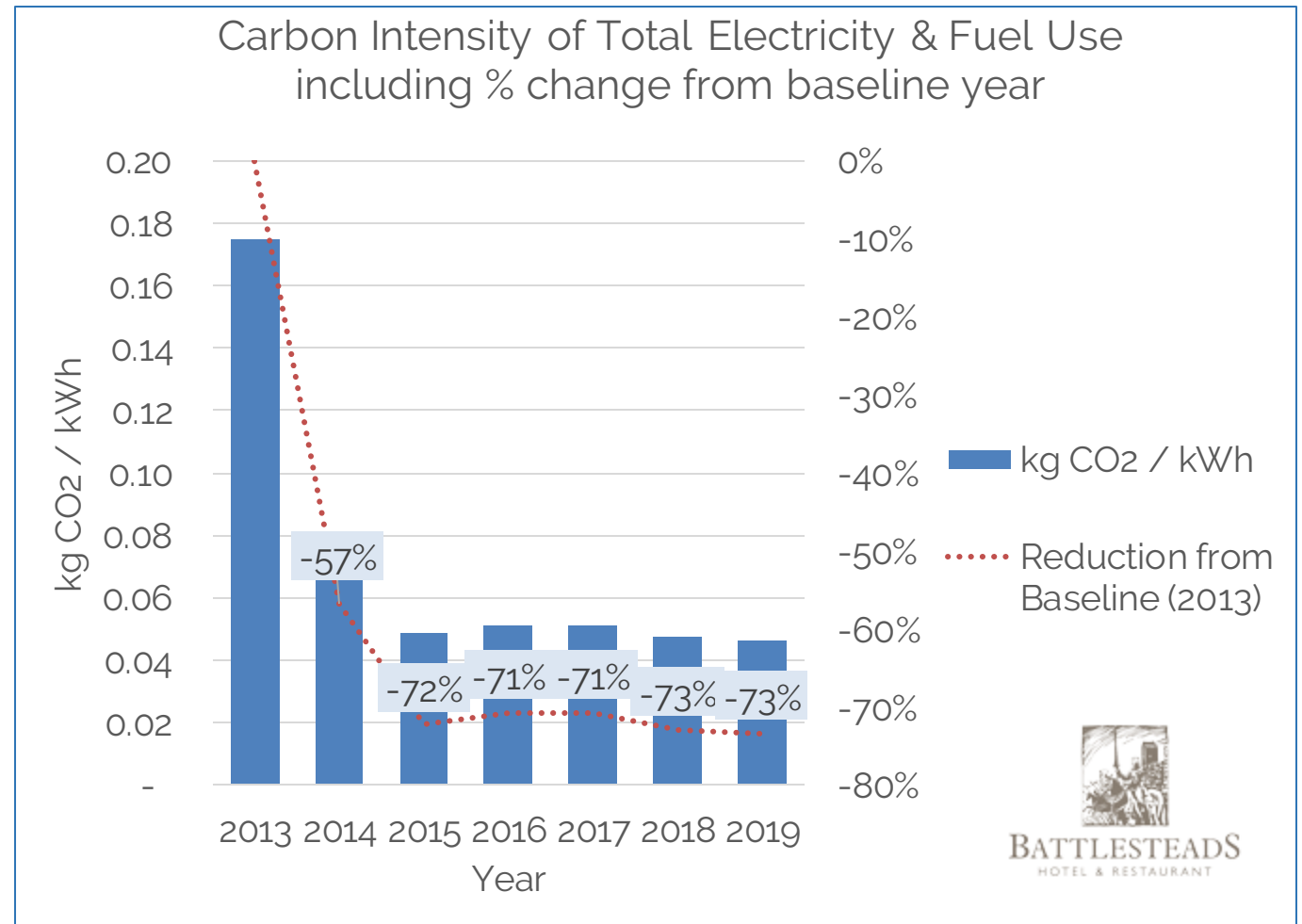
# EMISSION PER ROOM NIGHT

- Battlestead's carbon footprint per room night in 2019 was 4.9 g CO<sub>2</sub>e – about 84% below the UK benchmark of 31.1kg CO<sub>2</sub> per room night as specified by the HCMI
- Emissions per room night have been on a gradual annual decrease since the base year, in 2013, they decreased by **76%**, from 33.2kg CO<sub>2</sub>/RN in 2013
- In addition to procuring green energy from Ecotricity, the hotel generates energy from solar panels and biomass on site



# CARBON INTENSITY PER KWH

- Carbon intensity per kWh energy is a quarter of its value in the base year (2013) – a reduction of **73%**
- This reduction reflects both the site's adoption of Ecotricity's 'Green Electricity' and using solar panels and biomass to generate energy onsite.





# REPORTING METHODOLOGY

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# COMPANY DESCRIPTION

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Nestling in the picturesque village of Wark in Northumberland, Battlesteads offers its guests a place to unwind and relax in luxurious surroundings. Battlesteads is a Pub, Hotel and Restaurant, offering beautifully appointed accommodation in our individually styled rooms. The hotel has 22 en-suite bedrooms, Battlesteads prides itself on serving locally sourced produce, complimented by its own home-grown fruit and vegetables. Battlesteads was also the first to install a carbon-neutral heating system.

Contact person: Katherine Meyrick-Scott,  
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**Serving local produce and  
home-grown fruits and  
vegetables**





# GHG REPORTING BOUNDARY

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## ORGANISATIONAL BOUNDARY

Selected organisational boundary needs to reflect the substance and economic reality of the company, the intended purpose of information, and the needs of the users to ensure its relevancy. In accordance with this, we have adopted an operational control approach to organisational boundary as defined by the Corporate Accounting and Reporting Standard.

*"In line with the operational control approach, any activities directly associated with the Battlesteads' operation fall under the organisational boundary."*

## OPERATIONAL BOUNDARY

Operational boundary specifies emissions that fall within the defined organisational boundary.

Previous carbon reports had included diesel emissions from company vehicles, however as these were almost exclusively used for private purposes these have been excluded from the hotel's carbon reporting henceforth. Historical emissions have been recalculated to reflect this.

This operational boundary includes Scope 1 and Scope 2 emissions to cover organisation's key emission sources, and partial Scope 3 emissions. In particular, water is included as part of Scope 3 emissions, as this metric is also tracked on Con-Serve™ data management system. Scope 3 categories such as waste and supply chain are excluded from the current report due to this data being currently unavailable.



# GHG INVENTORY

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Following facilities are included in the inventory:

- Hotel
- Restaurant
- Pub
- Eco-lodges
- New walk-in fridge and freezer
- Solar panels
- Biomass boiler



# BASE YEAR SELECTION

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- Selecting a base year allows for tracking progress over time and is a prerequisite of the GHG protocol
- 2013 is a good comparative point as from this point onwards Battlesteads started generating power from solar energy and moved to a green tariff, and therefore the selected base year will allow for tracking of progress of Battlestead's continuous efforts to reduce its overall carbon footprint



**Selected base year: 2013**

# REPORTING PERIOD

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- This GHG inventory covers emissions for the 2019 calendar year and compares these emissions to former years, including the base year

**Calendar year 2019**





# EMISSION FACTORS

- All emissions are reported as carbon dioxide equivalent (**CO<sub>2e</sub>**) in order to take into account all the 6 greenhouse gases mandated by the Kyoto Protocol—carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF<sub>6</sub>), in line with the GHG Protocol requirements. This was achieved by using CO<sub>2e</sub> emission factors where available
- Within the Scope 1 emission factors for biofuels, the CO<sub>2</sub> emissions value is set as net '0' to account for the CO<sub>2</sub> absorbed by fast growing bioenergy sources during their growth, as such, the Scope 1 emission factor only contains values for N<sub>2</sub>O and CH<sub>4</sub> emissions. The impact of the CO<sub>2</sub> released through combustion of the biomass is accounted separately under 'outside of scopes' in line with GHG reporting guidelines
- **Market-based** approach was used to calculate electricity supplied from grid by Ecotricity\*. This means that a supplier-specific carbon factor was used in calculations rather than the average UK grid factor. (Please consult the [Greenhouse Gas Protocol Scope 2 Guidance](#) for further information on market-based versus location-based methods for calculating Scope 2 emissions). Briefly a **location based approach** reflects the average emissions intensity of grids on which energy consumption occurs



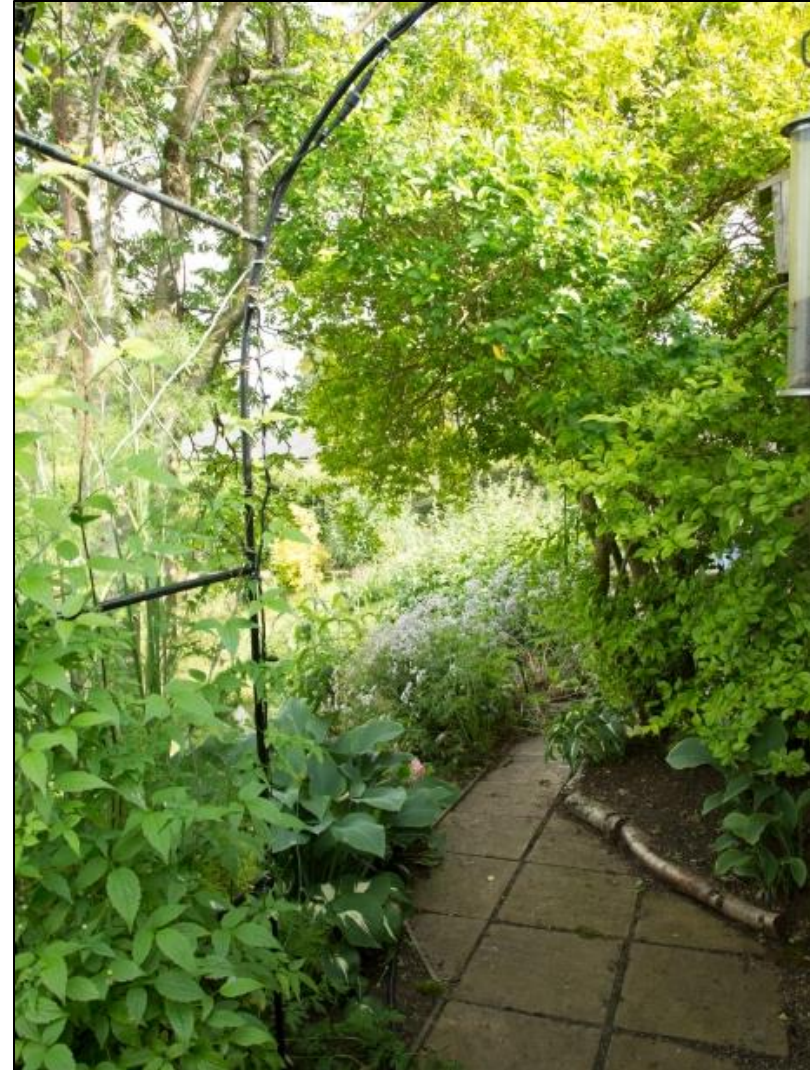
# EMISSION FACTOR SOURCE

Category	Source
Grid electricity	DEFRA for 2019
Electricity – Ecotricity 'Green Electricity' tariff	Electricity info: <a href="http://electricityinfo.org/fuel-mix-of-uk-domestic-electricity-suppliers/?y=2013#tabletop">http://electricityinfo.org/fuel-mix-of-uk-domestic-electricity-suppliers/?y=2013#tabletop</a> (2014-2019)
Gas (LPG)	DEFRA for a respective year (2013-2019)
Diesel Fuel	DEFRA for a respective year (2013-2019)
Water supply	DEFRA for a respective year (2013-2019)
Biomass Scope 1 relevant*	DEFRA for a respective year (2013-2019)
Biomass Outside of scopes*	DEFRA for a respective year (2013-2019)

# ASSUMPTIONS

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- Water data for 2018, 2019 was estimated based on previous 2017 data
- No F-gas emissions included within the reporting period because:
  - Previous cooling units not refilled since 2012
  - New cooling units put in place in 2018, however, the F-Gas included in the units does not count under ongoing Scope 1 emissions







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