



MARITIME HERITAGE SITES


SS Great Britain


The SS Great Britain Trust, Bristol, cares for the world's first great ocean liner, two museums, a research centre, wedding venue and conference facility. The Trust have declared a climate emergency and committed to become **carbon neutral** in their operations by **2030**. Presented below are the steps they have taken so far to understand and reduce their carbon emissions.




Key Statistics


 **200,000**
Visitors a year [1]


 **About 75%** Scope 1 and 2 carbon emissions are associated with the ship's dehumidifiers [2]

 **150 tCO₂e per year** has been reduced so far by reducing the energy use of the ship's dehumidifiers [3]


Scope 1 & 2 Emissions


 **75% of carbon emissions due to dehumidifiers**
SS Great Britain have developed a Scope 1 and 2 carbon baseline, and found that approximately 75% of these emissions were associated with dehumidifiers [2].

 **25% electricity saving saving 150 tonnes CO₂e**
Advanced sensors that monitor conditions such as humidity in real time have helped better understand where operating efficiency could be improved. A recent upgrade reducing electricity consumption by 25% [3] achieved a carbon saving circa 150 tonnes of CO₂e per year.

 **Further Improvement**
There is continued work with University of Bristol looking at modelling and analysis of the dehumidifiers, their controls and energy consumption, as well as the flow path of the dried air and the corrosion mechanisms of the iron. This has resulted in a lot of useful data that can be easily accessed and analysed to help identify where further efficiencies can be made [4].

Wider Considerations

 **Visitor Travel**
Visitor is expected to be the biggest source, although there is limited influence over this due to poor public transport provision and the car park being run by the local council.


 **Waste**
Waste has been reduced by choosing contractors committed to zero landfill policies, minimising plastic in the cafe, switching to recyclable gloves, as well as including local produced items in the gift shop.

Opportunities

- Replace old gas boilers with heat pumps
- Retrofit opportunities
- Formalise buying policies
- Replace dehumidification equipment with less energy intensive equipment

Challenges

- Certain technology that won't run on alternative fuels
- Cost and lack of funding opportunities

 **Air as dry as the Arizona Desert**
To provide the conditions required to prevent rust and maintain the world's first iron ship the air around Brunel's fragile original hull is as dry as the Arizona desert.

References

1. SS Great Britain. (unknown date) 'Corporate Partnership'. Available at: <https://www.ssgreatbritain.org/support-us/corporate-partnership/> (Accessed 1-15 March 2024).
2. Grahamslaw, NI. 2024 Microsoft Teams Conversation with 3ADAPT, 31 January 2024.
3. Heritage Fund. (2023) 'Case study: SS Great Britain – Voyage to Carbon Neutral'. Available at: <https://www.heritagefund.org.uk/stories/case-study-ss-great-britain-voyage-carbon-neutral> (Accessed: 1-15 March 2024).
4. Bristol Climate & Nature Partnership (2022). Accessed 1 - 15 March 2024 from <https://bristolclimatenature.org/news/climate-action-programme-case-study-ss-great-britain/>