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# Energy and Water Consumption and standing up to our responsibilities.

By Simon J King and Altai.

#### Introduction

The *Pride and Prejudice Novel Magazine* is a modern publishing experiment that combines historic narrative with emerging technologies, from thousands of digitally generated images to finely printed, limited-run volumes. While the creative process is imaginative, our responsibility to the real world is grounded and deliberate. This statement outlines the environmental footprint of both the digital and physical aspects of production, and how we are offsetting their impact through certified, high-impact initiatives.

## Digital Image Generation

Over 4,000 images were developed using an artificial intelligence platform hosted on Amazon Web Services. This process, while virtual, requires substantial real-world resources in the form of energy and water, consumed by the servers and cooling infrastructure behind the scenes.

#### Estimated digital resource use:

- Total energy consumed: approx. 120 kilowatt-hours
- Estimated carbon emissions: approx. 50 kilograms CO<sub>2</sub>e
- Estimated water use: approx. 216 litres

To balance this, we have funded the removal of 1,000 kilograms of carbon dioxide through ocean-based carbon capture via *Ecologi's* Blue Carbon Removal programme. This is more than twenty times the actual emissions from image generation and also accounts for digital storage, editing, and hosting.

The associated water use has been offset through contributions to the *Made Blue Foundation*, which supports clean water access on a litre-for-litre basis. We have funded 100,000 litres.

### Physical Magazine Production

Each physical copy of the magazine is 120 pages and printed on 170gsm glossy coated paper using print-on-demand technology. Our printers are committed to sustainability across their facilities. They use plant-based inks derived from renewable oils, energy-efficient machinery powered in part by solar energy, and large-sheet printing techniques that reduce waste and maximise efficiency. Paper offcuts are recycled back into production, and packaging is made from recycled and recyclable materials to minimise the impact of delivery.

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Estimated physical resource use (per UK-delivered copy):

- Carbon emissions: approx. 0.68 kilograms CO<sub>2</sub>e
- Water use: approx. 500 to 550 litres

International delivery increases emissions considerably:

- Average emissions per internationally shipped copy: approx. 2.5 to 3.0 kilograms CO<sub>2</sub>e

## Blended Emissions and Offsetting Approach

To ensure global accuracy, we use a blended average of UK and international delivery emissions in our offset calculations.

Blended average emissions per copy: 1.715 kilograms CO<sub>2</sub>e

All carbon emissions are neutralised through Ecologi's Blue Carbon Removal programme, which supports natural ocean-based carbon sequestration. Water usage is offset through the Made Blue Foundation, which funds long-term clean water infrastructure and delivery.

## Offset Summary (Per 1,000 Units Sold)

Carbon offset: 1.715 tonnes CO<sub>2</sub>e. Water offset: 525,000 litres

## Offset Cost Transparency

We believe sustainability should be measurable and accountable. Our offset programme will cost approximately £232.75 per 1,000 magazines, broken down as follows:

- Water offset: £147.00, to provide 525,000 litres of clean water
- Carbon offset: £85.75, supporting 1.715 tonnes of carbon removal.

This equates to an offset cost of £0.23 per magazine, a cost we absorb as part of a commitment to environmentally responsible publishing. These figures will be reviewed annually and updated to reflect actual delivery volumes and project pricing.

#### Conclusion

This offset strategy ensures that every stage of the magazine's creation, from the first imagined image to the final printed page, remains *somewhat* environmentally responsible.