

PRODUCT DESIGN

PORTFOLIO

Louise Boyle

About Me



My name is Louise Boyle, and I am pursuing an MSci in Product Design and Innovation at the University of Strathclyde. My studies have equipped me with a diverse skill-set, enabling me to approach a wide range of design challenges with confidence.

In addition to my academic work, I hold two part-time roles: as a dance educator at Believe Dance Academy and as a retail assistant at Lidl GB. These roles have given me valuable experience working with people from diverse backgrounds and have deepened my passion for user-centred design. This dedication to creating meaningful, practical solutions is central to my work and reflects my commitment to addressing real-world needs.

As a designer, I execute every project with clarity, open-mindedness, and purpose. I see design as an opportunity to display my adaptability, applying relevant skills across different settings. My expertise bridges both digital and physical environments, with a solid foundation in sketching and prototyping in both mediums. This helps to promote consistency and the continuation of ideas in my designs.

At the core of my philosophy is a commitment to prioritising the needs and wants of the customer at every stage of the design process. I believe that thorough and comprehensive research forms the foundation of a successful design, combined with sustainability to ensure the design is both impactful and responsible.

My design approach is driven by a focus on process and attention to detail, even during the most tedious phases of product design. This allows initial ideas to evolve into well-rounded solutions. I thrive in collaborative projects where I can contribute my skills and integrate them with the strengths of others. While I am comfortable taking on leadership roles when needed, I am also willing to acknowledge my weaknesses, as this enables personal and professional growth.



01 | e Stride

Individual Project

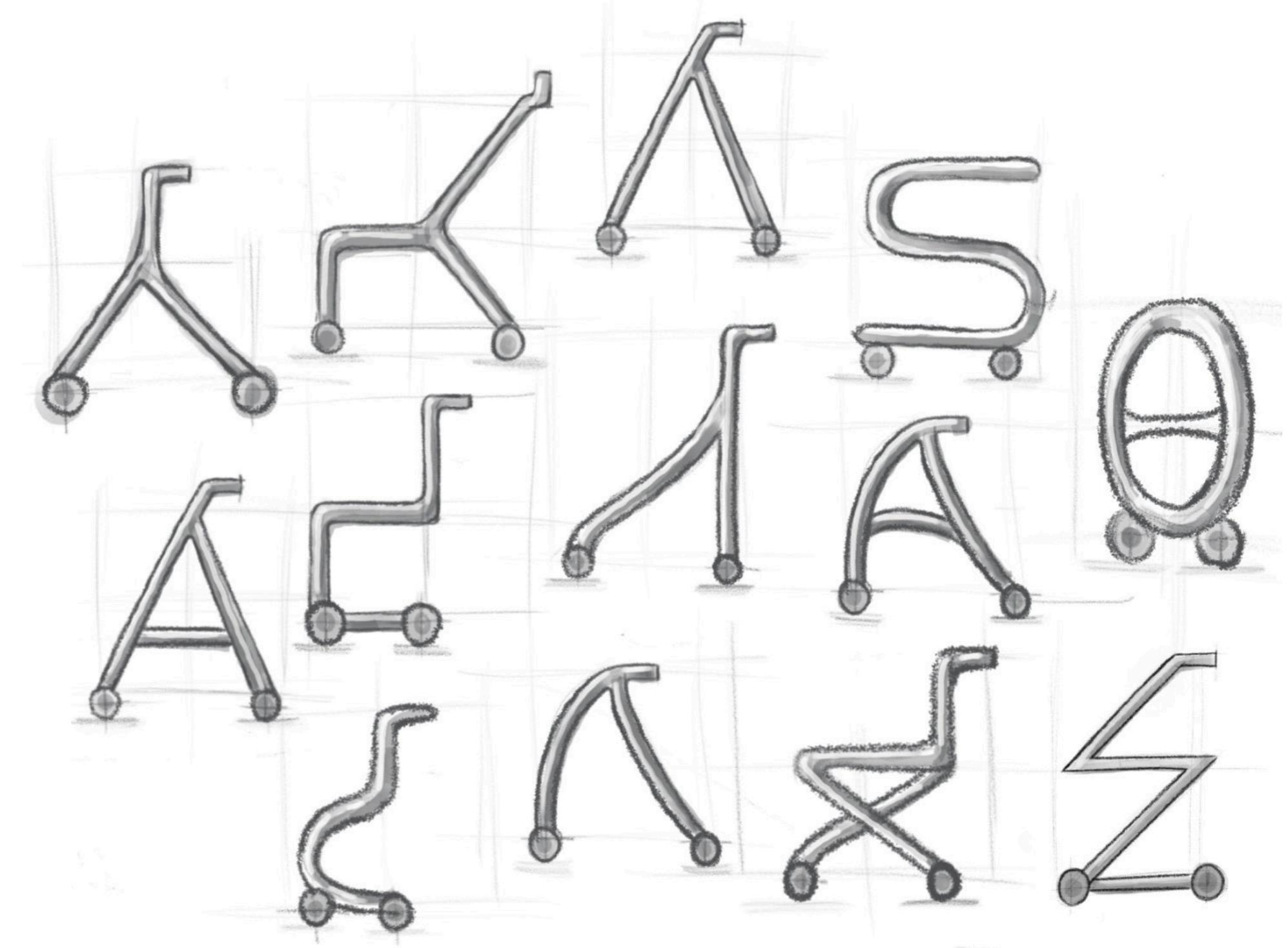
Problem and Purpose

Many elderly shoppers experience physical strain and fatigue when using conventional shopping trolleys, limiting comfort and confidence during everyday shopping trips. eStride was designed to provide motorised assistance with intuitive control, supporting safer, smoother movement through supermarket environments while maintaining familiarity and ease of use.



Ideation

Early ideation explored shopping trolley aesthetics, functionality, and structural integrity to support stability and ease of use.



Design for Manufacture and Assembly

The trolley was developed with manufacture and assembly in mind, using a modular frame structure and repeatable components to reduce part count and simplify assembly. Symmetrical frame elements, standardised fixings, and accessible component placement support efficient production, maintenance, and future repair.

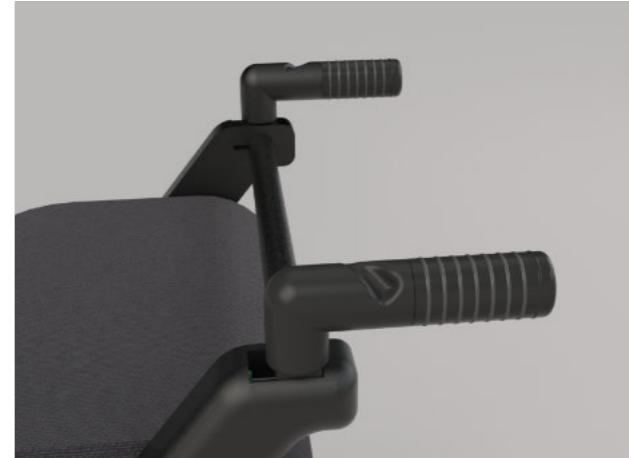


User Interaction and Control

Design development prioritised intuitive user control, ergonomic adjustment, and clear feedback to support confident use during everyday shopping.

Simple Slide Control

A single-axis sliding handle was developed to provide intuitive forward and reverse control while minimising cognitive load. Speed was deliberately limited to approximately 3.5 mph to prioritise user confidence and safety in busy retail environments.



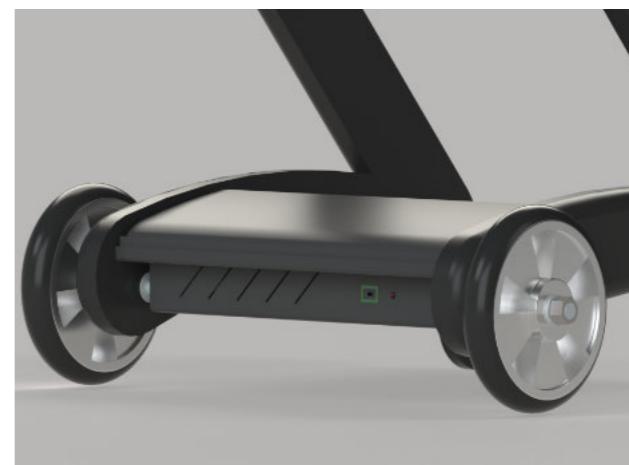
Height Adjustment

Adjustable handle bars allow the trolley to accommodate a wide range of user heights, supporting ergonomic posture and reducing strain during prolonged use.



Long Lasting Power

An integrated rechargeable battery was positioned low within the chassis to improve stability while supporting extended shopping trips. This placement balances weight distribution and enables up to 15 hours of use without compromising manoeuvrability.



Final Outcome

eStride resolves earlier design decisions into a compact, motor-assisted shopping trolley that supports comfort, stability, and confident movement in everyday retail environments.

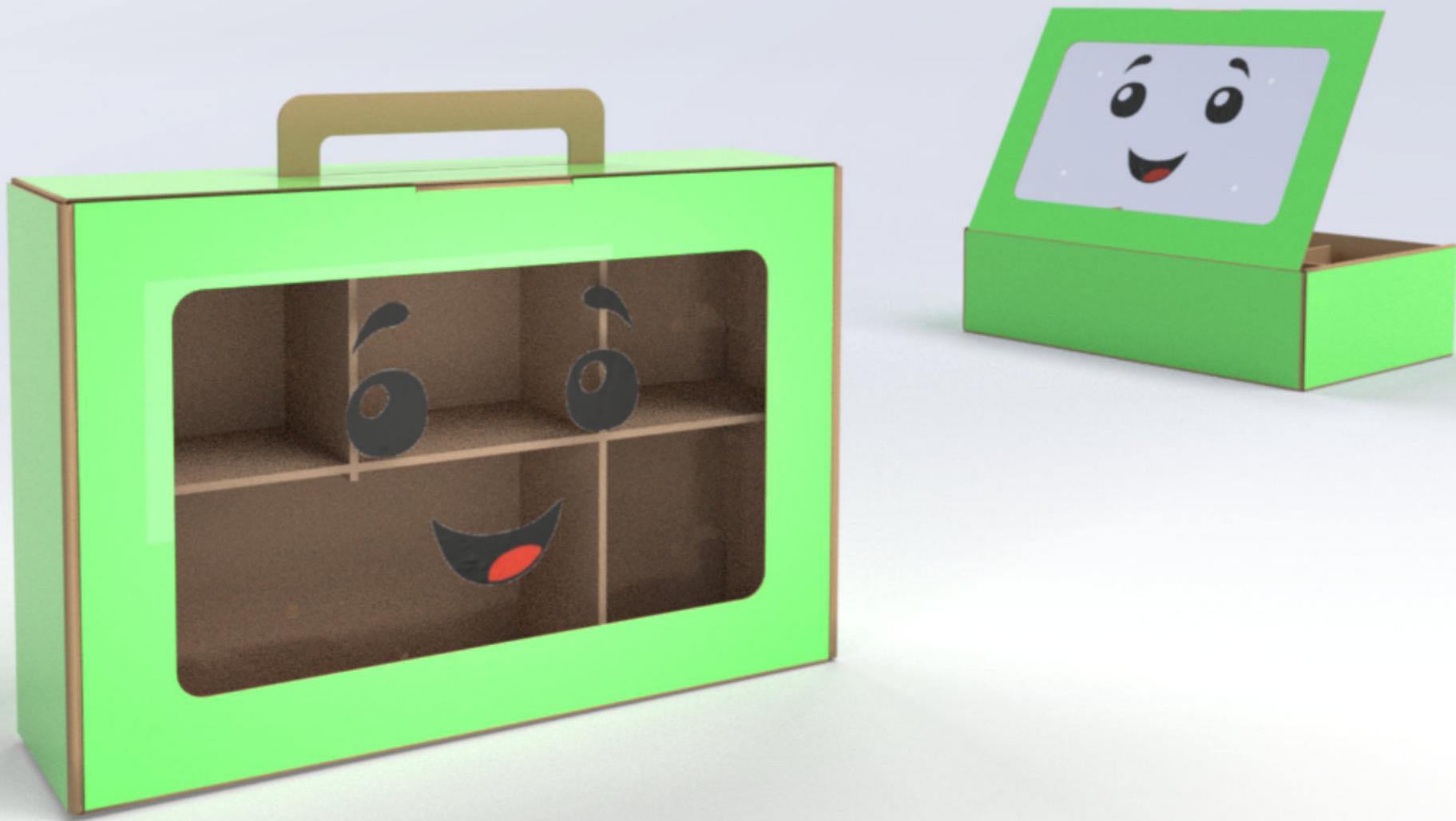


02 | Lunchbox Legends

Packaging Design
Project

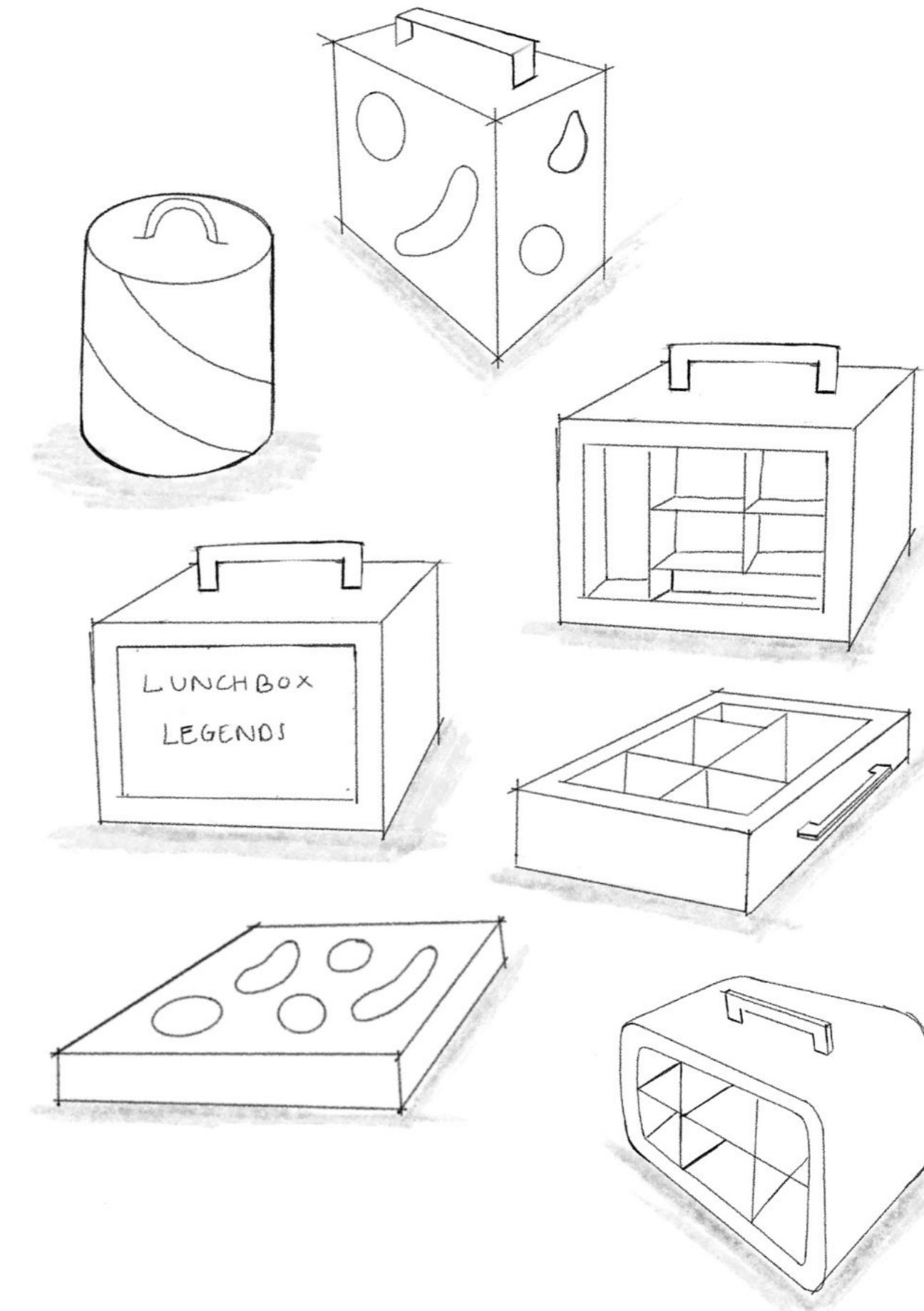
Problem and Purpose

A lack of engaging and sustainable packaging contributes to low fruit and vegetable consumption among school-aged children and unnecessary food waste. This project aimed to address this by designing a playful, reusable packaging concept that encourages healthier eating habits while supporting more responsible purchasing choices.



Ideation

Early ideation focused on exploring different box formats, internal layouts, and levels of visibility to balance playful interaction with practical storage. Concepts tested how character-led graphics, handles, and compartmentalisation could encourage daily fruit selection while remaining simple to manufacture and reuse.



Physical Prototyping and Functional Testing



Development

Development focused on refining the selected concept through iterative digital modelling and physical prototyping. Internal compartment layouts, handle ergonomics, and visibility of produce were tested to ensure the design was functional, reusable, and engaging for children while remaining simple to manufacture.



Final Solution

Lunchbox Legends is a reusable, character-led packaging solution designed to encourage daily fruit consumption among school-aged children. The final design features a rigid cardboard structure with internal compartments for portioning fruit, a carry handle for portability, and a transparent window that allows children to see and engage with the contents while supporting more sustainable purchasing choices.



03 | Shadow Sound

Speaker Design
Project

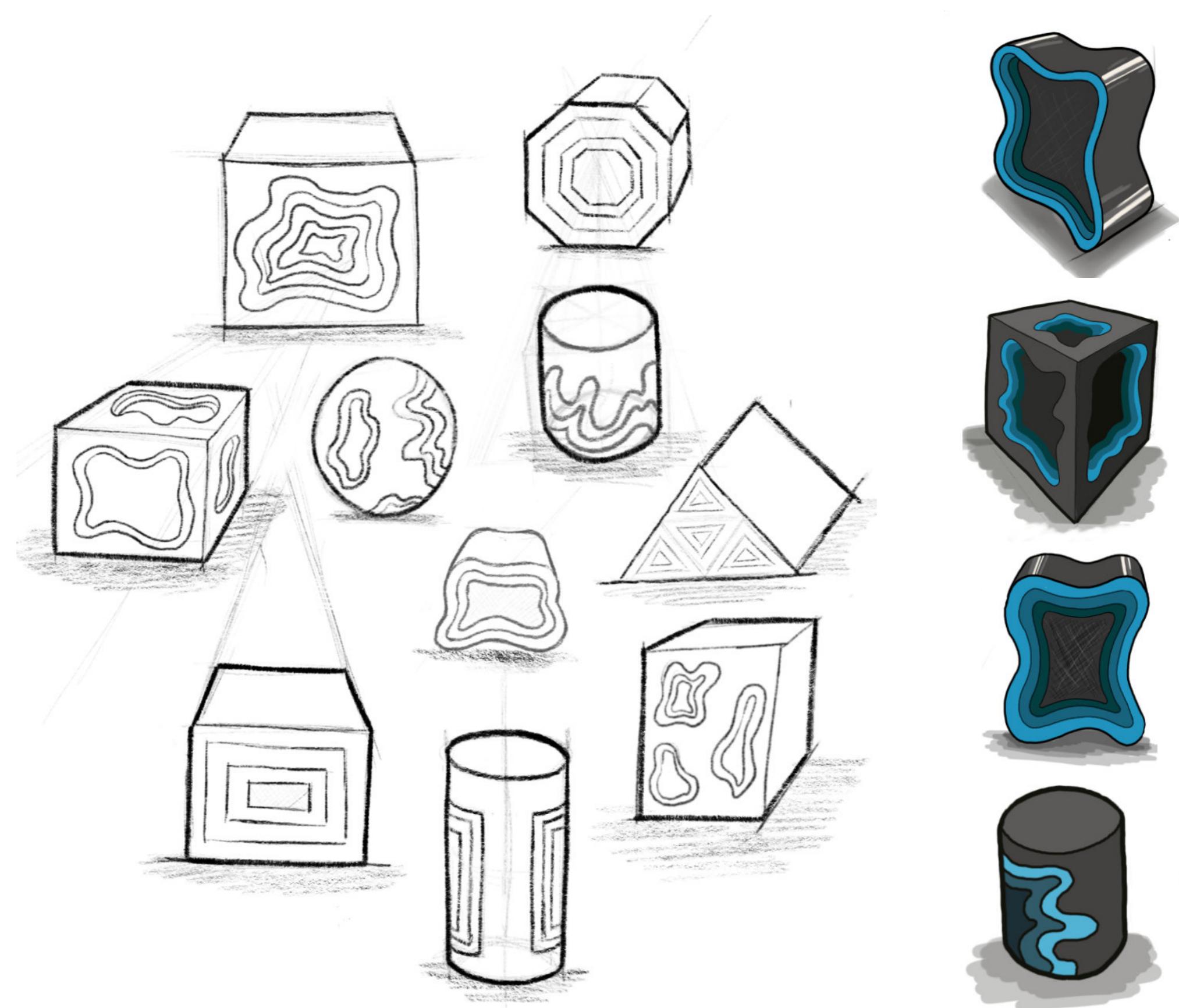
Problem and Purpose

Wireless speakers are often designed with a focus on performance, with limited consideration for emotional expression through form. This project investigated how fear could be communicated through a sculptural speaker design using shape, colour, and layered geometry.



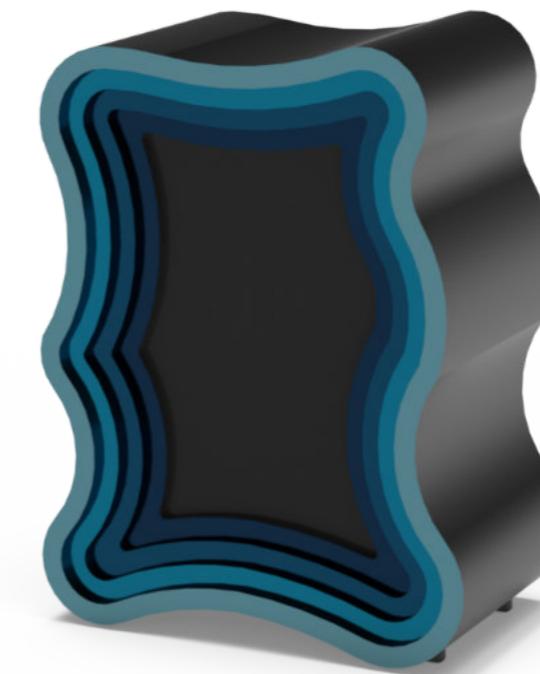
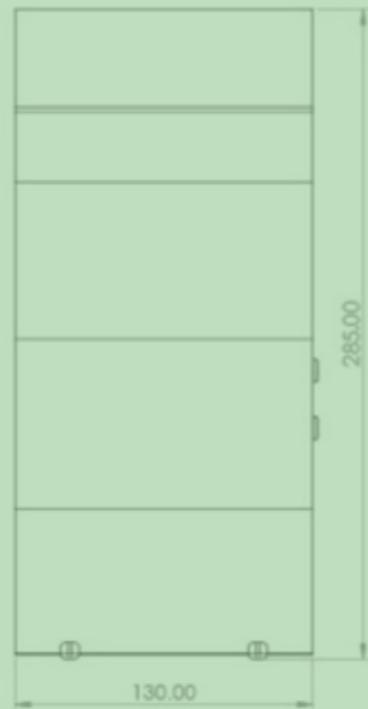
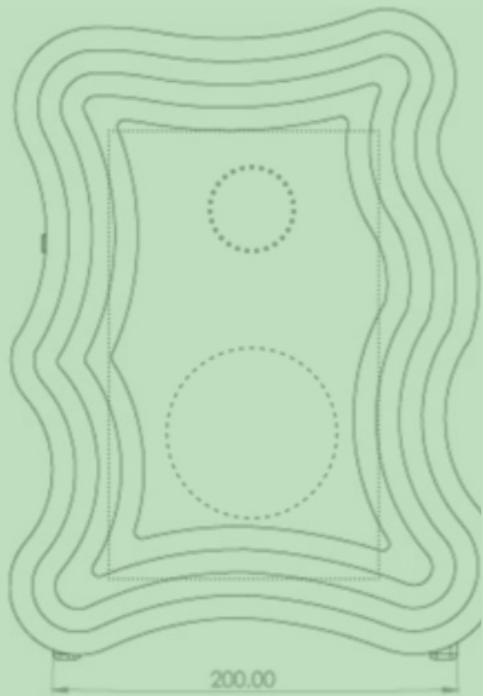
Form Exploration and Development

Ideation focused on exploring a range of abstract forms, proportions, and layered geometries to visually communicate the emotion of fear. Sketching and early 3D form studies were used to investigate tension, distortion, and depth, allowing emotional expression to guide the development of the speaker's sculptural identity.



Development

Development focused on refining the selected form through adjustments to layered geometry, proportions, and surface continuity to enhance its emotional impact and manufacturability.



Final Solution

Development focused on refining the selected form through adjustments to layered geometry, proportions, and surface continuity to enhance its emotional impact and manufacturability.

- 🔊 2 way sound output

- ＊ Wireless connectivity

- 🔋 Rechargeable power



04 | Busy Brew

Technical Design
Project

Problem and Purpose

In busy domestic environments, kettle use often leads to unnecessary mess and interruptions, particularly during rushed morning routines. This project aimed to improve the everyday brewing experience through the integration of modular attachments, such as a drip tray and teabag holder, designed to reduce mess, minimise cleanup, and support more efficient use.



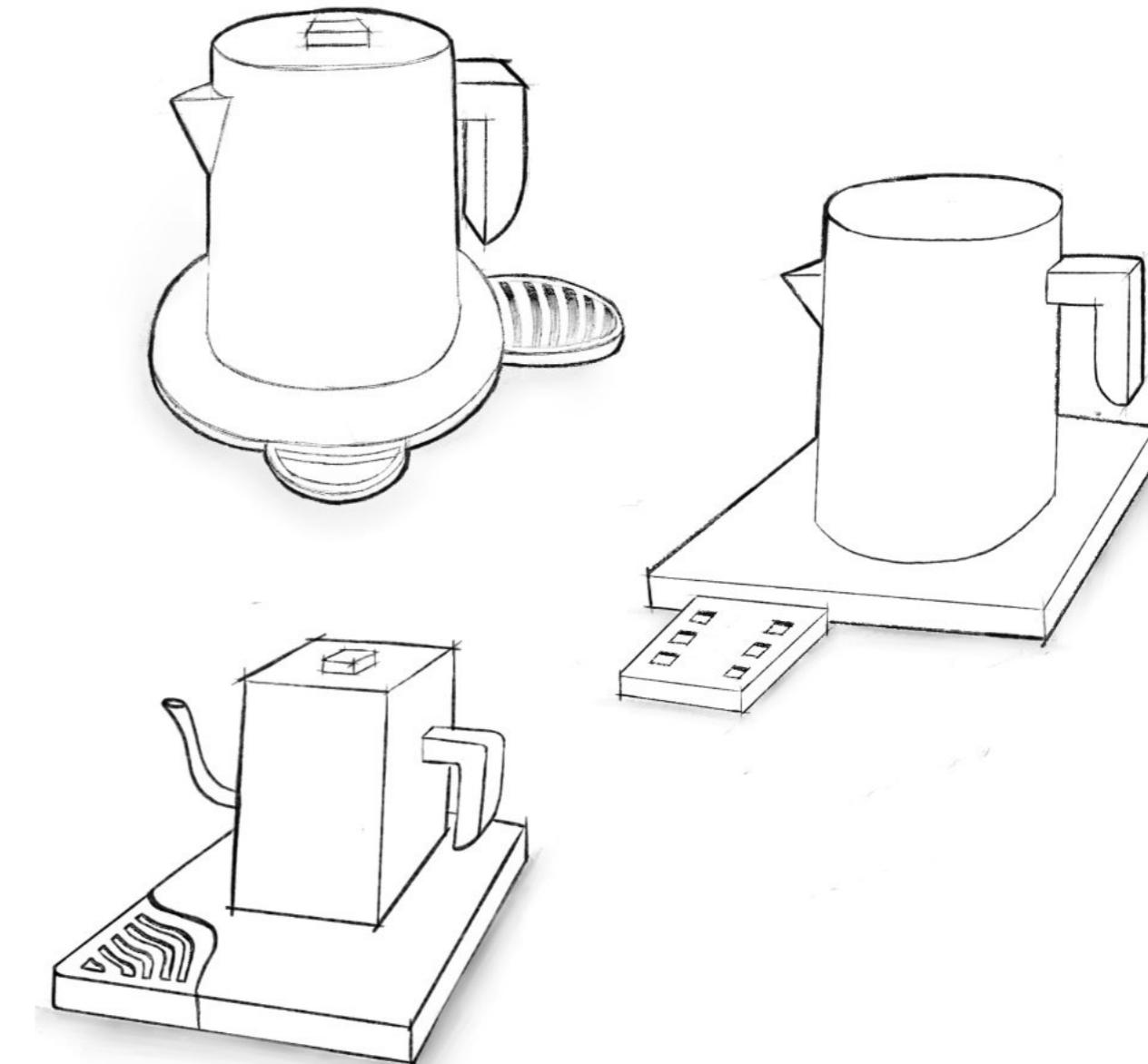
User Needs and Ideation

Key Needs

Busy Brew is designed for users with time-pressured morning routines, where efficiency, cleanliness, and minimal interruption are essential. Research highlighted common pain points around water drips, teabag disposal, and workspace clutter.

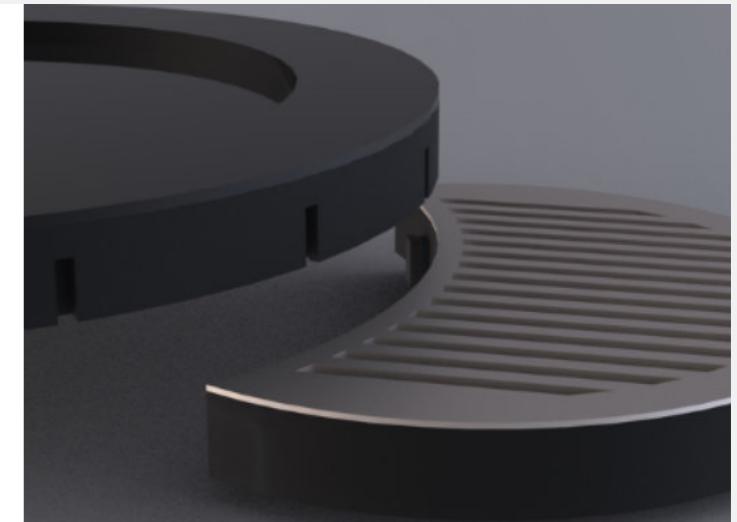
Design Direction

Early ideation explored how modular attachments, such as a drip tray and teabag holder, could be integrated into the kettle system to support a cleaner and more efficient brewing experience.



Design Development and Refinement

Development focused on refining the kettle form and attachment system through 3D modelling. Proportions, surface transitions, and the integration of the drip tray were adjusted to improve usability, visual balance, and ease of everyday interaction.



Final Solution

Busy Brew is a modular kettle system designed to reduce mess and interruption during time-pressured morning routines. Integrated attachments support a cleaner, more efficient brewing experience while maintaining a compact form suitable for everyday domestic use.



05 | Eco-offin

Industrial Group Project

Problem and Purpose

Traditional coffin manufacture often relies on resource-intensive materials and processes with limited consideration for environmental impact. Eco-offin aimed to explore a more sustainable approach to end-of-life design, balancing material responsibility, manufacturability, and dignity within a contemporary burial context.



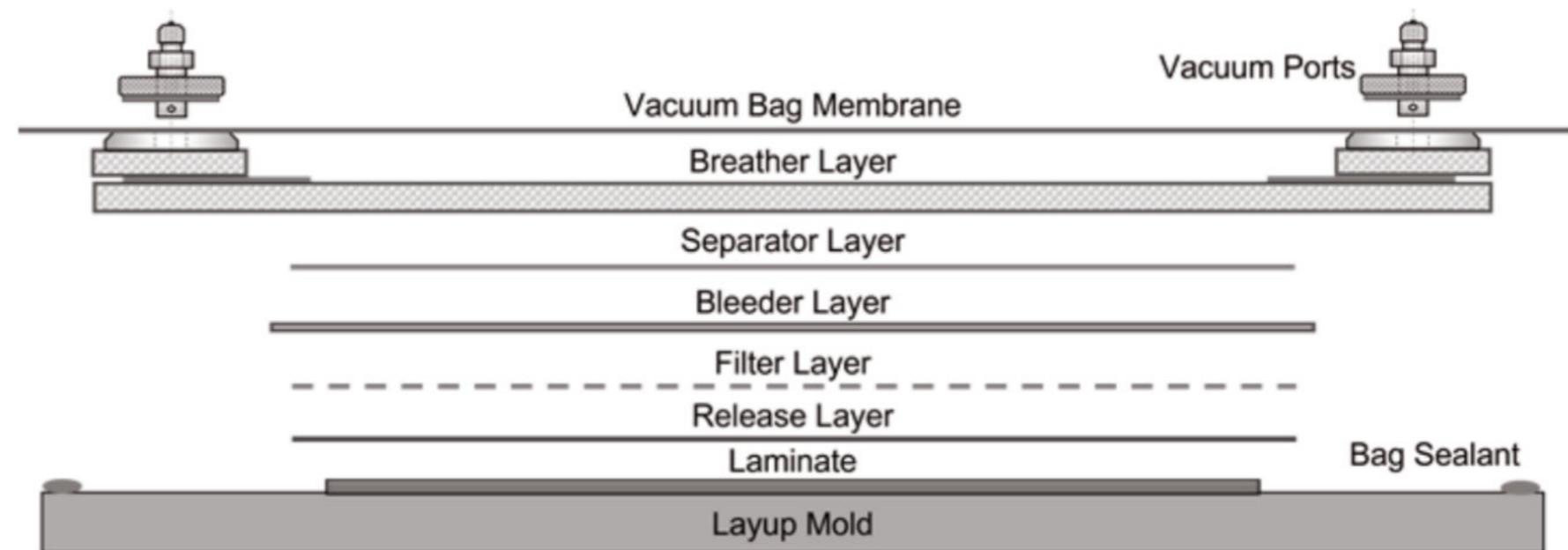
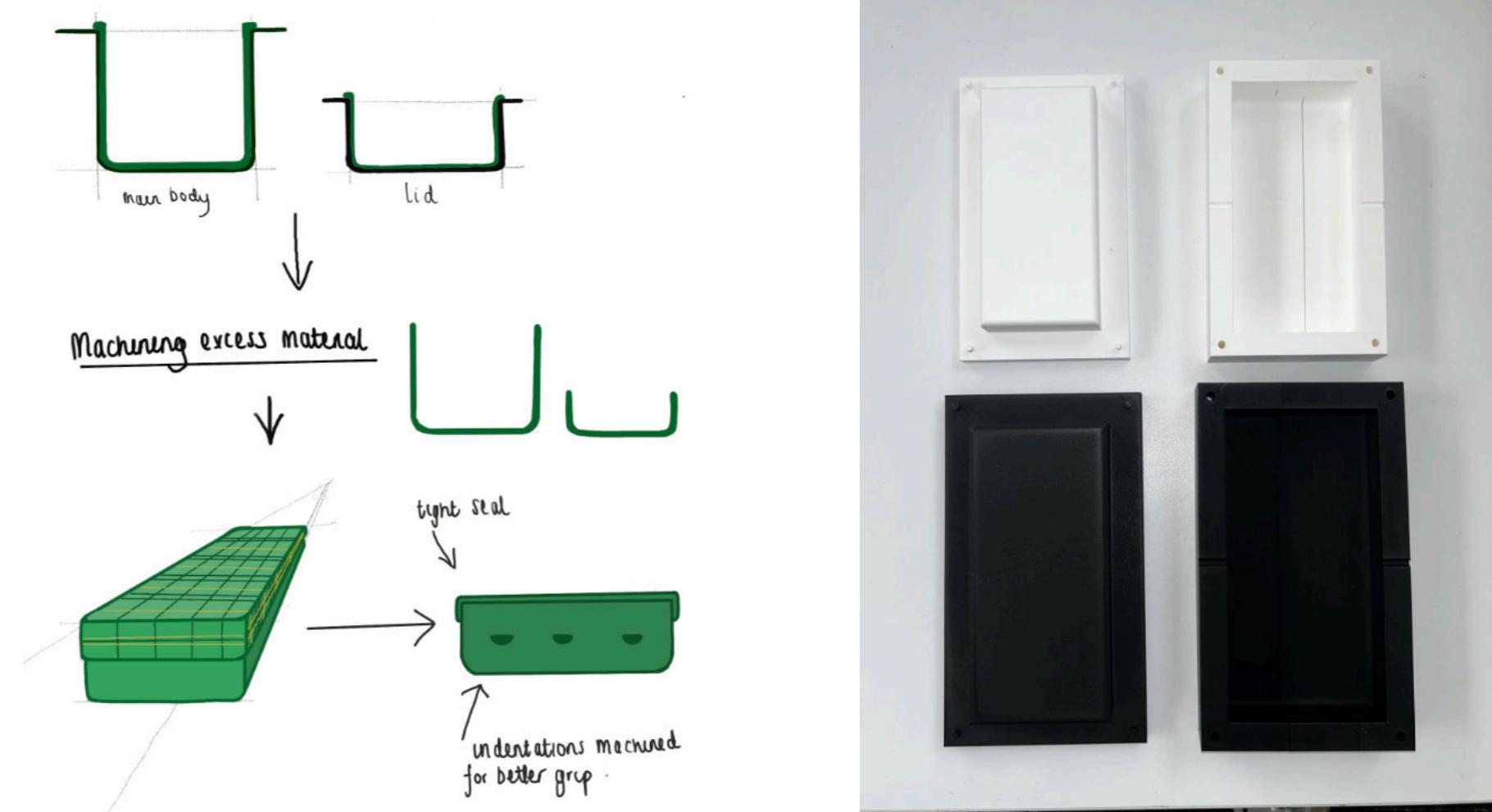
Company Profile and Research

Research and development were informed through engagement with Prickly Thistle, a Scottish manufacturer specialising in sustainable textile production. Site visits and material exploration provided insight into responsible manufacturing processes, material sourcing, and opportunities to integrate locally produced wool textiles within the coffin design.



Sustainable Materials and Manufacture

Material selection and manufacturing processes focused on reducing environmental impact while maintaining structural integrity and manufacturability. Composite layups using bio-resin and wool reinforcement were explored through small-scale testing to inform a feasible and responsible coffin construction method.



Final Solution

The final solution integrates sustainable composite construction with locally sourced wool textiles, balancing environmental responsibility, manufacturability, and a respectful aesthetic appropriate for end-of-life use.



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