## Overview

On this page I am collecting all of my initial and final design ideas. Whilst designing my product I used multiple different media. For example to generate many ideas I started by using pencil and pen this allowed me to make many changes to many different ideas rapidly allowing me to fully develop every idea. Then once I was happy with an idea I moved onto making a few cardboard models to test the functionality and form. Once happy I made my final design on CAD.

Models

Pictured below are all the models I had created based on my drawings and favourite design idea. Whilst modelling I wanted to capture the idea and workings of the product. For example I modelled the different sized dividers and tested how they will all clip together and come apart whilst also holding their shape within. I was extremely happy with this outcome. Also I wanted to test the living hinge in which would make the packaging act as almost a book cover and fully open flat and close securely. I also started experimenting with the sizing of my packaging and decided to stick to 27cm wide, 8cm deep and 25 cm long whilst folded so that the box can be delivered through a standard UK post-box.

2D Design

After all of my design models and drawings were complete and I was happy with my final Idea. I moved on to CAD and designed a 2D net on 2D design. In the bottom left I have created all of the dividers necessary to create multiple different sizes of compartments for singular or multiple products. These dividers can simply clip into the base of the main shell and hold their upright shape very well. They also have gaps to allow the other dividers to slip together. Just below you can see the main shell of the packaging that houses the gaps to allow the dividers to clip into place. Also you can see the living hinge in which is fully flexible and can lay completely flat but also when closed hold its shape covering the contents inside the packaging. Furthermore I decided to add some finishing features such as engraving two boxes on the front, one to add the delivery address and one to add the return address of the company.
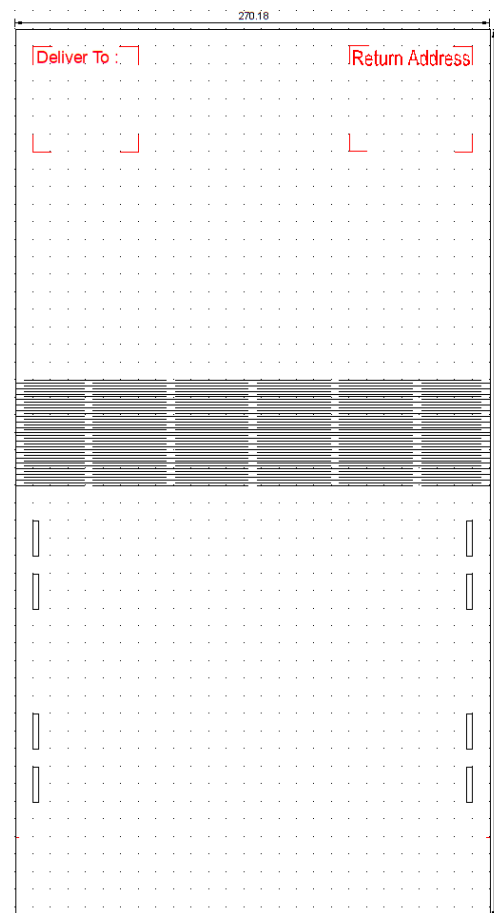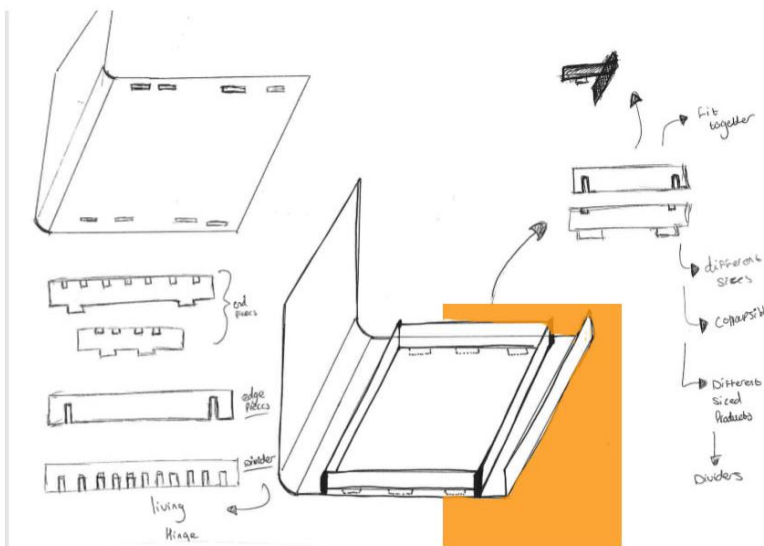
Pencil Drawings

After all of my research and using my mood board I started to generate multiple product ideas. I wanted my product to hit most of, if not all of the points in the brief. I mostly focused on making the packaging collapsible and have the ability to hold a range of different sized products. Therefore I tested multiple ideas such as a multiple sliding boxes in which can be removed and replaced in a range of different sizes however I decided that this idea did not meet other parts of the brief such as being fully collapsible. Additionally there was a risk of the box being able to slide out during transit losing the contents inside. My second idea after this problem was to design multiple different sized sides in which clip into place and lock together to create a strong box, this box can also change size based on the layout of the sides. In the drawings you can see the individual sides and how they are designed to lock together into place at a range of different sizes I decided to stick with this idea as it hits most of the points in the brief and I feel it will work perfectly. One of my design ideas in which I decided to keep from the start was the use of the living hinge. I wanted to use a living hinge because of its properties as it could easily lay flat, however hold its shape and strength whilst covering the product. This allowed the packaging to lay completely flat when not in use. Additionally the living hinge allows the box to become completely hinge and standard component free. Furthermore I experimented with multiple different sizes of packaging and in my drawings I decided to stick to the sizes of a standard UK letterbox. Not only will this allow the company to deliver the product when the user is not present at home but also allow the user to return the packaging almost instantly at any post-box. This allows the product to become completely client and user efficient.