

CRITERION A: ANALYSIS OF A DESIGN OPPORTUNITY Problem Area

As a student living away from home, a constant problem is the organisation of my make-up and jewellery. At home I have my own bedroom with the furniture arranged as I want it. I also have spare storage space for things I don't use all the time. When away from home, I can only take the things I know I am going to need, which often end up in a mess on the only table that I sometimes need for other purposes e.g. study!

On discussing this with my friends, there was a general agreement that it was a problem. However, we all agreed that our own organisation also contributed to the scale of it – we could just arrange things more neatly and keep it that way.

Given this, a suggestion that some of my friends liked, was the concept of a 'travelling make-up table' that could also store our 'bling' as we moved from location to location.



I therefore decided to analyse the problem that my friends and I actually had more deeply. The main points were:

- We were generally untidy when getting ready to go out and this was the case at home and away.
- We had got used to sorting out our make-up as we needed it.
- We also agreed that we often stuck with the same items for quite a long time until fashion, or our mood, changed. This meant that a make-up bag sufficed.
- It was our jewellery that caused us the most problems:
 - Mislaying one piece of a set.
 - Items getting tangled.
 - Keeping them from getting damaged.
 - Keeping them clean.

I have therefore decided to change the focus of my project and concentrate on:

- Organising jewellery.
- At home in the bedroom.
- Located on a dressing table.

This will necessarily mean that my target audience will not now be students as such and the product will need to be a significant piece of 'furniture' that can fit in to more 'luxurious' surroundings and be of a higher aesthetic and monetary value.

Initial Design Brief

To design a jewellery organiser to be used on a dressing table.

- Areas to research:
 - Potential users
 - Age
 - Income
 - Lifestyle
- Existing products
 - Style
 - Materials
 - Price range
- Target market
 - Type of outlet
 - Price



Research showed that existing products fell into the two categories illustrated here.

The first example was liked as a concept, but it was felt that it was very expensive (over £200) and would actually take up more space than we had in our digs. The final straw was that we felt that our parents would not be happy about adding to the amount that they already helped us move each term!

The second example was considered useful in that it did organise our make-up. However, we all had items like this already, although as separate items e.g. bags/boxes and mirrors.

The issue of our jewellery was still not solved.



Target Market and Audience

A jewellery organiser is potentially a product that could be used by any woman who owns jewellery – and some men. People with expensive items are likely to make alternative arrangements e.g. a home safe. Those with 'cheap bling' are unlikely to worry about buying anything specific for storage – drawers, bags and table surfaces will do. I therefore decided to interview a number of my mother's friends and clients at the 'select' hairdresser where I have a part-time job. I also asked 20 of them to fill in a questionnaire to help generate a final design specification.

Through this, I was able to generate a 'model client' to serve as my target audience.

Customer Profile

- Female, aged 30 -50, living in her own home.
- Full-time career, earning £35,000 + per year.
- Proud of her job, appearance and home.
- Shops in boutiques and vintage shops.
- Visits museums and art galleries.

Interview

Q: Do you find your jewellery hard to organise as it is currently stored?

A: *Yes, it's hard to find different items because they are all together and the necklaces always get tangled and become entwined in bracelets.*

Q: Would you prefer your jewellery to be stored out of sight or on show?

A: *It doesn't need to be on show, but so that it remains separate. Most jewellery boxes just mean everything is put in together and it is hard to find an item.*

Q: Where do you store your jewellery at the moment?

A: *Mostly in the dresser drawers, but I do have a box on top of it as well.*

Q: How much room do you need for your jewellery?

A: *I have some pieces that go with certain items of clothing and I keep them together with a small bag on each hanger in the wardrobe. Items that I use regularly are just on the dresser surface or in my jewellery box. This uses up about half the surface area.*

Q: What do you dislike most about your existing jewellery box?

A: *Too many small compartments and it is basically a box with little aesthetic merit!*

Q: What colours would suit your bedroom furnishings?

A: *Primary colours would not be appropriate. Pastels and calming shades would be more in keeping. Natural material finishes would also be preferable.*

Q: Are environmental issues important to you?

A: *I do try to look out for environmentally aware products – not always successfully.*

Q: How much would you be prepared to pay for an organiser?

A: *That is difficult to answer without seeing the product. If it solved the problem and suited my style, then who knows!*

Organization Questionnaire

1. What kind of jewellery do you own the most of?(Tick two)

Necklaces Earrings Bracelets Rings

Other: _____

2. Which of the options above are the most unorganized in your home? Please state: _____

3. Do you need a light to put on/find jewellery? Yes No

4. Where do you store your jewellery?

Bedroom Washroom Other (please specify) _____

5. Would you prefer to store your jewellery compactly and safely or have it on display so it is easy to see?

Store compactly and safely

On display, easy to see

6. What color scheme best describes your bedroom?

Bright Dark Pastel Natural Monochromatic

7. If you could design a jewellery organiser, what two colors would it be? (Tick two)

Blue Brown Silver Gold Purple

Other _____

8. What is a reasonable price range for a boutique sold jewellery organiser??

None £1 - 10 £11 - 20 £21 - 30 £31 +

9. Would you prefer for an organiser to be freestanding or wall attached?

Freestanding

Wall attached

Other (please specify) _____

10. If you could design a jewellery organiser for yourself, what 3 things would you include in the organiser and why?

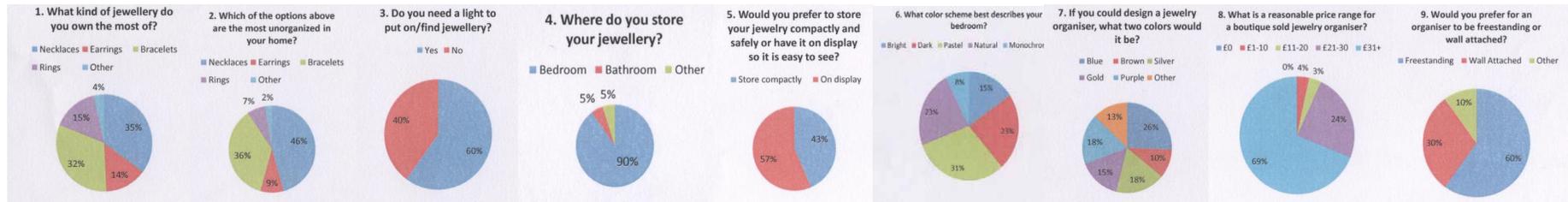
1. _____

2. _____

3. _____

Thank you very much!

The purpose of the questionnaire was to establish how the target audience viewed the design aspect of the organiser – function, aesthetics, and personal preferences. I also asked a question regarding the price range that they would expect to pay and about any special features they would include that might extend the marketability of the product.



The answers to the questions confirmed some of my one experiences and assumptions -

- Necklaces and bracelets should be the focus of the design; however some consideration should be given to smaller items such as rings. There was a significant agreement that the organiser should be freestanding and would be used in the bedroom – most probably on the dressing table.
- There was little agreement on the colours to be used, but pastel shades and those from nature were more popular. A theme from nature was also a popular consideration. To my surprise, the majority wanted the organiser to display the items, rather than to just store them.
- The final consideration, which will enhance the marketability, would be to make it dual purpose in some way.
- Not unsurprisingly, given my chosen customer profile, they were prepared to pay more for the product – especially if it met their high expectations.

10. What would you include?

The most common features were:

- A feature from nature
- Containers for small items
- Ways to keep longer items free from tangles
- Make it dual-purpose e.g. include a notepad/light

Final Design Brief

To design a jewellery organiser, based on a natural theme, that is placed on a dressing table. It should include a light to assist choosing the items of jewellery to be worn.

Existing Products

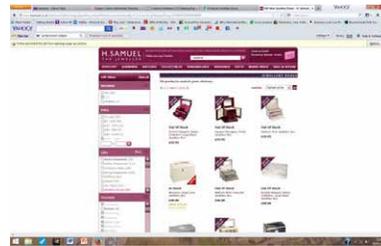
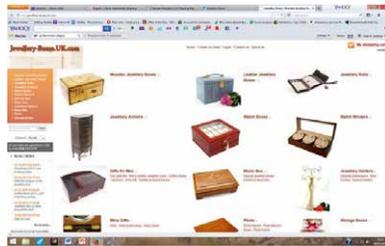
Having found out that my potential clients prefer to shop in 'quality' high street shops and are more than prepared to use on-line retailers, I collected together a range of products that satisfied my initial brief and recorded their responses.

Item	Size & Material	Vendor / price / features	Comments
IMAGE REMOVED DUE TO COPYRIGHT	Height 16cm Diameter 14.5 cm Wood – Cedar, Thuya Burr	Bundu : On line - £125 Shaped drawers	The fact that it is an ethnic craft product, made in an environmentally friendly way was liked by everyone. It has a distinct design, which did not suit everyone's taste. It is not particularly large and it was felt that it would not <u>organise</u> the jewellery very well – especially necklaces.
IMAGE REMOVED DUE TO COPYRIGHT	83 x 40 cm x 9.5 cm Mirror Height 70 cm, with 22cm Wood - painted	Hartleys : On line - £65 Wall/Door Mounted Mirror Cabinet with Photo Frames	The dual-purposes aspect of this design was liked – especially the photo frame element. However, most already had a mirror associated with their dressing table and felt that positioning the item on the wall would not be useful. The design does help with the issue of tangled necklaces.
IMAGE REMOVED DUE TO COPYRIGHT	Height 50 cm Diameter 18 cm Cream powder coated metal	Rustic Angels: On-line - £24 Mirror feature	The 'boudoir chic' style was liked by most, but it appeared a 'cheap' in its production. The mirror was not required and made it look rather 'top heavy'

IMAGE REMOVED DUE TO COPYRIGHT	45 x 27.5 cm x 15 cm Distressed metal with champagne gold effect finish	Next: Shop & on-line - £24	Not liked by anyone and most were surprised that it was from Next – 'more like a cake stand'. Not very good for 'organising' jewellery. Considered to be rather unstable.
IMAGE REMOVED DUE TO COPYRIGHT	31cm x 17.5cm x 8cm Mixed materials	Marks & Spencer: Shop - £30 Wardrobe style with mirror, multiple hooks and studs - Butterfly design	Considered to be rather 'twee and old-fashioned'. It was also felt that it would take up too much space considering the doors need to be opened to get out the jewellery.
IMAGE REMOVED DUE TO COPYRIGHT	Height 39cm Max width 28cm Nickel plated metal Coloured silver	Laura Ashley: Shop and on-line - £35 Flat base with cross shaped ornate arms	Everyone was surprised that this was Laura Ashley as the design seemed rather 'stark'. Once again, it was considered to be unstable and only really useful for necklaces and bangles.
IMAGE REMOVED DUE TO COPYRIGHT	10.5cm x 30.5cm x 15cm Mixed materials	Oliver Bonas: Shop and online - £65 7 separate compartments lined with a plush black and a pull out drawer below. With the clear glass lid so you can see what you've got inside	Split opinions – mainly as to whether the style suited everyone. The glass lid seemed irrelevant, as you have to open it anyway to get the items from the top tray. Too expensive for what it was – a box!
IMAGE REMOVED DUE TO COPYRIGHT	24.5cm x 25cm x 11cm Certified Mango wood from a sustainable source Plywood drawer bases and back panel Non-toxic paint	Oliver Bonas: Shop and online - £49 Misaligned drawers and selection of paint colours	Liked much more than the previous example, both for price and design. Once again, the drawers would not solve the problem of tangled necklaces. The 'real' wood material was liked, with its 'ethnic' look.

Market analysis

My chosen customer profile prefers to shop in smart boutiques and is also prepared to shop on-line from the same style of retailer. They are also prepared to spend more on quality items. There are many retailers who specialise in providing items for such clients and it is these retailers that the product should be aimed at. A few are illustrated below:



A typical retail outlet would be like the one to the right that I visited in the newly opened, prestigious Cabot Circus development in Bristol. An extract from the Oliver Bonas website states:

Our product range is eclectic. Women's clothing, accessories, jewellery, things for the home, furniture and the odd item that resists categorizing. OB is the place to come if you celebrate individuality, cherish good design and are inspired by the cool, the quirky and the creative. Many of our products are designed in house – we have our own ranges of accessories, jewellery and homewares. Our most significant launches have been 'Poem', our range of womens clothing, and our stunning, upholstered furniture in velvet and cotton.

The aesthetic of the store is feminine, with pastel colours to the fore.

The products are at the high end, catering for career women and have a natural feel, combining style and function.

Prices on these sites clearly show that there is a market for high quality goods fetching £100's.

Dimensional research

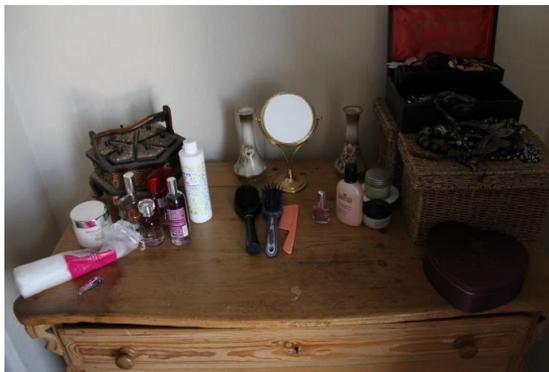


I selected a range of jewellery that my mother is currently using:

Necklaces: Varied in hanging length between 210mm and 430mm

Bracelets Varied in diameter between 61mm and 74mm
 Varied in width between 4mm and 24mm

Brooches: Varied up to 50mm diameter



This picture is a good example of how many dressing tables end up looking like.

The organizer is unlikely to have much effect on this in terms of space available – its main task will be in organizing the jewellery on the table.

I also collected some relevant anthropometric data on hand finger/sizes in order to judge the ability of clients to arrange items on the organiser :(http://usability.gtri.gatech.edu/eou_info/hand_anthro.php)

	Adult female hand length:	Adult female thumb length:	Adult female thumb breadth
5 th percentile	159-160mm	40mm	10-14mm
50 th percentile	167-174mm	47mm	20-21mm
95 th percentile	189-191mm	53mm	24mm



These are typical of the type of display shelves used in the target shops for the organiser. The manager of one pointed out that it would not be a high volume product and therefore must stand out from similar products displayed in an ad-hoc manner. **It must market itself!**

The average shelf depth is unlikely to be more than 300mm. The 'running length' of shelving put over to a product would be directly related to its value, the number of different models in the range and the likely number of units to be sold.

In the case of the organiser, the manager suggested that only one unit would be displayed at any one time and, depending on the lead time for orders, it would be the only one stocked. The size of the packaging could also be an issue with respect to whether it would be stocked.

They also remarked that it would be unlikely that they could display it lit up.

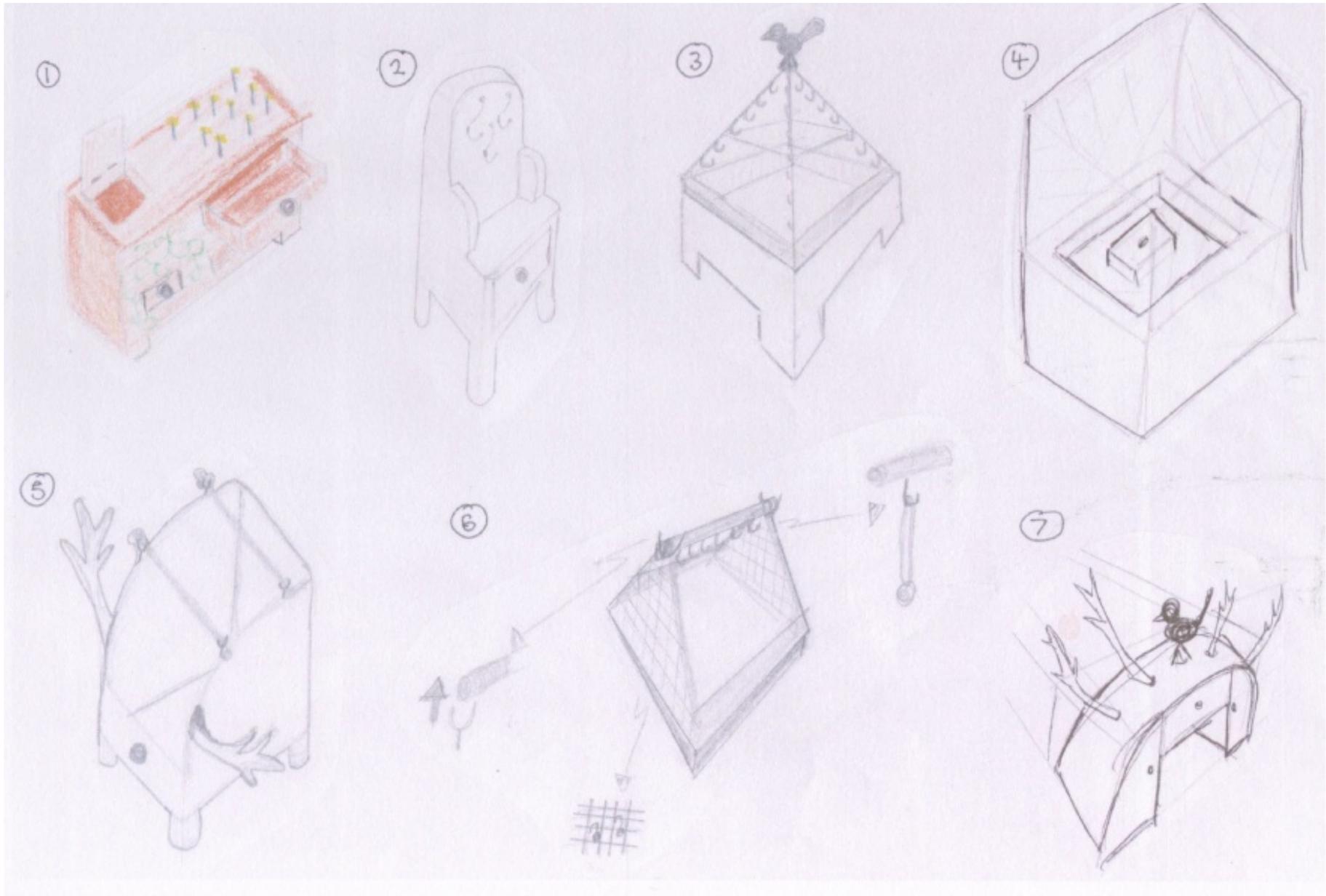
Design & Marketing specification

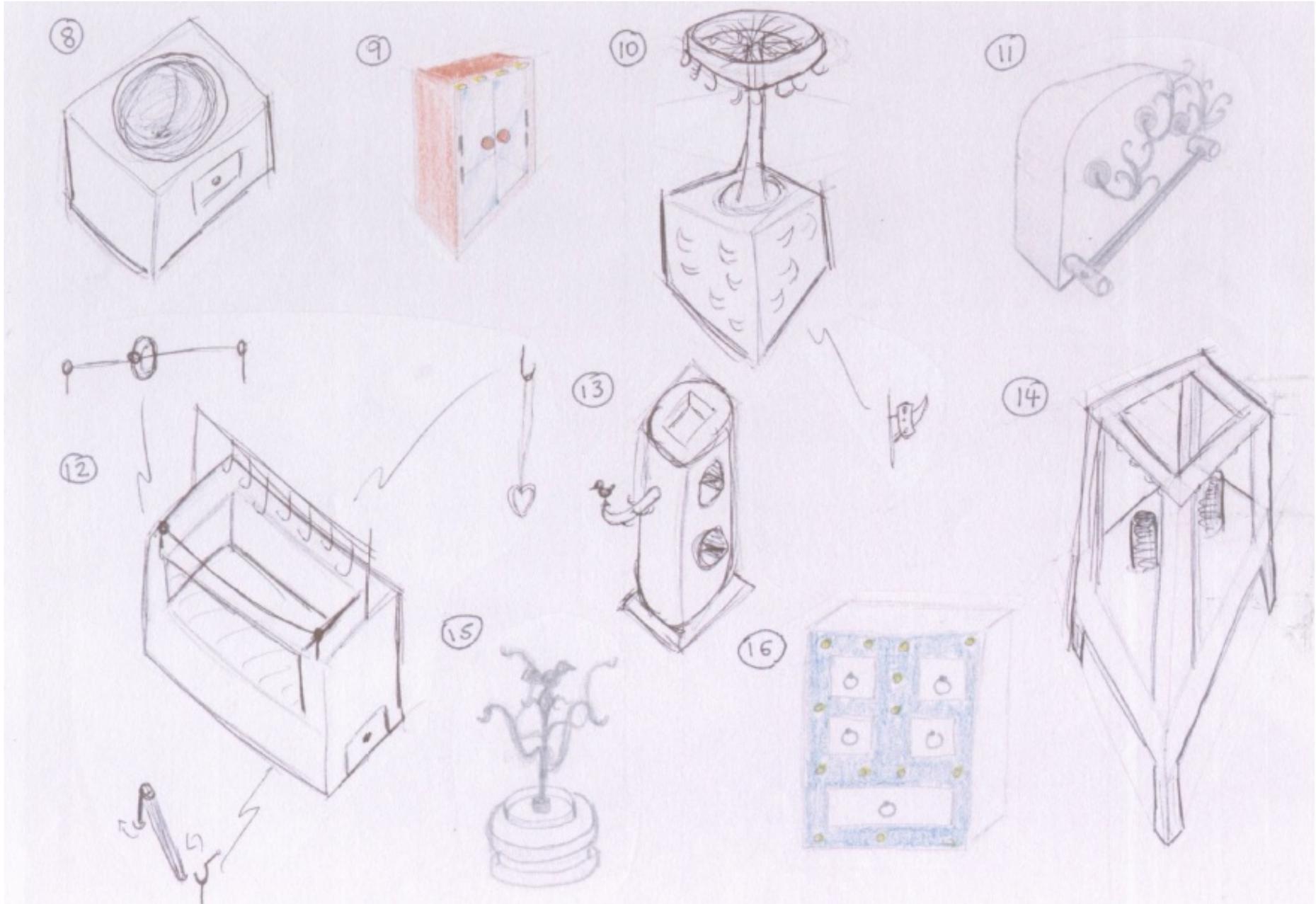
	Specification point	Justification
1.	The organiser will be made primarily out of natural timber, with composite timbers for hidden items.	It was clear from my research that the target client preferred natural materials and was prepared to pay for it.
2.	Secondary materials should be 'shiny' in appearance to add to the 'bling' effect of jewellery – likely to be aluminium or acrylic. All materials should be recyclable.	These materials can be shaped easily to form elements for hanging. They can also be cast to form any form required for ornamentation – animals plants etc. An environmentally 'friendly' image is required.
3.	The organiser must be designed in a way to reduce its 'package size'.	This will minimise transport and storage costs, making it more marketable.
4.	The primary colour scheme will involve pastel shades and natural colours – mainly blues, greens and browns.	This will appeal to my target audience and market. The majority of the clients surveyed had such colour schemes in their bedrooms and so did many of the retail outlets surveyed.
5.	The organiser should incorporate elements from nature such as birds, trees or flowers.	My research clearly indicated they are influenced by the arts and crafts movement and things based on nature.
6.	The organiser should incorporate an LED light as an extra marketing feature.	Although my research did not indicate that clients needed a light for make-up or dressing as they already had good provision for this, it was suggested that it may help selection from the organiser. An LED light could be either battery or mains operated depending on further market research of the finished product.
7.	It must be able to hold at least 4 necklaces and 4 bracelets without them becoming tangled, displaying them at the same time. There should be provision made for some smaller items	Whilst all my correspondents owned more jewellery than this, most mentioned that what they used was often decided upon by the season or quirks of fashion. Thus a selection on display at any one time would be sufficient.
8.	It should be freestanding and placed on the dressing table or equivalent e.g. chest of drawers.	This was a unanimous response and allowed for easy relocation.
9.	The size in its constructed form should be: Width/length: 110mm – 320mm Height: 500mm max.	This comes from research of existing similar products. It was clear from my correspondents that space on the dressing table was not influenced by what was need on it!
10.	The final purchase cost will necessarily be high because of the items specified above. However, it is expected that a ceiling of £100 is likely.	The potential clients indicated that that were prepared to spend over £30 and when showed more expensive pieces were not put off. The retail outlets suggested that the novelty aspect, coupled with a sensitive design would justify the higher price. For them it could mean a larger profit margin for the shelf space put over to it.
11.	Packaging to be made from recycled materials.	To maintain the environmentally friendly approach.

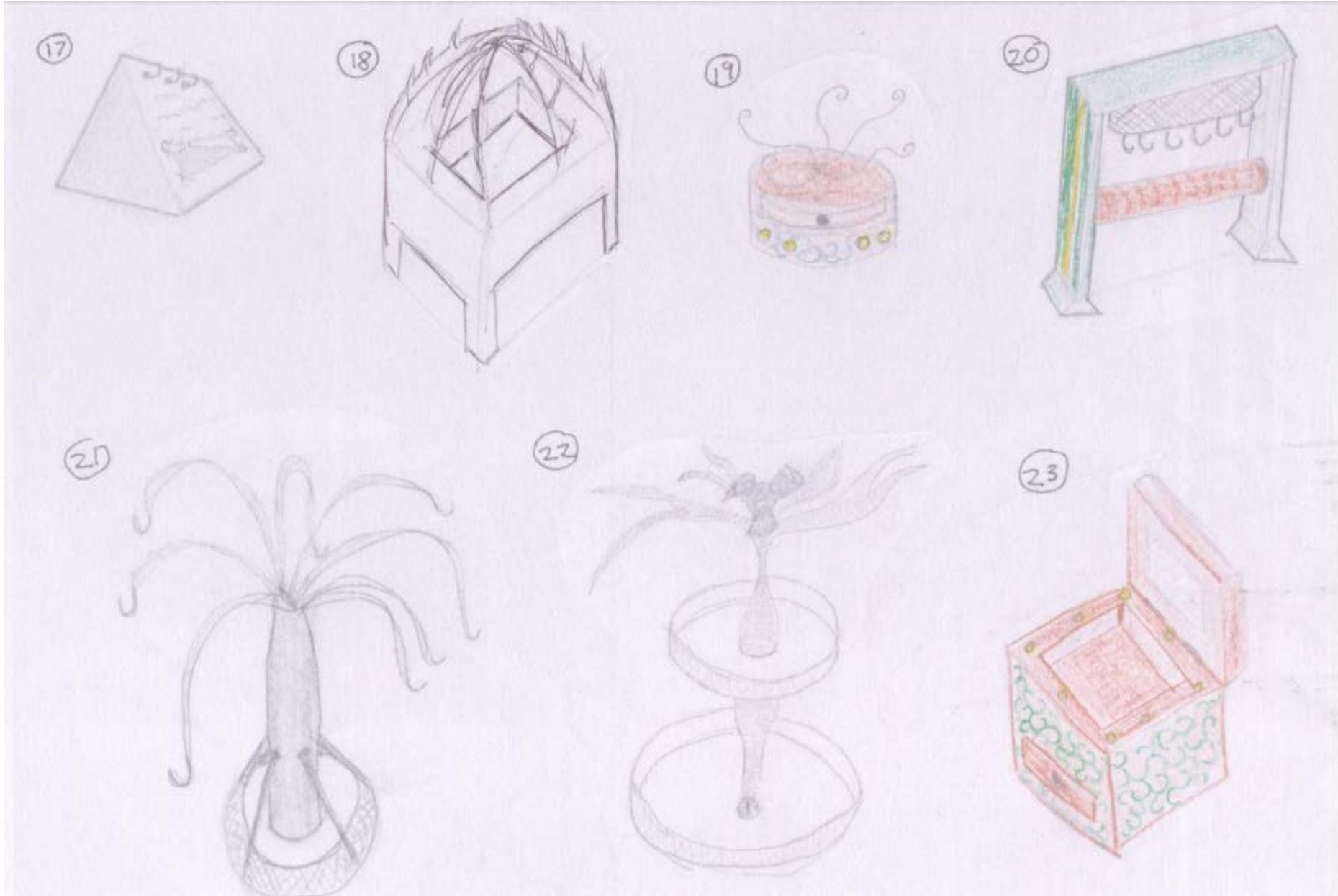
Plan

I now intend to produce a number of sketched initial designs from which I will choose 4 that most closely meet my specification for development. One of these will then be taken forward for modelling, market evaluation and production analysis.

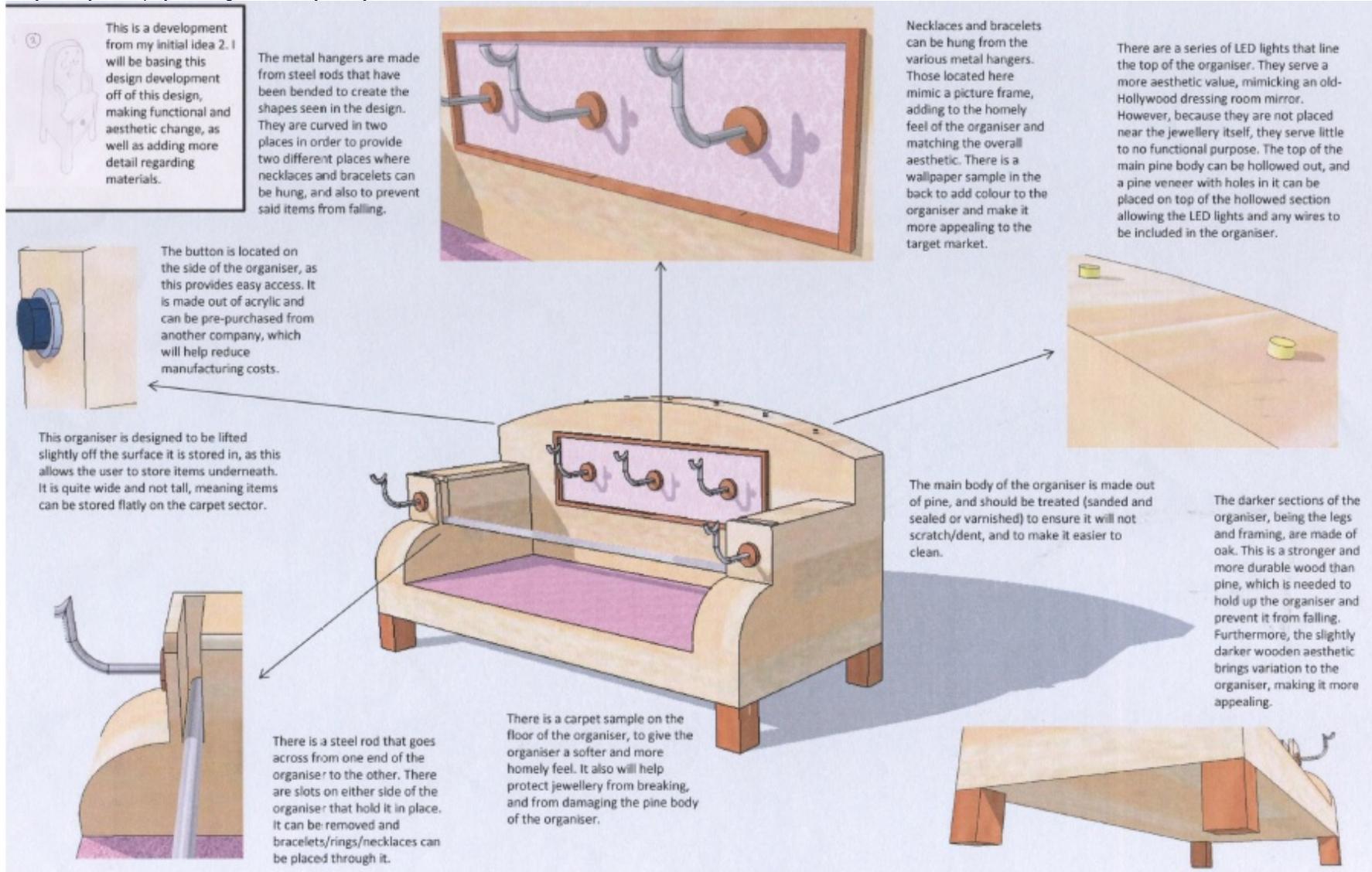
Criterion B: Conceptual design







This is a reworking of Idea No.2, incorporating aspects of ideas 3, 7 & 15 as there was a common theme running throughout. It clearly fits the arts and craft design ethic and has the option of putting the jewellery on display or being stored away neatly.



This is a development from my initial idea 3. I will be focusing on developing its aesthetics and function, as well as beginning to look at how it will be assembled.

Idea No. 3 was chosen as it stands out by breaking away from the basic cube and includes features from nature.

The apple could be made from circular acrylic discs, attached through the middle with a green stem. There is a final cylinder than attaches the apple to the main frame, that is secured using a glue gun, as tensol cement would not fall under design for disassembly.

The joining technique used to join the wood would be a 1/2 lap joint, as this was identified as the best joining method. PVA glue will be used to secure the wooden parts together.

The main frame is made out of green dip coated aluminium. There are holes drilled into the aluminium frame that the hanging wire is attached through.

The two aluminium sectors have holes in the centre. They are set up as in structure A, and attached when the green acrylic pole (see the description of the apple) is slid through them. An acrylic cylinder is attached to hold them in place.

Jewellery can be stored flat in the box compartment of the organiser.

Two slots are cut into the wooden legs/sides, which the MDF and clear blue acrylic sheet would be slotted into before joining the device as a whole.

There is a bottom sheet of MDF that has holes drilled into it. This allows the light to shine through from the box below and make an interesting pattern on the bottom of the organiser.

The MDF is covered with a clear blue acrylic sheet, to prevent any moisture or metal from falling through the holes and into the light fixture. This will add protection to the light, and therefore increase the longevity/product life cycle of the organiser.

The metal hangers can be used to hang bracelets or necklaces. There 7 places where this jewellery can be hung one each side, meaning a total of 28 pieces of jewellery can be hung.

The metal hangers also have red beads on the end of them. This prevents the edge of the metal wire from causing injury and also to matches the aesthetic of the apple, making the organiser as a whole more aesthetically coherent.

The main bottom sides of the organiser are made of sand-and-sealed pine, and attached using a 1/2 lap joint. There are 4 'feet', which elevate the organiser and prevent it from scratching or staining the surface it is placed on.

The aluminium frame is attached to the corners of the wooden base. A slot would need to be drilled into the wooden base so that the metal part could slide in.

The main colours used are light brown (the colour of pine) and green (this give the illusion of the organiser being tree-like, with the apple added to further add to this effect.) Red and purple are also included to draw the user's attention to certain parts of the organiser,

The switch is purple and red, to clearly indicate to the user where they can turn the light on and off. It is circular, and the inner part has a diameter of 2cm, ensuring all of the target market are able to function the switch.

The light is located below the MDF sheet, and is power by battery. The battery case is located on the underside of the organiser, ensuring there is an easy way for the user to replace it. The battery is then connected to a switch, which is located on the side of the organiser, ensuring it is easy for the user to turn the lights on or off.

Based on Idea No.7, which is constant with the arts and craft movement, it resembles the style of many items that I saw in the Boutiques and would therefore improve its marketability.

This is a development from my initial idea 7. I will be focusing on developing its aesthetic and functional properties, and looking at how it can be manufactured.

The main body of the organiser is made from oak that has been treated using wax. This gives it a natural feel and also is in line with the arts-and-craft movement, which uses wood as a primary material.

The handles and feet are oak that has sanded and sealed, primed with an acrylic based primer and then painted with an acrylic based paint (blue for the handles, dark brown for the feet.)

The green branches can be used to hang necklaces and/or bracelets, allowing them to be on display and preventing them from becoming tangled.

The bird is made from blue glass, with steel-enforced glass feet attaching it to the wood.

The addition of the green branches and the bird give the organiser a more modern feel, as this has a similar theme to organisers and items currently sold in boutiques.

The green branches are made from copper wire strands that have been dip-coated to achieve the green colour. These would likely need to be hand-crafted.

The middle of the organiser opens to be flat at 90 degrees, allowing for a miniature temporary jewellery station. This also mimics the traditional arts-and-crafts design of having a fold-out desk or dresser.

The middle compartment of the organiser contains two LED lights in each bottom corner, which can be turned on using a switch located in the back of the organiser. A cord that can be plugged into a pain power supply will provide the lights with power. This will help provide visual aid in this compartment of the organiser.

There is a clear area under the middle segment to allow further storage of extra jewellery boxes if the user wants this. The extra space also helps the organiser look less bulky and thus makes it more aesthetically appealing.

The inside of the organiser will be split into second compartments as seen here, to allow for jewellery to be stored compactly and in different sections.

Most of the wooden aspects in the organiser will be attached using screws.

The feet provide room under the organiser if the user wants to store a jewellery box below. They also lift the organiser up from the main surface, preventing the organiser from scratching whichever surface it is placed on.

The feet will be attached to the organiser by screwing them in through the bottom part of the organiser. This will ensure they are securely attached to the organiser.

There are 4 hinges in the design, to allow the doors to open and shut easily. They are made out of brass, and can be ordered from another company to reduce manufacturing costs.

Rubber feet are located on the bottom of the feet to provide extra grip to the surface the organiser is stored on. This will prevent it from sliding around, ensuring the jewellery will not be broken.

All three handles are 1cm thick, with 2cm behind them, and have a 2cm diameter. They would be attached to the wooden doors by drilling a hole through the wood, and then sticking the small part of the handle through the wood and screwing it in. 1cm would be left outside of the wood, while 1cm would be attached in the hole.

The main idea of this organiser is to give off a classic arts-and-craft feel, but with a more realistic feel to it. The wooden texture should be included in order to make it appear more tree-like, while the branches and bird add to the naturalistic element of the organiser. Functionally, it can mainly store jewellery compactly, although there is the option of storing it on the branches.

Based on Idea No.15, it relies on a tree-like structure to display the necklaces. Similar items were sold in the Boutiques but without the lit base.

5 This is a development from my initial idea 15. I will be focusing mainly on developing it's functional purpose, and considering aesthetics and manufacturing aspects of the design.

The main tree frame of the organiser will be made from a combination of steel wire, clear acrylic tubing and green acrylic.

There is one structure made of steel wire, which held together at the bottom by being inserted through the acrylic tubing. It is also inserted into a green acrylic tubing, which has a screw at the end of it. This in turn screws into the main green acrylic cylinder to secure the tree-like structure and to prevent it from falling or snapping. This whole component can be disassembled, making it sustainable.

The steel wire has good durability and high strength, and therefore the weight of the jewellery will not change it's shape.

The clear acrylic tube will prevent the steel wire structure from falling to one side, and keep the top half of the organiser upright without taking away from it's aesthetics.

The acrylic cylinder is attached to the wood using glue, as this ensures that there is little to no chance of the 'tree'...

The main idea behind this design is to make it look like a tree with birds perched on it, focusing on having a natural aesthetic. The wooden base adds an element of modern arts-and-craft to the organiser.

The curves in the steel wire are designed to hang necklaces straight, without tangling, and also to hang bracelets. The birds tail can also be used to hang a ring.

The other metal hangers are attached to the acrylic cylinder by placing them in holes that have been drilled, and securing them with a glue gun inside the fixture. They too can hang bracelets or small necklaces.

The colours of the switch are green and blue, so that it is notable among the wooden brown but still is consistent with the other colours being used in the organiser.

The birds are made from acrylic. The bottom of the bird has a hole drilled into it, where the top of the steel wires is placed. This promotes design for disassembly, and also increases the safety of the organiser by removing the danger of a small piece of wire injuring the user.

There are green beads on the end of these metal hangers to add to the aesthetical coherence of the design, and also to prevent injury, as a bare metal wire end could potentially cut or scratch the user.-

The triangular base is made out of treated MDF (sand and seal), as this wood composite is the most reliable to drill holes through (there is no danger of chipping and little risk of snapping).

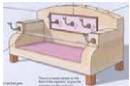
The triangle base is constructed in two parts. The first part is made of 4 pieces of wood, which have holes drilled in them to let light escape. They are attached using the miter joint, as this is the most aesthetically appealing joint and will do an effective job of securing them at an angle.

The switch is placed through a hole on the side of the box, ensuring it is easy for the user to turn the light on and off.

The bottom part of the wooden base is attached using PVA glue and a lap joint.

The second part of the triangle base is the box component, which contained the LED light and battery. The light is located in the middle of the box, and when lit up illuminated the inside of the triangular structure, shining light through the holes. The battery is located below it and accessible through the bottom of the organiser, so that it can be changed but does not ruin the overall aesthetics or block the light from passing to the holes.

Preliminary Evaluation against the Design Specification – although I couldn't return to all my initial correspondents, I showed the 4 ideas to them and asked their views on some of the specification points. This would allow me to choose the most promising for further development.

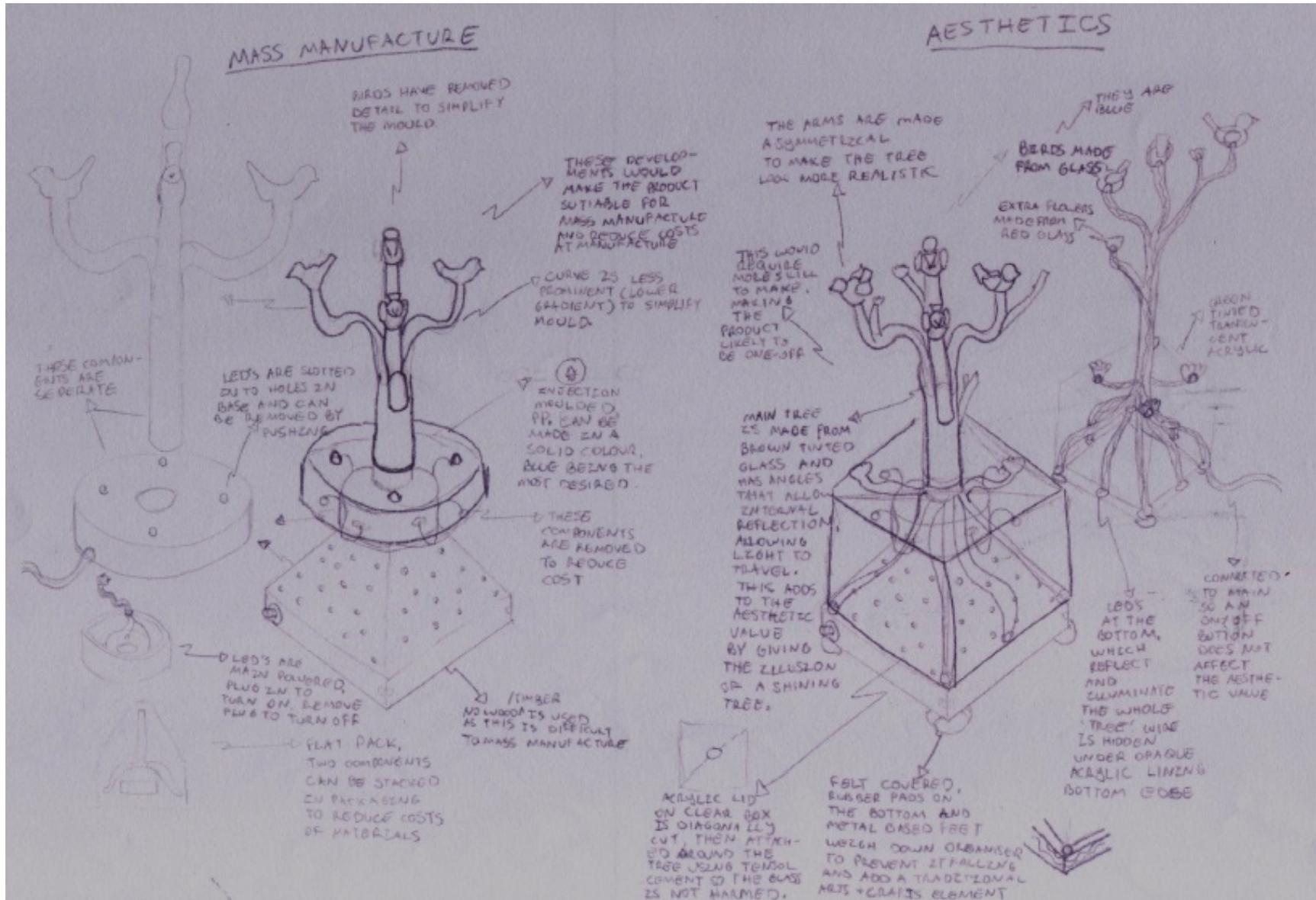
Specification point				
The organiser will be made primarily out of natural timber, with composite timbers for hidden items.	The wood would be primarily pine with oak details. Liked by most people.	The mixture of materials was not liked by everyone.	Once again, the oak as the main material was appreciated by most.	There is little timber in this design apart from the MDF base. However, the main materials were liked by
The organiser must be designed in a way to reduce its 'package size'.	This item could not be dismantled for smaller packaging.	This item could not be dismantled for smaller packaging.	This item could not be dismantled for smaller packaging.	Comes in sections and could have reduced packaging.
The primary colour scheme will involve pastel shades and natural colours – mainly blues, greens and browns.	Mainly the colour of the natural timber.	Has been shown with brighter colours, but could be toned down.	Natural timber colours again.	Finished in pastel shades of blue and green.
The organiser should incorporate elements from nature such as birds, trees or flowers.	Has not covered this specification.	Limited aspects from nature.	A firm natural effect.	Totally based on nature with the tree and bird motifs.
The organiser should incorporate an LED light as an extra marketing feature.	The position of the Led was questioned by most respondents as it is placed above the jewellery.	The LED lights up the bottom part of the organiser, but was one was considered to be of little use.	As I have positioned the LED inside the middle compartment its usefulness was questioned.	The 'pin-hole' effect was liked for aesthetic reasons rather than being a visual aid.
It must be able to hold at least 4 necklaces and 4 bracelets without them becoming tangled, displaying them at the same time. There should be	Meets most of the requirements except that longer necklaces would have to be 'hung double'.	Completely meets the specification, with small items stored in the base.	This can hold the minimum number of necklaces/bracelets, but is more in the style of the traditional 'box' designs.	Holds the required number of items on display only, with no compartments.
It should be freestanding and placed on the dressing table or equivalent e.g. chest of drawers.	Meets the specification.	Meets the specification.	Meets the specification.	Meets the specification, but some felt it may be prone to being knocked more easily than the others.
The size in its constructed form should be: Width/length: 110mm – 320mm Height: 500mm max.	Meets the specification.	Meets the specification.	Meets the specification.	Meets the specification. It is the tallest of the ideas, but has a substantial base area.
Ranking from those who responded.	4 th	2 nd	3 rd	1 st

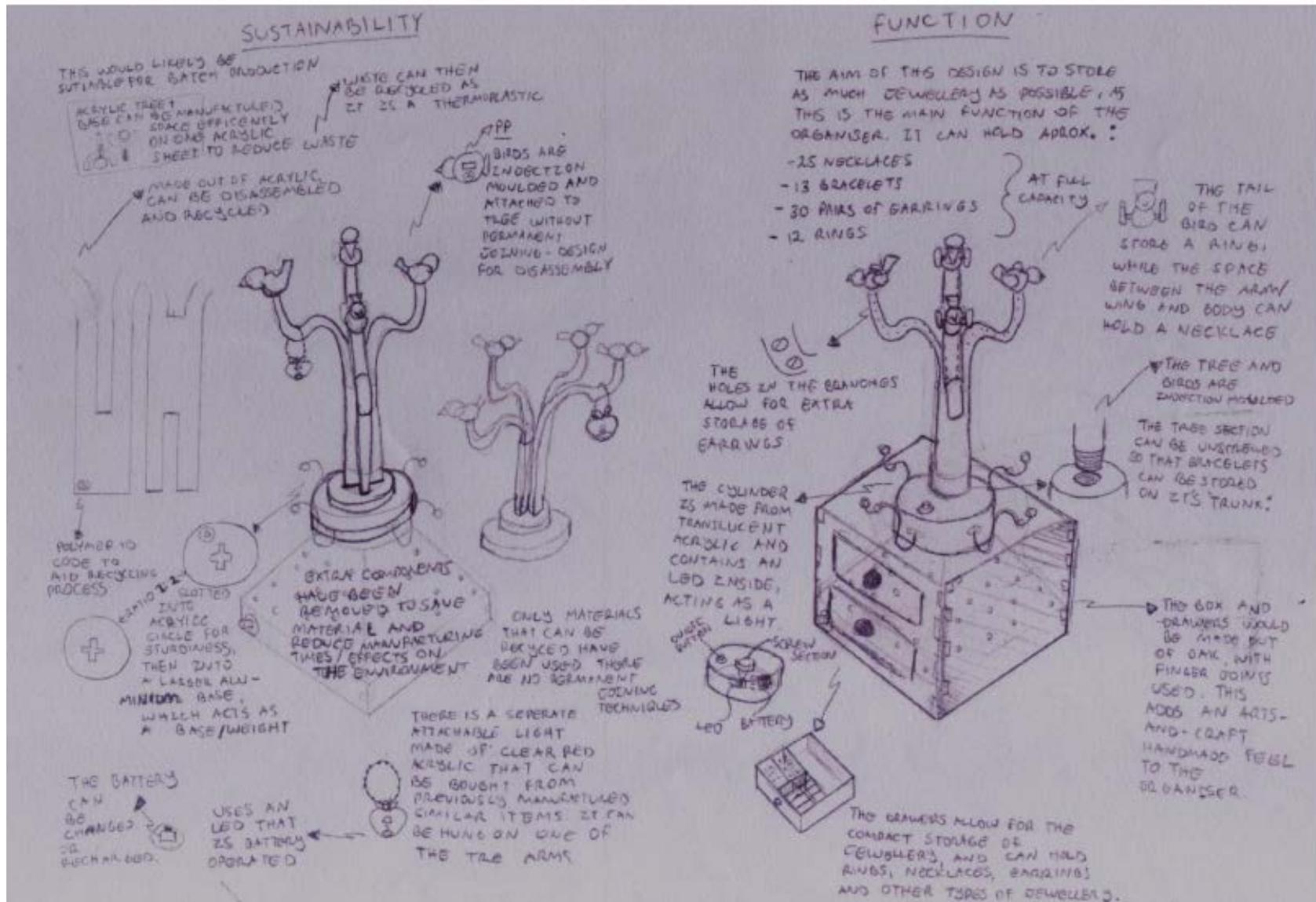
Summary of Research

There was little to choose between the two most popular ideas. However, the two retailers both preferred the final idea in terms of its marketability. The colours and theme also suited their existing shop décor and ethos. The fact that it could be deconstructed into a smaller unit was also economically more viable. I will therefore now develop this idea into a card model for further evaluation before producing a prototype.

CRITERION C: DEVELOPMENT OF A DETAILED DESIGN

I will now develop this preferred design with respect to: Mass manufacture, Aesthetics, Sustainability and Function.





From this development series I am now going to improve the following features as they improve the marketing aspects The idea of lighting up the tree rather than the base, toe part construction for ease of packaging, storage and transport, making the base out of wood.

I have produced this card model in order to establish the functional details, manufacturing options and possible size of the organiser.



I created the arms using the idea from the sustainability development. I felt this would be aesthetically pleasing and also make the manufacturing process easier. The two arms were cut out of corrugated card with opposing slots, and slotted together firmly, although they could be unspotted afterwards. A small piece of corrugated card was added to secure the arms and ensure they did not fall out of place.

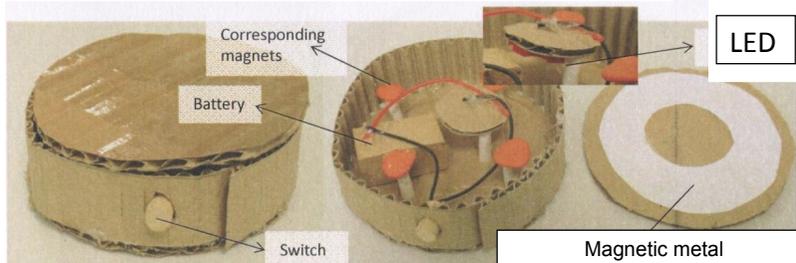
From doing this I came to several conclusions. This method will likely work well when it comes to making the organizer, and using the slotting arms will ensure the design is fit for disassembly. This promotes sustainability, making the product more 'green', and also looks aesthetically pleasing. However, the arms themselves are perhaps too basic. They look more robotic than tree-like, and could perhaps be made to be more detailed in the making of the organizer. Alternatively, a pattern could be added to them to increase their aesthetic value. I would recommend for the arms to be made using acrylic and cut on a laser cutter, as this will allow light to travel up the arms and allow for details to be etched into them.



The four birds perching on the 'tree branches' of the organiser are important in adding a nature themed aesthetic to the organiser. Because this was primarily a functional model, I focused on developing the birds from a functional standpoint. I made the birds without wings to reduce potential manufacturing time and cost. The birds still are aesthetically appealing without wings, and end up looking neater and more simplistic, adding a modern twist to the organiser. This is similar to my previous development for mass manufacture, although in this development I made the birds 20. This makes it easier for them to be slotted into the main arms. The birds were 3mm thick, meaning holding rings or bracelets from their tails may be slightly unsteady. Therefore, I would recommend either making them out of thicker material, or making them out of metal. In order to attach the birds to the arms, I created an extra component with holes that slot into the arms and birds, as seen in the photographs. This promotes sustainability by making the organiser have a design for disassembly, and almost gives the impression of the birds slightly hovering over the arms, adding to aesthetic appeal. These components could be manufactured out of acrylic using a laser cutter.



For the base of the organizer, I considered a three-tiered hollow shape, which the arms were slotted into. This is based off of the functional development of the organizer previously done. This was a slight trial and error process, because at first I constructed a single-tiered base, which turned out to be too tall and unsteady. The three-tiered base is aesthetically pleasing as it adds smooth shaping the organizer and also provides a sturdy base. If the bottom was to be weighted the organizer would be very secure with little risk of toppling. I would think keeping the base is recommended, although perhaps it should be more curved around the horizontal edges to add to the look and feel of the organizer. I would recommend for the base to be made out of MDF as this will weigh the organizer down or for it to be vacuum formed from an MDF mould



This separate model shows how the light function of the organiser will work. This will be located on the bottom of the organiser, with the lid representing the bottom of the 3 tiered cake. The white part on the lid represents a metal donut shape, which will allow for the 3 tiered base to be attached to the light holder using magnets (the orange cylinders represent magnets.) This is a non-permanent joining technique, and means the target market can remove the light and replace its batteries with ease. The light being used is a star LED as this is brighter than a normal LED and will help illuminate the organiser.

From working on this cardboard model I have decided the following manufacturing and functional requirements: The organiser will be attached to the base compartment with the lights using a magnet, the organiser will have a three tiered base, the arms will be made from acrylic parts that slot together and have a pattern included in their design, the birds will be 20 with no wings as they would 'snag' the jewellery.

The arms of the organiser should be made out of acrylic. This will allow the light to travel up the arms, creating the light function. They can be cut from larger sheets of acrylic, but for finer detail they should be laser cut.

The acrylic arms have opposing slots, meaning that when manufactured the two arms can be joined without any permanent joining techniques. This means the organizer is designed for disassembly and promotes sustainability. Furthermore, this adds a modern twist to the classic tree idea, making the organizer unique.

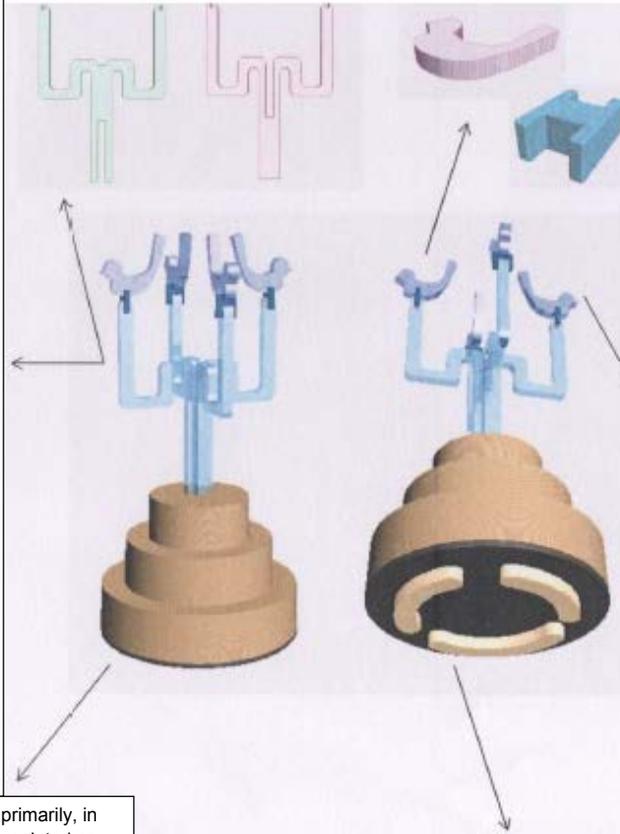
There are slots on the top of the arms that allow for the 'H' shape to be attached and then for the bird to be attached to the 'H' shape. These may need to be secured with a glue gun to prevent any unsteadiness, or alternatively, the birds could be incorporated into the wooden arms.

The curves in the arms are where the necklaces or bracelets can hang. This means that the jewellery will be on display, and will prevent it from becoming tangled.

Aesthetically, the arms are designed to look slightly branch like, although their colour and material adds a more modern twist to the traditional idea of a tree. The acrylic will allow for the arms to have a smooth shiny finish, making the organizer look polished. Further additions could be added such as engravings on the arms or more detailed branch-like elements, to improve the overall aesthetic appeal.

The three tiered base should be made out of MDF primarily, in order to get the shape required. After this, it can be painted or treated in order to improve its aesthetics. It is also possible that a vinyl sticker could be added to the bottom tier, perhaps one with a leaf-like pattern, to add to the nature-based aesthetic of the organizer.

The three-tiered base will need to be hollowed out and have a hole drilled through the middle, as this will allow for the light to fit under it and then travel up towards the acrylic arms. The MDF material will protect the light from liquids or impact, and also ensure the base of the organizer is weighted down, preventing it from falling and damaging the jewellery. Along the bottom of the organizer, magnets will be placed, to allow for the second base of the organizer and this base to be attached.



The 'H' shape should be made out of acrylic being cost effective for it to be made from a cheaper material. By using the same material as the arms, this will mean they can be cut from the same sheet, reducing waste. The 'H' cut will be cut using a laser cutter.

The purpose of the 'H' is to attach the bird to the tree arms. It promotes design for disassembly. It also creates the allusion of being the birds feet.

The 4 birds on the organizer add to the nature based aesthetic. However their 2D design and silhouette design adds a more modern element to the classic bird design that was in my research mood boards. They are to be manufactured in acrylic and be a different colour than the arms and 'H' shape to stand out. The consistency of material for the tree part makes the organizer look more coherent and sleek. They are to be cut using a laser cutter as they will be too small to cut using saws.

The birds also serve a functional purpose. The tail can be used to store one ring, as can the head or additional necklaces/bracelets can be stored on the tail.

The base will be made from two materials. The cylinder will be made out of steel, so that the magnets can attach to it. To improve aesthetics and decrease the risk of oxidation or injury from rough steel edges, it will be dip-coated in black. This cylinder will hold the light on its top, as well as the battery case, allowing for the user to change the LED light or battery if necessary.

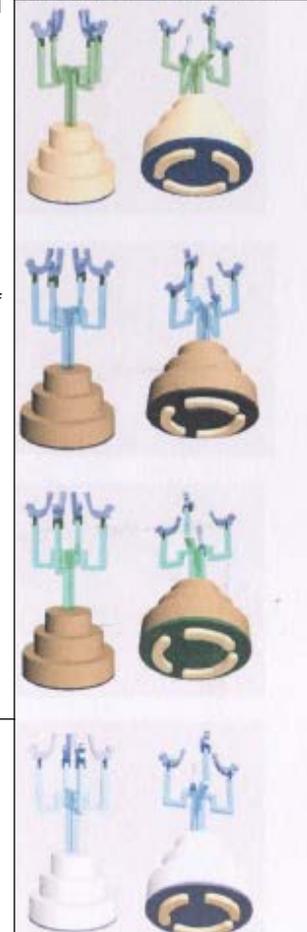
Attached to the bottom of the cylinder using screws are 3 pine feet. These are to protect the surface the cylinder is placed on. It also protects the bottom from scratching by elevating it slightly. The circular nature of these feet allow the organizer to be turned around so different parts of it can be accessed.

I have made the following conclusions: the base will be made from MDF and painted; the steel will be dip-coated and the feet made from pine; The arms should be made from translucent acrylic and coloured light/dark blue or green. The birds should be made from deep blue acrylic; The H-shaped connectors should also be made from dark blue or dark green acrylic.

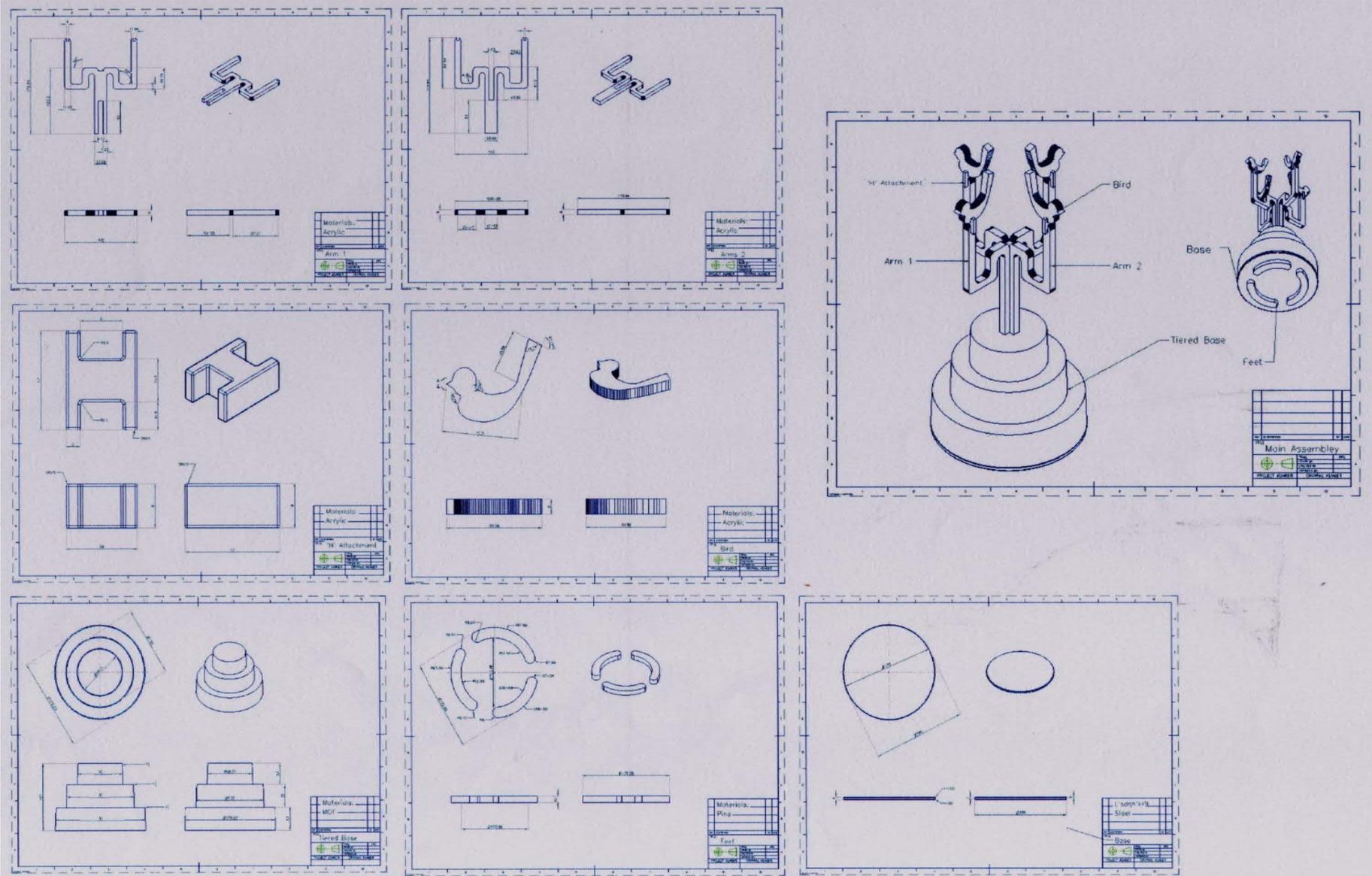
This will satisfy my specification and the wishes of my clients and retailers.

Colour variations

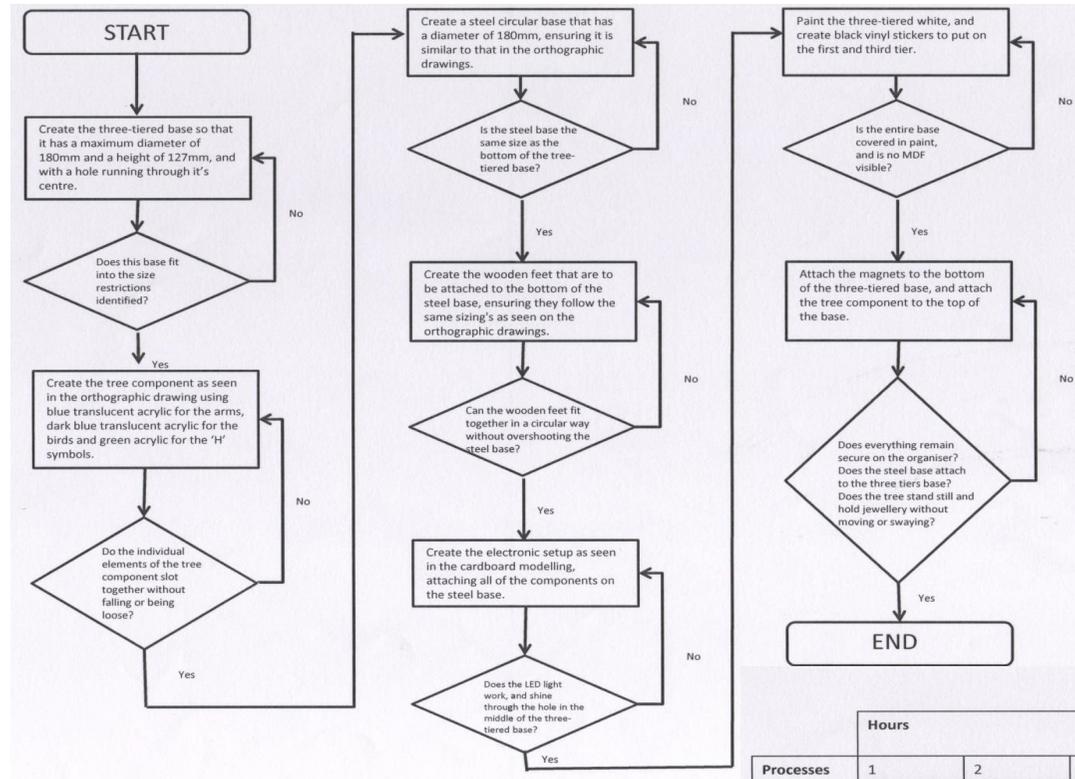
Some of the materials used in the organizer can have their colour changed, or can be ordered in different colours. These colour variations show which colours should be used for the organizer.



Final Design Drawings



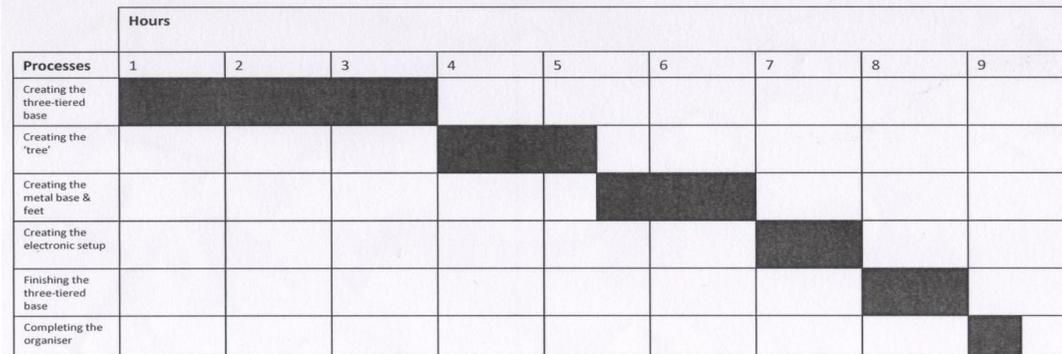
Manufacture of the prototype



Materials		
Base	MDF	20mm thick
Baseplate	Steel	1.6mm
Feet	Pine	15mm
Tree & Birds	Acrylic	6mm
Lighting circuit	Star LED, battery holder, switch	
Finishes		
Base	Primer, acrylic spray paint – white, Vinyl shapes	
Baseplate	Primer, acrylic spray paint – white	
Feet	Varnish	
Tree	Laser cut silhouette of leaves	

- Main Health & safety considerations**
- MDF must be machined with adequate extraction facilities in place.
 - PSE should be worn at all times.
 - Spirit based finishes must be used in ventilated areas.
 - Laser cutter must be used with ventilation equipment engaged.
 - Check that all electrical equipment has a PAT sticker in place.
 - Two part adhesives should be used with disposable gloves.

Gantt Chart



Criterion D: Testing and evaluation

This is the final prototype that will be used for evaluation against the design and marketing specification



The pictures on this page show the complete organiser that was made

1-This is the organiser as a whole, which can be split into three parts. The tree-jewelry hanger, the three-tiered base and the steel base with feet.

2 – This shows the organizer from a view it is likely to be seen from. The feet are not visible from this view. It also shows the light component on the steel base separate from the rest of the organizer. To change the battery or repair the light, the user would remove the bottom part of the organizer (which is attached magnetically) and change/fit it manually, then simply place the three-tiered base on top of the electrical component again.

3 – This shows the tree part of the organizer with the left photo showing it during the day. The light has a glowing effect on the acrylic, making it appear as though the stem is lit from the inside. There is a hole running through the centre of the three-tiered base, from the light travels up and into the acrylic. The arms 'H' attachments and birds are all slotted together and remain in this form unless forcefully removed.

4 – This is an example of the vinyl sticker detail. The sticker was attached on top of the white coat on the base, meaning that it can also be removed or replaced according to the wishes of the user. It does not go over the width of either tier ensuring there are no loose edges.

5 – This shows the base of the tree secured by the two pieces of acrylic. The black acrylic covers the foam underneath and is glued using a hot glue gun to the top, preventing the tree from moving but still allowing the joint to be non-permanent. The blue acrylic further secures the tree, and also adds a smoother addition from black to blue aesthetically.

6 – This shows the three-tiered base of the organizer. The top and third tier have the vinyl stickers attached as this makes the organizer look less whited-out and bland, but also ensures there are not too many conflicting patterns. This base is smooth to the touch due to the sand and seal process, along with the primer and paint process. It is also fairly heavy, helping to weight down the organizer

7 – This shows the bottom of the organizer. The three wooden feet have been constructed in a circular manner and are taller than the nuts and bolts and switch helping to protect them from damage. The switch can be easily turned on, either by lifting the organizer slightly or reaching under. The feet also act as help when removing the steel base from the MDF base – they act as handles in this scenario

Practical Testing

To see whether the prototype performed as specified, I used a selection of jewellery made up of: 1 x heavy bracelet; 4 x lightweight bracelets; 2 x long necklaces with heavy pendants; 1 x short necklace with light pendant; 1 x short necklace with heavy pendant

- The organiser easily held the specified items of jewellery, without any hint of 'wobbling'. The items were easy to get on and off the unit, although bracelets required any necklaces to be removed first.
- The tiered base worked well in keeping the pendants from becoming tangled and even provided physical support in some cases.
- The LED provides a 'mood' light at the centre of the unit which is quite enchanting. However, it is only really effective when the room is fairly poorly lit.



Target Audience

Once again, not all my original correspondents were available, but a number of them were prepared to take it home and try it out. The main findings were:

- The visual impact was very much liked, especially when lit. However, it was felt that the light needed to be brighter.
- Nobody had difficulty in putting the pieces together. However, it was noted that if it was taken apart too often there may be the risk of losing pieces or even breaking them.
- The size was considered to be suitable (180mm dia – 370mm high) and to be well proportioned.
- The 'feet' on the base were not liked – 'it looks unstable even though it isn't!'
- The switch on the base was considered impractical as you have to lift the whole unit up to switch it on
- The battery life was also questioned. Most people would be prepared to pay extra to have it mains powered as they were unlikely to move it that often.
- It was found to be 'fairly easy' to use, but the bracelets were more difficult due to the necklaces being in the way.
- Some asked why the base was not put 'to greater advantage' by having somewhere to put smaller items such as rings.
- One person suggested that the design could easily be produced in a range of colours especially green or light brown – keeping the natural theme, as blue can be considered a 'cold' colour.
- I asked what price they would be prepared to pay and was very pleased that they all agreed that it could be over £50 if it was well made.

Summary:

I feel that it is clear that I have satisfied the requirements of my target audience and will hope to address the suggestions made in my further recommendations.

Target Market

Unfortunately, I was not able to return to the shop manager that originally talked with me, nor was I able to approach any on-line outlets. However, I did take the prototype to two similar shops in my locality. I was trying to find out whether they would be prepared to stock a production version of the organiser and whether they felt that there was a market for it.

- The first response, pleasingly, was that they were impressed that it was only a prototype!
- 'It is stylish' and 'unlike anything else that I have seen'.

- However, 'to maintain the quality, the presentation packing would need to be of a similar standard'. This would enhance the sales potential.
- The size was liked and it would display well on the shelves.
- Another good selling point was that it could be packaged much smaller. This packaging should also be as environmentally friendly as possible 'with no plastic film or polystyrene!'
- One manager also agreed that it would be better if it did come in a range of colours 'as we often have colour themed displays', but was happy that I had chosen blue for the prototype 'as it stands out'.
- When I asked whether that agreed that it could sell for over £50 – they agreed. 'Because of the lighting element' it has a USP which could command that sort of price – if not more'. The real issue would be the quality of production – 'it must not be flimsy!'

Summary:

Although I have tested it fully in a retail environment, the initial responses have indicated that there should be a market for this product. The remaining issues are quality of production, colour range and packaging.

Competition

Having chosen the target audience and retailers that I did at the beginning, the organiser is clearly aimed at a small 'niche' market. However, at a target price of £50-60, it would appear to be better product than the similar organisers I investigated at the beginning of this project. The items of a higher selling price were all 'box' types, which my target audience did not want.

Similar products did not have the 'nature theme' or the LED lighting element. This still remains a good selling point if it can be made to work more effectively.

The problem comes in the fact that this product is not a 'necessity'. The market for such items is clearly dependant on the general economic health of the market at any one time. Quality boutique shops do 'come and go' regularly in the high street. The main threat comes from cheaply made 'imitations' that copy the overall concept. However, one of the managers made it clear that 'even in bad times' clients with money will want 'to spoil themselves' or show off!

Strengths and Weaknesses

- Commercially, I believe, it is going to be difficult to manufacture the product to achieve a selling price of £60. To achieve the suggested higher price, it may be necessary to

simplify the design and make sure that the production quality is high.

- The materials are all recyclable apart from the battery itself. The packaging must also be fully recyclable to maintain the 'environmentally friendly' tag.
- The fact that it can be taken apart for easier transportation and storage is a commercial strength.
- None of the manufacturing processes are specialist and are readily available.
- As designed the product is safe for an adult. There are a number of small pieces that could be a choking hazard for small children and there would need to be a statutory warning on the packaging to this effect. If the battery was replaced by a 240v system, it would not be any more dangerous than a table lamp for example.

Summary:

I feel that this testing has shown that the product has satisfied both its target audience and market. It has a USP in the LED lighting and is aesthetically pleasing to its audience. I will now evaluate it against the specification and suggest some further improvements.

Suggested Improvements

Base construction

- The prototype was made up of layers of MDF and hollowed out. This gave the base the needed mass for stability, but would be inappropriate in commercial production. I suggest that it would be injection moulded. This would also make the choice of colours easier to manage.
- The steel plate had to have wooden feet attached to allow the switch to be mounted. I suggest the switch should be on the side as my target audience did not want to lift the whole unit up. The steel plate could also be thicker – 2.5mm, to increase the mass for stability and strengthen the injection moulded shell of the base.
- The steel base was attached with magnets to allow easy access to the electric compartment. This adds to the cost of the unit as was not particularly effective. Because of the previous recommendation, the base could now be screwed in place into pre-formed lugs in the shell.
- It was also suggested that small items needed to be stored in the unit. I propose that the bottom tier could now contain a small drawer for this purpose. This would also facilitate easy access to the battery.

'Tree' construction

- The interlocking slot system worked well and was stable once all pieces were put together. However, I realised that the 'H' pieces were not necessary. My clients had also been concerned about them getting mislaid. I would leave them out altogether which would save production costs and make the task of packaging easier.
- The translucent acrylic worked well as the 'tree' and the problems I had manufacturing the pieces by hand would not occur when they are produced commercially.
- The light from the LED travelled up the tree to some extent and gave a 'haunting look' as reported by one of my clients. However, it was as effective as I had hoped. I would like to investigate the use of more LEDs and the use of 'live edge acrylic' which I believe would make the tree 'glow' more effectively.
- I 'engraved' a pattern onto the support arms to give them a more natural look. However, with commercial manufacturing equipment e.g. laser cutter, the arms could be made more intricate. This would help solve the reported problem of hanging the bracelets on the unit. I propose that the branches are made with more spurs making it more 'tree-like' and adding to its appeal for the target audience.

Sustainability

The organiser is design for disassembly, with no permanent joining techniques – just slots and screws. The materials are all recyclable – even batteries are recycled by some retail outlets under

the WEEE Regulations. LEDs are very energy efficient and last longer than filament lamps.

Further considerations

The retailers were very interested on how the item would be packaged. The advice was clear:

- Make it as small as feasible, but with good graphics to show how the product looked if the box had not been opened. Small shops often have low numbers of an item stored among a lot of other items, which makes finding them difficult.
- Fully recyclable – preferably from recycled materials.
- Use the same colour scheme as the item itself, unless it is part of a 'range' of products which already has a recognisable market image.



CRITERION E: COMMERCIAL PRODUCTION

It is clear from the testing & evaluation that the base of the organiser could be further developed, especially with respect to the storage of small items and the location of the switch. The method of construction used for the prototype is also completely inappropriate. I am therefore proposing a redesign to take account of this.

The base will be injection moulded enabling:

- Simple colour changes depending on market
- Hollow interior to accommodate electric circuit and easy battery change

Support hole given tapered sides to allow draw angle and to locate 'tree' more securely

All vertical sides to be given a small draw angle for injection moulding

Switch for LED positioned at this level

4 No. recesses set in this level at the quarter points, offset by 45 degrees to the fixing lugs to accommodate rings and brooches

Support hole given tapered sides to allow angle and locate 'tree' more securely.

Fixing lugs incorporated into the shell at quarter points to take self-tapping screws to fix base plate and electronics board

Electronics board with LED set on top under the 'tree' and the battery holder fixed underneath to allow battery changing.

Steel baseplate is now inset with the shell to avoid damaging surfaces and removing the need for the 'feet'

The bottom section of the 'tree' will be adjusted as follows:

- Shoulder incorporated to increase stability
- Tapered ends to match draw angle in the support hole

A recess is formed in the shell to receive the baseplate.



Possible redesign for the ends of the 'tree' structure in order to make it more 'realistic' and to create greater variety of hanging positions as reported during the client evaluation

Costings

- Tooling for the unit would depend on the surface finish required. A tooling from a 'low cost economy' e.g. China, would be £6-8000, whilst a UK costing would be £10-12000.
- About 200gm of material required for the base: a first run of 1000 units would cost £1000.
- The application of a single colour decoration would add approximately 20% to the cost.
- Transport and handling would be extra, but the mould would be suitable for future production runs.

This would result in an initial unit cost of approximately £11.20, but an ongoing cost of £1.20

A quote from *TINY BOX* for a suitably sized package from stock using recycled materials, the application of a single colour logo and product information panel was approximately £2.50/unit, based on 1000 units.

Bespoke packaging, with cut out windows and elaborate printing would require a detailed quote to be produced.

The live edge Perspex sheet comes in a number of fluorescent colours and would cost around £50/sq.m. This would lead to a cost/unit of £2 This has been chosen to add the extra 'glow' discussed earlier.

A quote from this company to laser cut the arms and engrave the pattern resulted in a unit cost of approximately £6.

A machine could be purchased at around £8000.

The cost of the ancillary pieces such as baseplate, screws and circuit board are less specialist in nature and would depend on the manufacturing method. This could be done 'in-house' or contracted out. However, advice received suggested a cost of £1/unit.

Research into having the unit run on mains voltage rather than battery power suggested that it would make it uneconomic due to safety legislation. The evaluation by my clients had already suggested that they prefer to be able to place the unit anywhere in the room and not be restricted by the position of an electric socket.

As the basic concept of the unit is that is demountable for packaging and transport reasons, there is little in the way of permanent construction – screwing on the electronics board and the baseplate are the main elements.

The unit would, however, need to be packaged and then transported, adding up to £5/unit.

Summary

These figures, based on an initial run of 1000 units, with some retained equipment and materials for future use, would give a cost price of £27.20/ unit and an ongoing cost of £17.20.

Materials and processes



The two most suitable materials for the base of the organiser are Rigid PVC and ABS. On discussing the choice with the company above, it was found that Rigid PVC is very aggressive on the moulding and has associated H&S problems with regards to fumes. The ABS can come self-coloured and has the required rigidity for the design.

CRITERION F: MARKETING STRATEGIES

Target Sales Price

This particular item was always going to be for a niche market selling in upmarket boutique style shops, usually located in better off locations. From my early research the following was evident:

- There was a gap in the market for similar items costing between £30 and £60.
- My target audience, would be happy to pay over £50 and in some cases were happy to pay up to £100 for 'the right product'
- The prototype was well received by both clients and retailers, giving me no reason to change this view.

I have to assume that some of the set-up costs are funded by loans etc., which would need to be paid back out of profits. I therefore asked the retailers what percentages they felt would be reasonable. I was told that a common 'rule of thumb' was 30% manufacturing costs, 40% manufacturing profit, 30% retail profit.

From the manufacturing costs itemised above, with a unit cost of £17.20 based on 1000 units being manufactured, it would suggest a target sales price of £57.30.

It was also suggested by the retailers that a launch price reduction would be beneficial, which leaves me to believe that it should be marketed at £60, with a £5 reduction to £55. It would then be up to retailers to promote the product in their own way or negotiate bulk purchase reductions.

It is anticipated that this would be part of a range of products using similar manufacturing techniques and based on a similar design image e.g. hairbrushes, mirrors etc. The set-up costs would therefore diminish in relation to the production costs, which could be written off over time.

Promotional Strategies

To satisfy the original specification of appealing to an environmentally aware target audience, I have decided to name the company:

GREEN TREE PRODUCTIONS



'For in the true nature of things, if we rightly consider, every green tree is far more glorious than if it were made of gold and silver' ~ Martin Luther

The logo will appear on the packaging for all items in the range along with standard product information. The four side panels of any box would have a picture of the actual product to help retailers when searching for stock.

I noticed during the research that this type of company also used quotes or well-known phrases to illustrate the packaging – a kind of 'moral slogan'. Looking through tree related images and quotations, I came across the quote from Martin Luther, which I feel is most appropriate and could resonate with my target audience and market.

It had been suggested that the product should be produced in a range of colours. From my research, this would not affect the manufacturing costs directly, but would require an organized and flexible batch production plan. Material stock quantities would be the single most important factor.

It is sensible that the initial promotion be restricted to the originally envisaged blue, green and brown. Further colours could be added to the range if market research warranted it.

Marketing

Because of the target market being largely independent boutique shops, I have assumed that this will be a small business venture for a designer/entrepreneur. Therefore the early marketing will be done 'face to face' by the designer (or partner) travelling around promoting the product directly.

One requirement of this would be a business card – the provision of which is easily and cheaply done through many on-line companies. This would contain contact details, the company image and logo.

The manager of the retail outlet that I questioned told me that they regularly get travelling 'reps' coming into their shop with such items. One approach that they took with suitable items was 'sale or return' approach. They would agree to give some shelf space to the product for a fixed length of time. If it sold, then the agreed payment would be made. If not, then it would be collected at no cost to the retailer. If sales proved successful, then restocking would take place under normal commercial arrangements.

This system had proved very successful on some occasions. It was liked by the retailer as it gave them a 'fresh look' to their merchandise with a limited risk factor. They also suggested that if the product/range of products proved successful, they would also be prepared to 'host' a small display stand provided by the company involved. However, they would expect an increase in their 'percentage' in this case.

As the product range was expanded and the company gained recognition a website would be the next step.

This type of product lends itself to internet sales and would be a way of increasing the profit margin for the company. It is also the sort of sales method that a small company with few employees can carry out with everybody 'multi-tasking'.

The main task is to gain the greatest number of 'hits' which companies like these are expert, at a cost of about £35/month.

However, it is clear that the placement in retail outlets would be the best way of 'launching' the product.

Expansion

All new companies have decisions to make about their future expansion. The 'one person' business is in complete control of the whole process, but is obviously limited as to the amount of work they can do. Some entrepreneurs are happy to 'exist' whilst others feel the urge to 'grow'. This will lead them to have to make decisions about taking on a workforce and therefore having to generate more sales. There would be the advantages in 'economies of scale' with regard to materials purchasing, external services etc., but the market must be secure to warrant further investment in the company.

A stepping stone to be considered would be Shopping Channels. However, research has indicated that the product on its own would not warrant the expenditure. To achieve the required exposure and therefore sales, a 'partner sponsor' is required. Their job would be to create a 'package' of products to promote on air. The sales could go up, but the individual profit margin on each item would be much reduced. A success or failure situation for the future.

