



# Zewadi

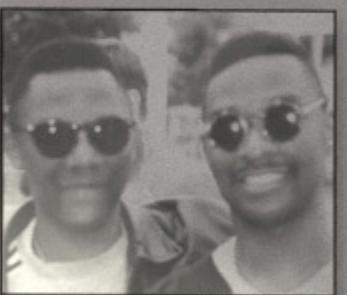
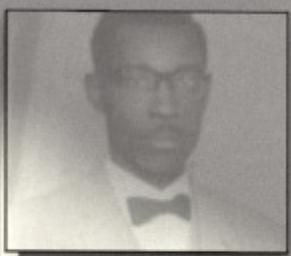
Katy Thompson  
Final Major Project



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*“At school I was told that my hair was too distracting and messy, I was told to straighten it or wear it in tight plaits. Other pupils at school would hide pens and pencils, ripped up pieces of paper and rubbish in my curls to see how long it would take me to notice. I have had curls cut off my head without my permission as people wanted to keep them. In my first job interview I was told that if I wanted the job then ‘something would have to be done’ about my hair. I have been pet like an animal and grabbed without consent by strangers my whole life”*



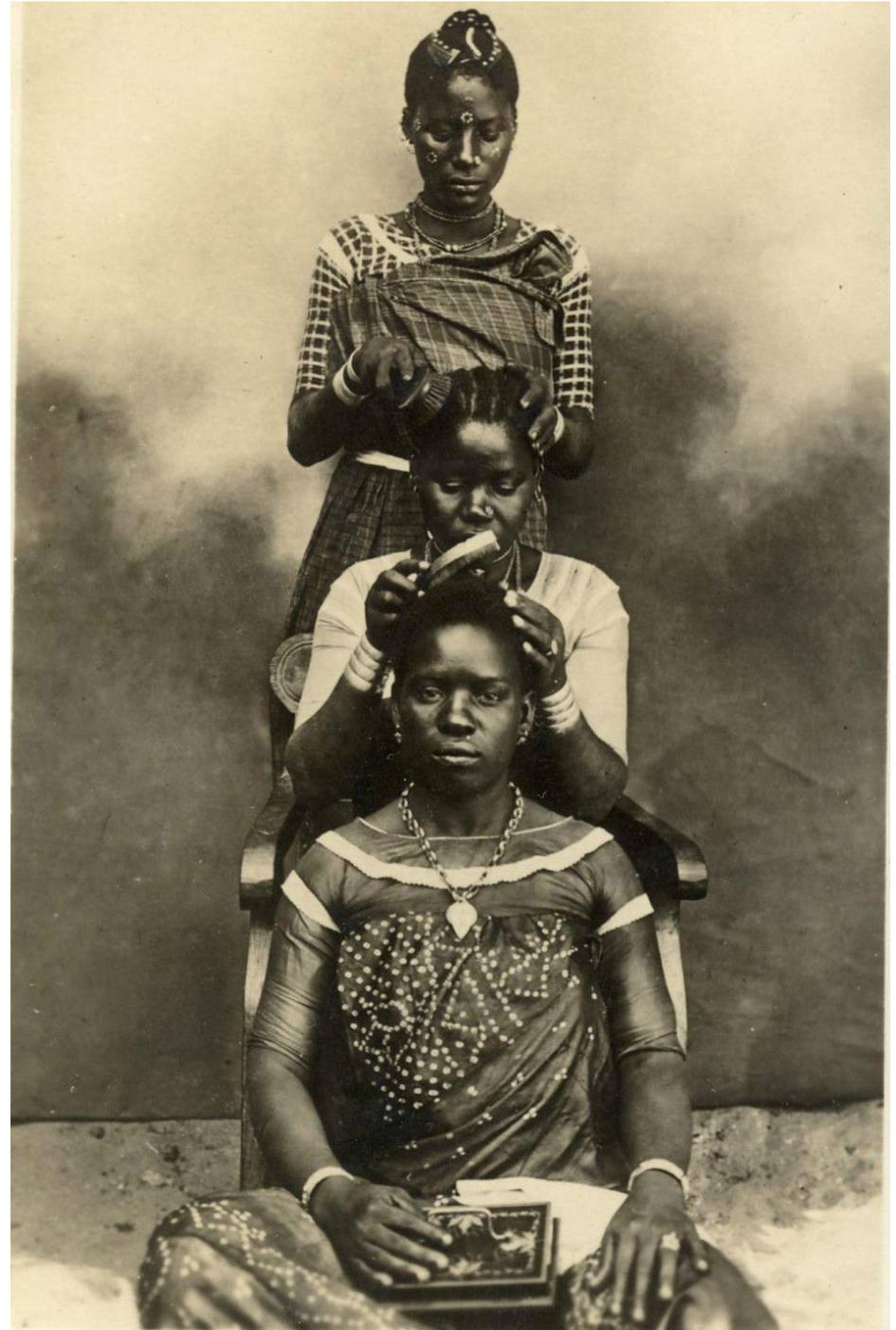


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# Project Context

Since the rise of the internet and social media, popular culture has been changing, encompassing more and more of our lives. Within the past years, these expanding categories have been creating new opportunities and challenges for design to overcome, from issues of racial and gender inequality to the expanding reach of social media and influencer marketing.





## Concept Overview

Zewadi aims to highlight and challenge the systemic discrimination people of colour face for wearing their natural hair. The chair is designed to represent textured hair, frame the users hair whilst also limiting hair damage and disruption to the users hair.

Zewadi is throne like, empowering the user to feel confident with their natural hair. Utilising blackcork and brass details against a light Maple frame to create a striking statement piece of furniture.

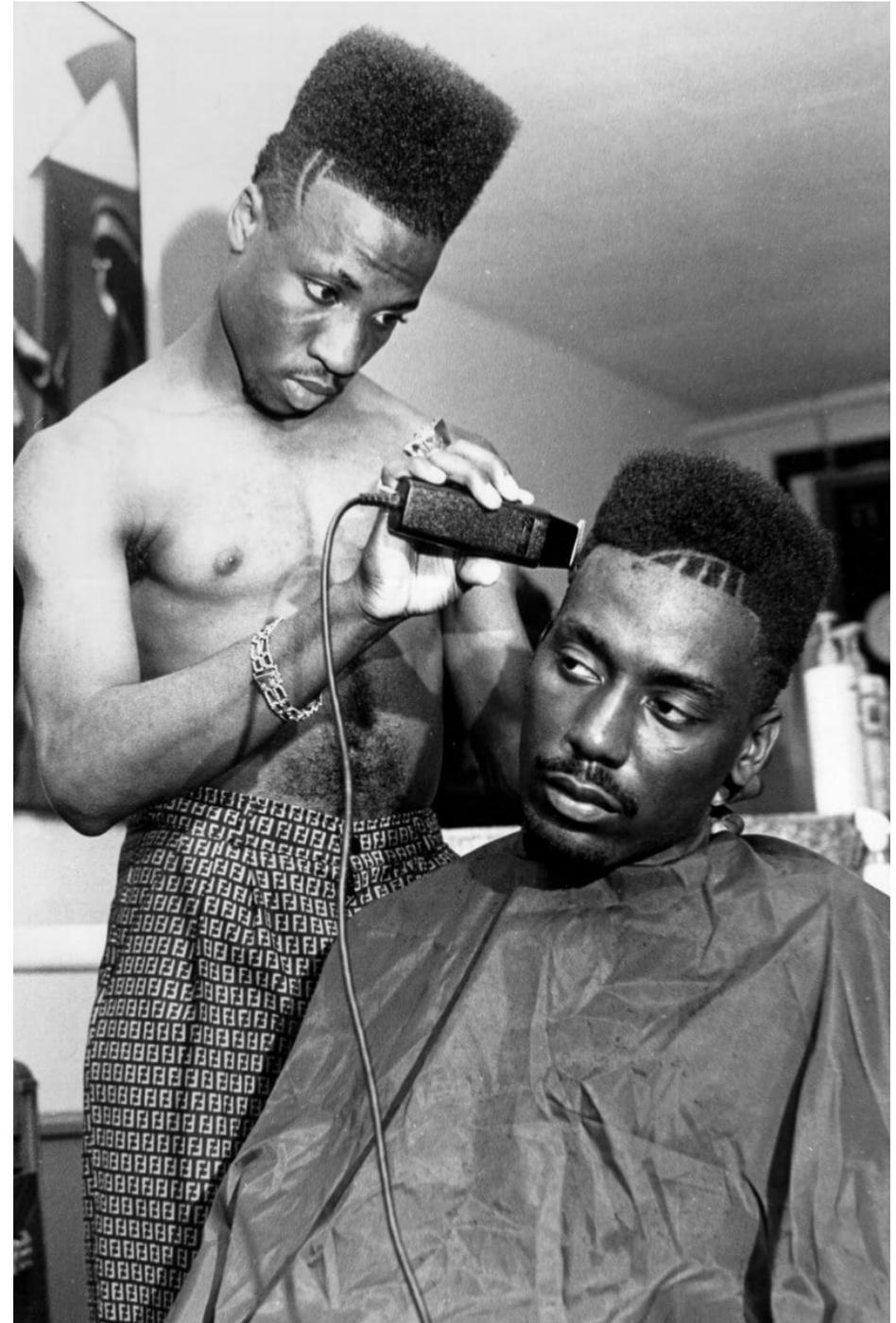
# Brief

This project aims to create a chair which represents and highlights the users black and afro hairstyles.

The final piece must utilise materials, forms and finishes to represent the hairstyles, and highlight the hairstyles of the users. The piece must also incorporate black cork and moulded plywood and be of a suitable size for male and females of any size to use.

The outcome should be suitable to be used as a statement piece in the home, as well as a public educational piece of furniture.

The chair shall be aimed at an adult audience, and should evoke an emotional response.



“Growing up in a predominately white school I used to hate my hair, it used to be so difficult to deal with and it couldn’t be styled how European hair was which frustrated me. People always asking to touch it like I’m a pet, and may ignorant questions. Grown up and now I love my hair, it is so versatile and the use of extensions and wigs is amazing!”

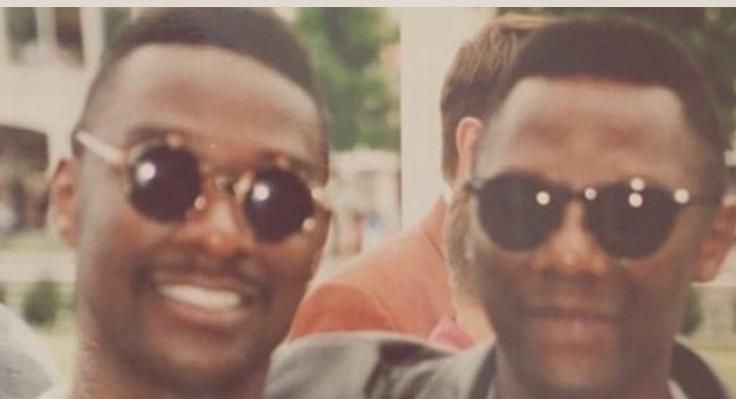


## Personal Background

Being of African/Caribbean descent means experiencing discrimination and micro aggressions due to your hair type on a day to day basis. Because of this people of colour, past and present, have had to find ways to adapt and make their hair more manageable and socially acceptable.

Up until recently, finding products for black/ mixed hair types was very difficult. Pharmacies such as Boots and Superdrug would have one shelf of products if you were lucky, so having straightened hair was easier to maintain and style with the products available.

These photos show how back in the 70's/80's styles such as perms and relaxers, which are designed to straighten and tame curls, were more popular. However, now people are beginning to embrace their natural hair more. Natural hair movements, campaigns, festivals and social media influencers all contributing to the normalisation and destigmatisation of natural textured hair. Yet, outdated policies and views in workplaces and schools have meant that natural hair styles are still seen in as messy and unprofessional by many people.

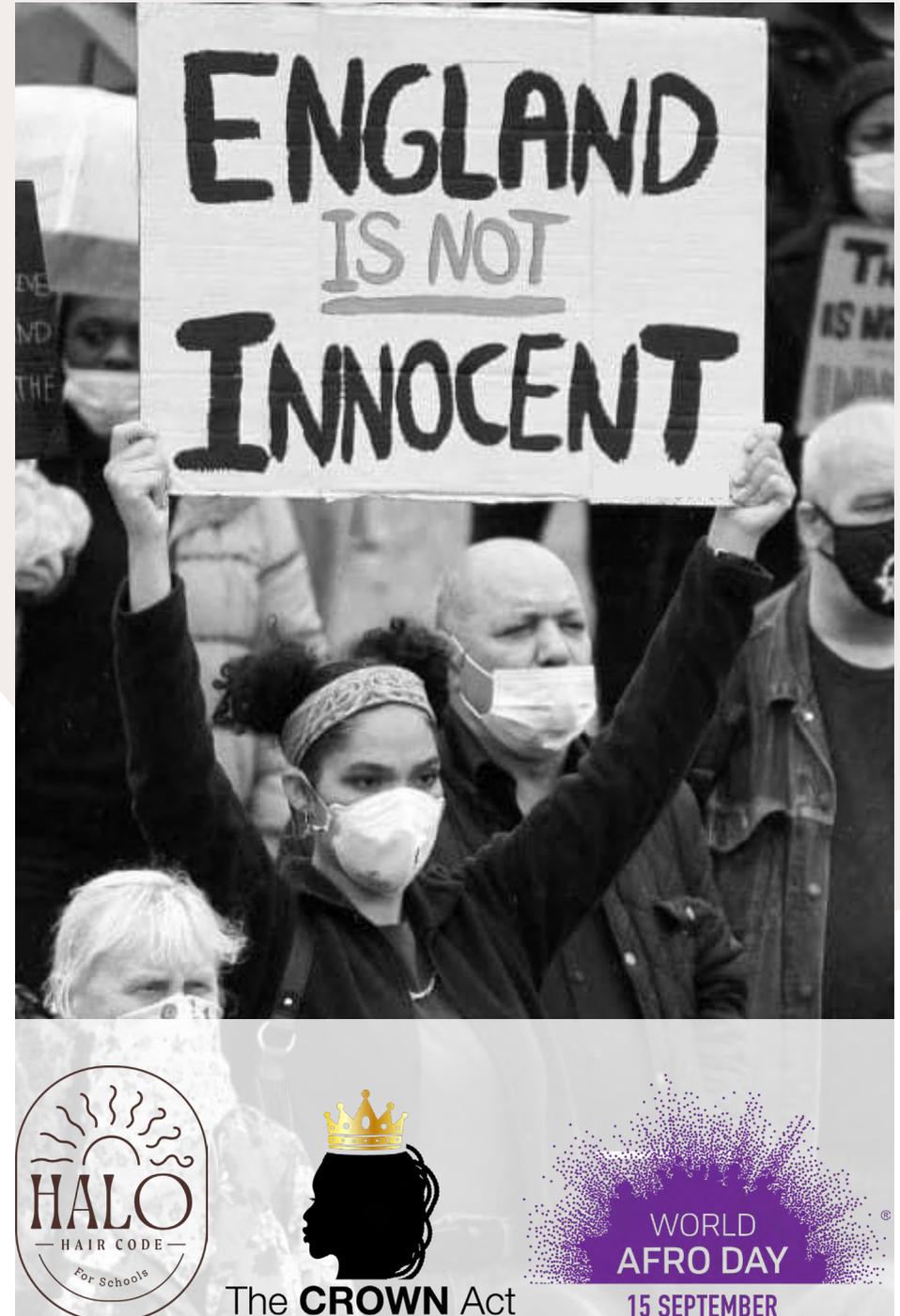


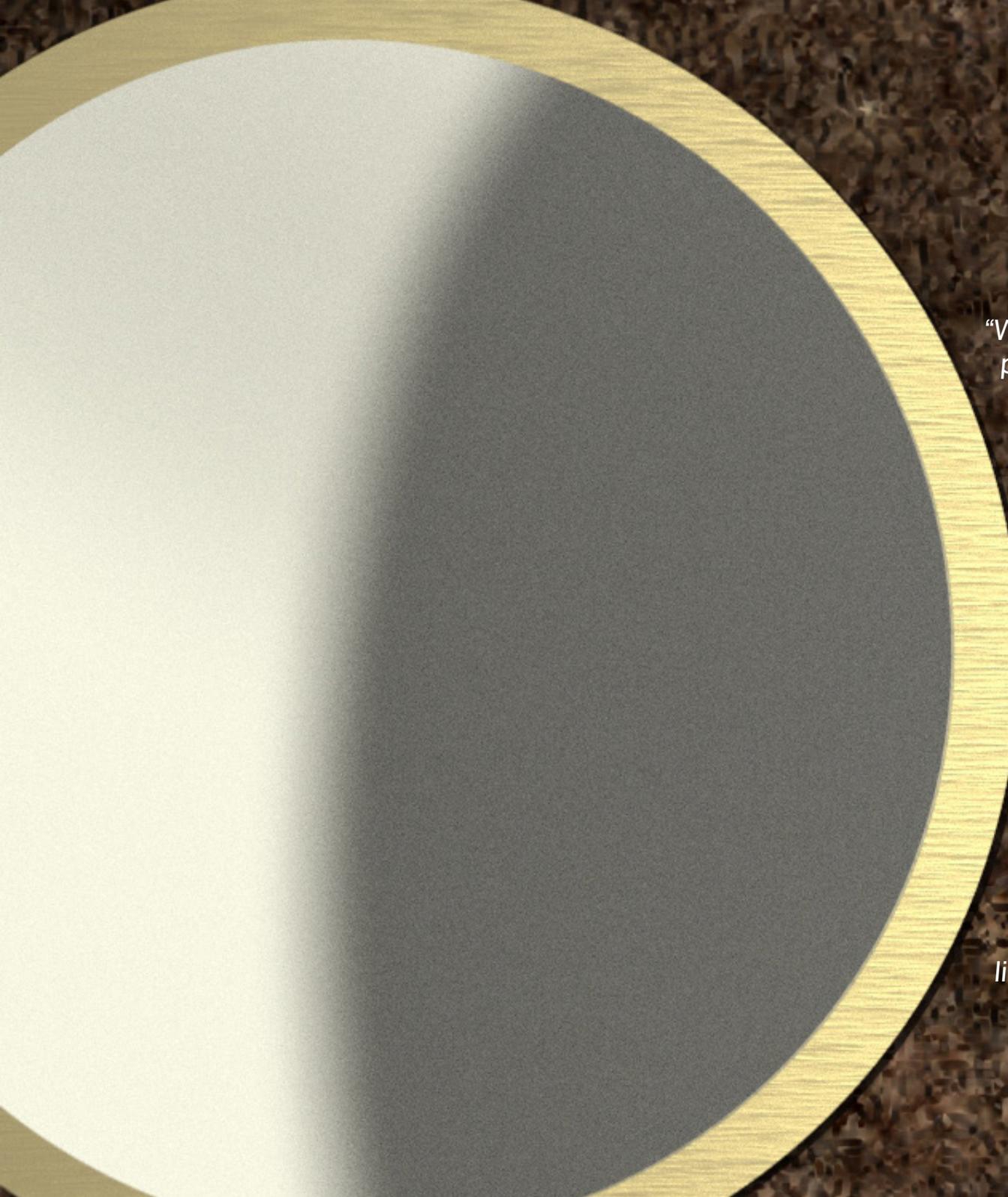
## Project Background and Inspiration

Researching into social issues for a research report assignment was one of the major catalyst for this project. Within the report issues such as gender and racial inequality and under-representation within design were explored, however due to the present Black Lives Matter movement and personal experiences it felt right taking the issue of racial representation forward as a project proposal.

Discrimination against peoples hair types in both school and work has been gaining a lot of media attention recently, partly thanks to the Black Lives Matter movement. Racist uniform policies in the UK and in America have spurred on the creation of The Crown Act, The Halo Hair Code and World Afro Day, all aiming to raise awareness and put an end to Hair discrimination.

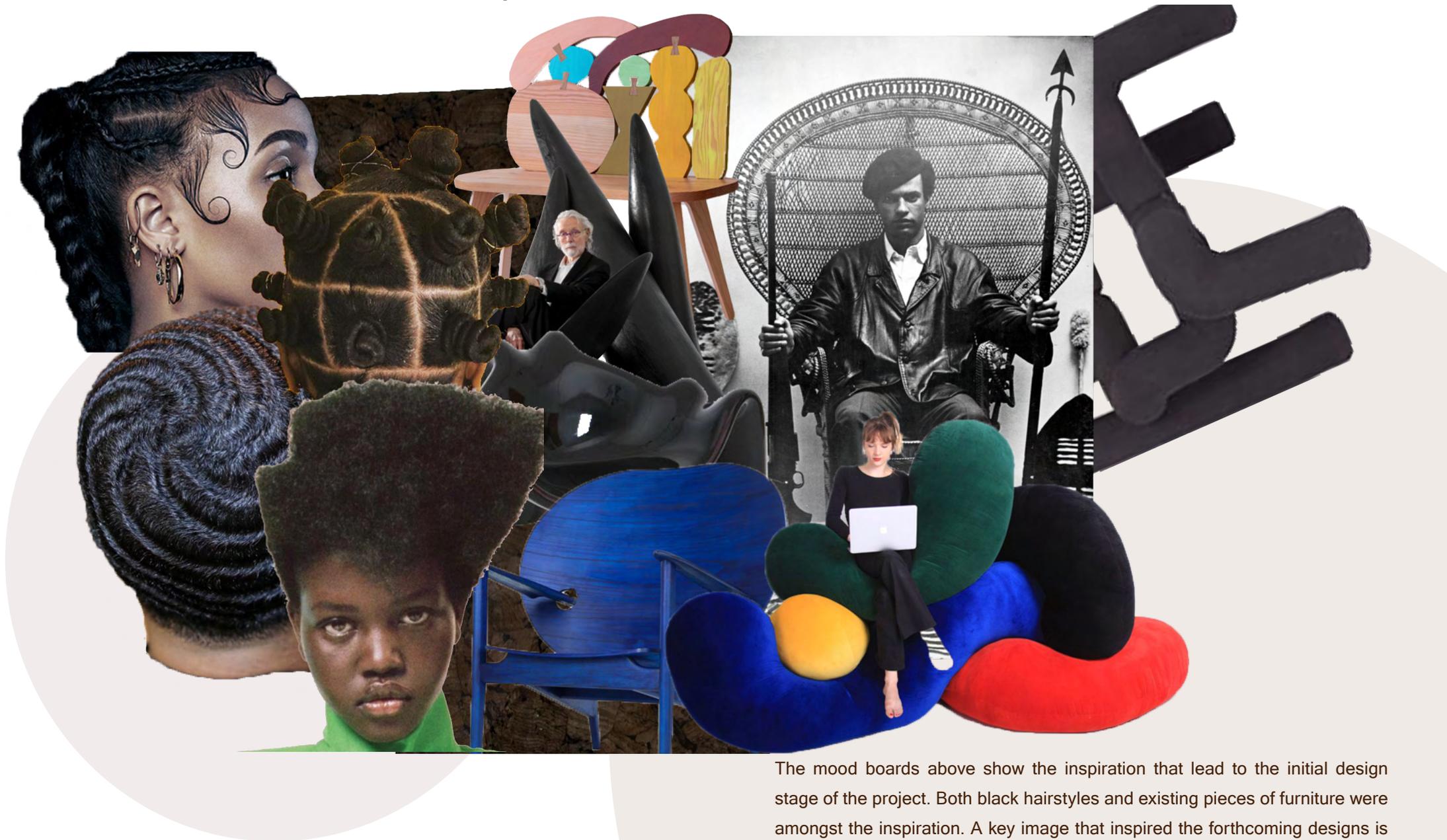
Although this project was routed in personal experiences, It is also important to highlight the challenges of others, represent movements which are happening around us and ultimately celebrate black hair.





“Work experience in professional selling has shown more acceptance towards longer black hairstyles but these were in multicultural areas. But I have concern for when I am back in Lincoln, a majoritively white city. It should be fine but the fact that the concern is there when it wouldn't be for white people shows that there is an air of inequality depending on where you live in the UK.”

## Mood boards and Visual Inspiration



The mood boards above show the inspiration that lead to the initial design stage of the project. Both black hairstyles and existing pieces of furniture were amongst the inspiration. A key image that inspired the forthcoming designs is the image of the Black Panther leader sitting in the peacock chair.



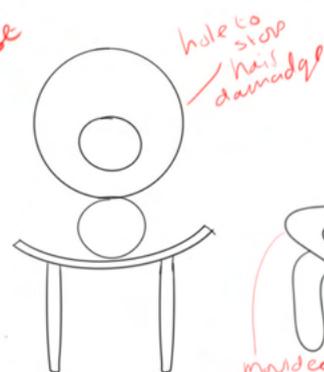
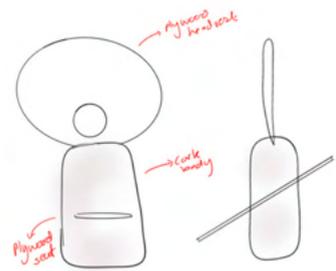
## Expanded Black Cork

Expanded black cork is a material usually found on building sites as insulation due to its waterproof, fire resistant and heat obtaining properties. However, because of its hair like colour and texture, this material was the starting point in the design process of Zewadi.

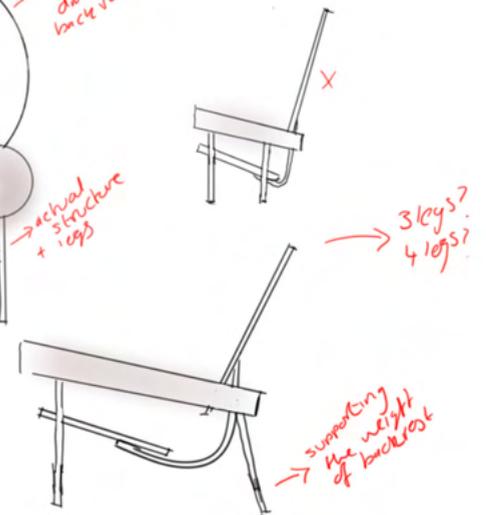
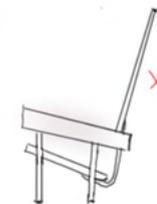
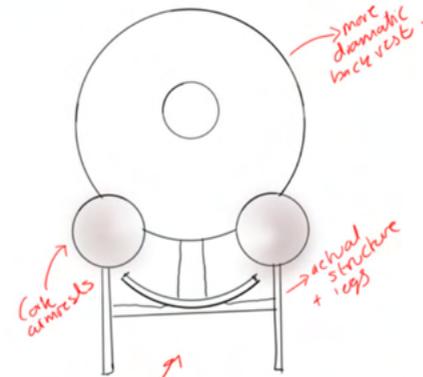
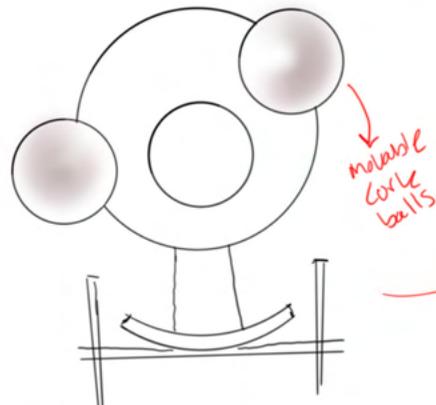
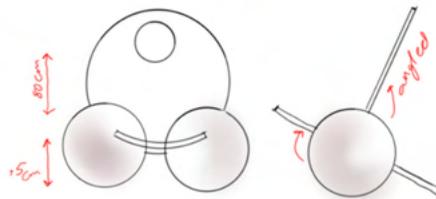
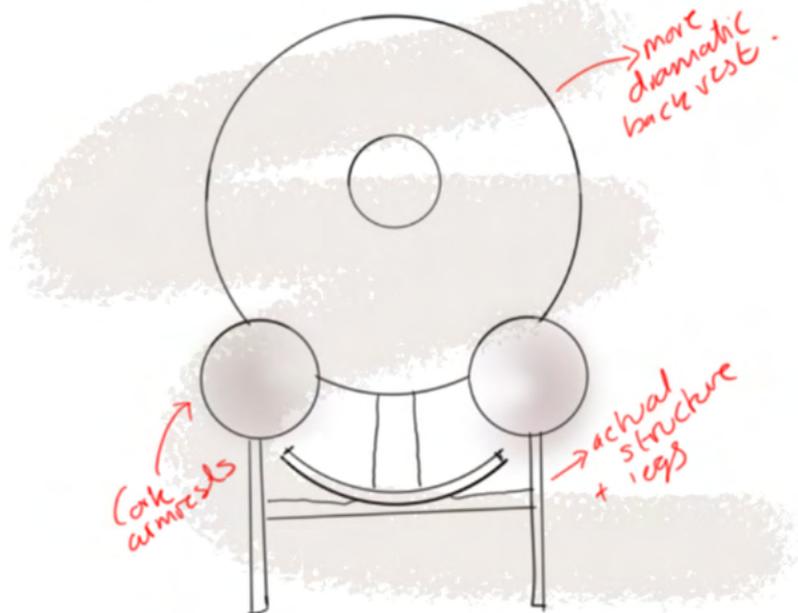
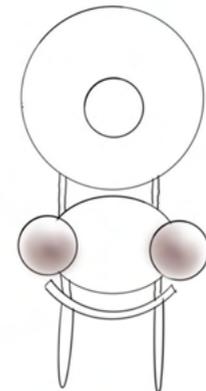
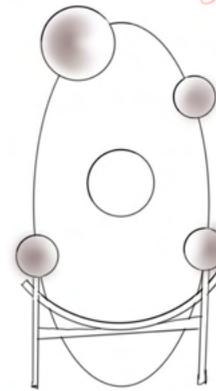
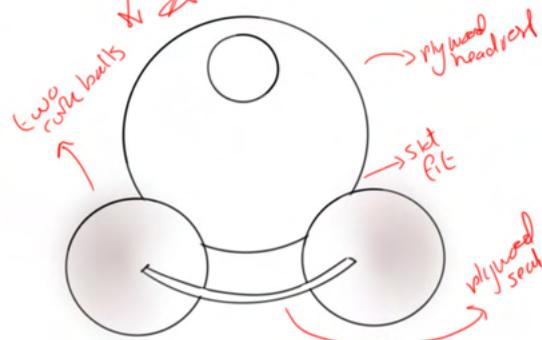
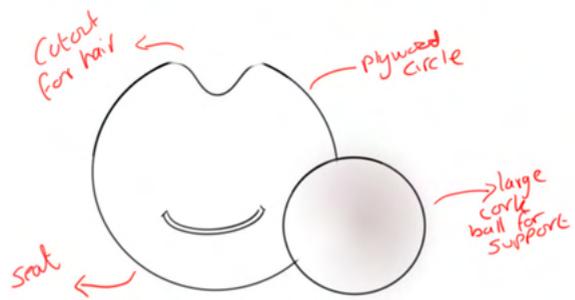
The cork is harvested from the bark off the branches of cork Oak trees. The tree is not harmed in this process and the bark will grow back, making cork a highly sustainable material. In expanded black cork particularly, the granules are fused together with their own natural resins which are released in a process of heating and steaming. It is also this process which gives this type of cork its large aerated grains and distinctive dark colour. The boilers used to steam the cork are also fuelled from waste material, making the whole manufacturing process 95% energy self-sufficient.



# Initial Concept Development



dradler inspired legs



## 3D CAD Model Development

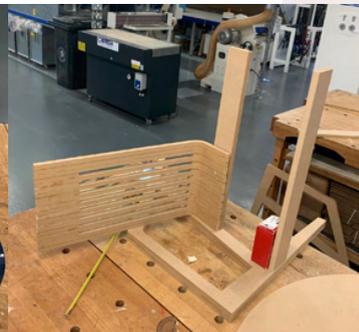


Due to limited access to the workshops, CAD modelling was the main method of developing and testing the chair. The overall form of Zewadi emerged quite early in the development process as there were certain key functions which the chair needed to have. This includes representing black hair, framing the user's hair and not damaging the user's curls. However, technical developments on the chair's structure and weight distribution took longer to finalise as these elements dictated the chair's functionality, therefore, getting them wrong would have meant a chair that was not safe or stable.

## 3D Test Model

This 1 to 1 scale test rig is a very rough former of the chair designs shown earlier. By creating this model it allows you to see the scale and proportions of the chair, how comfortable the angles are, how large certain pieces will be and the overall functionality of the chair.

Creating this model was a real turning point in the project, as it made it clear that the large scale of the seat was necessary to create the impact and power that was wanted.

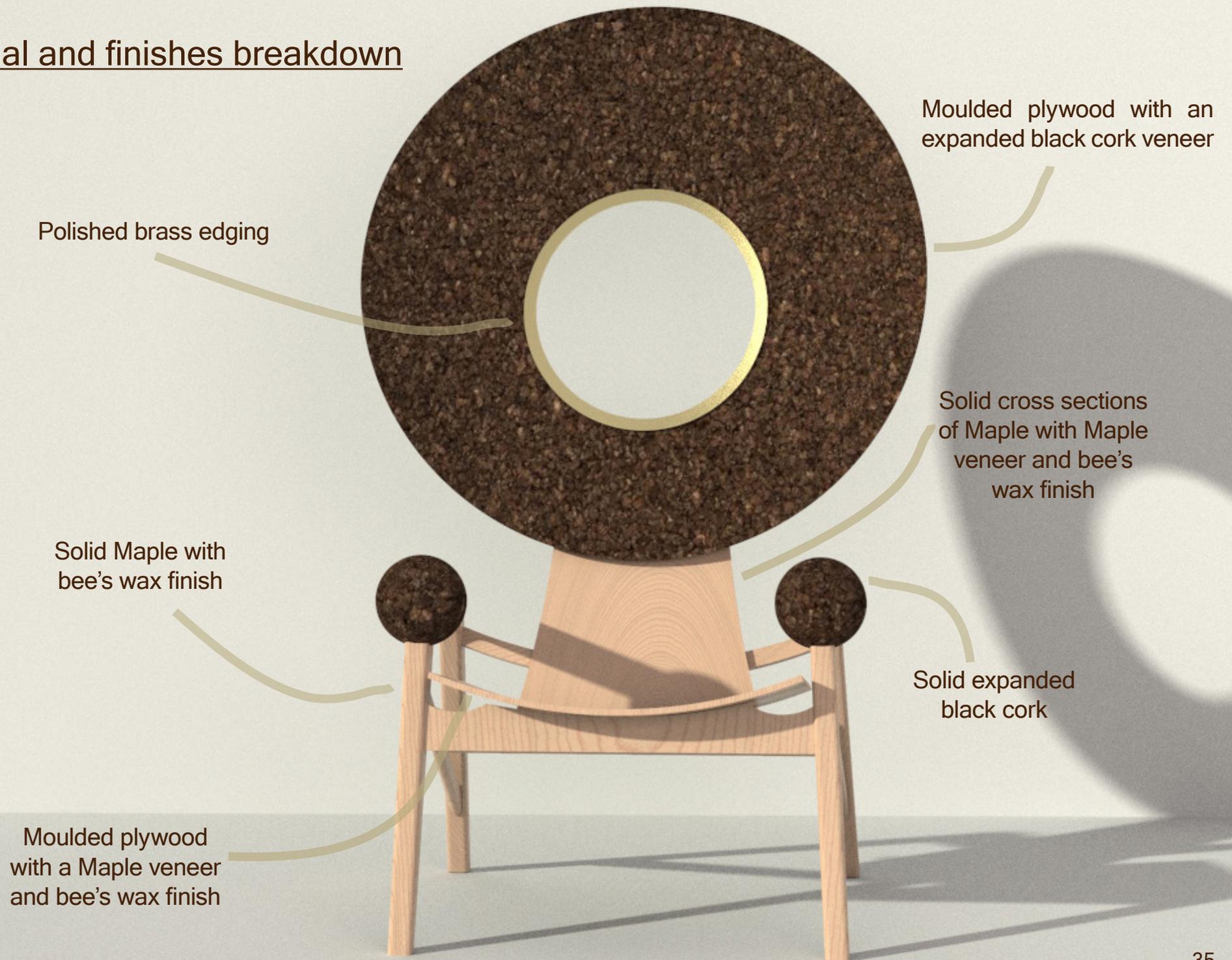




“I have faced many negative experiences because of my hair texture, my texture id 3c/4a and I was always told to cover my hair because it was messy looking. I come from an east African family so having curly hair isn't out of the norm, but a lot of Somalis have much looser curls. I also had to relax my hair every year because it was easier for my mum to deal with.”

### 3. Final Outcome

## Material and finishes breakdown



# Manufacturing Processes

The seat will be made using moulded plywood, with a CNC cut MDF mould and a bag press. 3 sheets of 3mm birch faced plywood will be used to reduce costs but still get a stable result.



The backrest will be made by CNC cutting cross sections of Maple which will be glued together and covered in a veneer to give it the appearance of moulded plywood. This method will be used to ensure a strong and stable backrest.

The black cork balls at the end of the armrests will be CNC cut on a 4/5 axis machine from a solid block of cork. This will allow the round shape and the slots to all be cut at the same time.



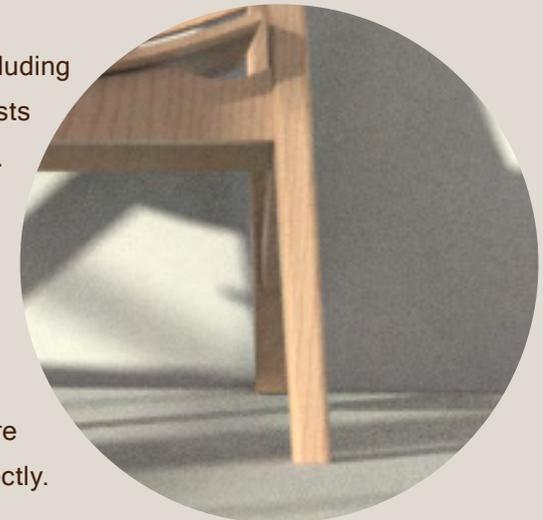
The headrest of the chair will be made from moulded plywood using a CNC cut MDF mould and a bag-press.

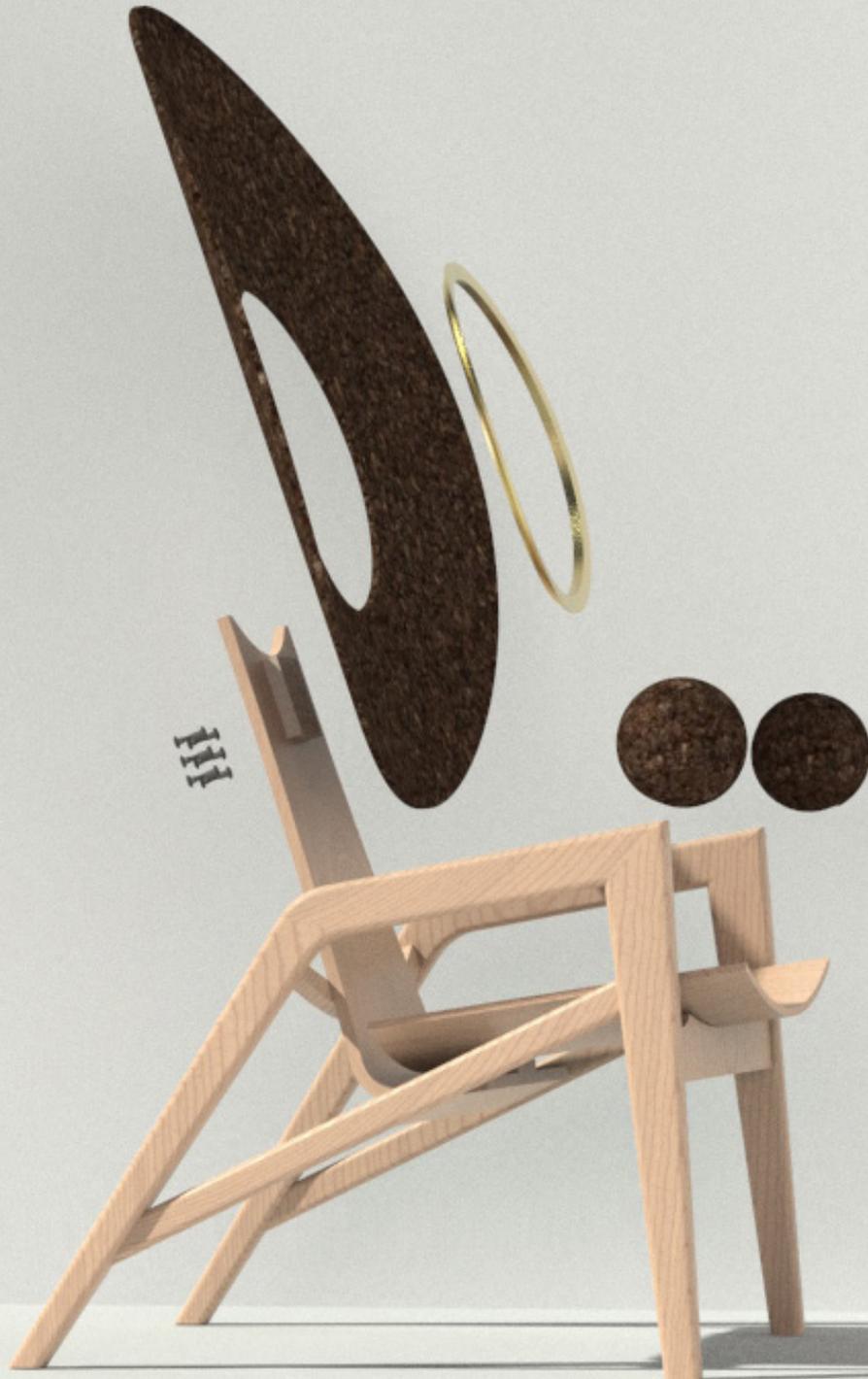


3 sheets of 3mm birch faced plywood will be used. The plywood will then be covered in an expanded black cork veneer.

The brass edging will be made from brass angle that will be heated with a torch and bent/hammered into shape using a CNC cut former. The ends will then be brazed together and the final piece will be polished.

All of the wooden pieces including the legs, supports and armrests will be CNC cut from Maple. The piece will then be joined together using a domino joiner, and dowel joints for any smaller pieces. Once the frame is joined it will all be routed to curve the edges. This will insure all of the edges will line up correctly.





## Assembly

As the Zewadi is a one off/commission piece the chair would be sent to the customer almost complete. However, due to its large size and fragile cork materials, the headrest and cork balls will be detachable and packaged separately.

The headrest can be fastened on by customers at home by screwing in the 6 male to female screws at the back of the backrest. The cork balls and brass detail simply slot into place.

## Branding and Marketing

Although the Zewadi chair would not necessarily retail in stores, creating a brand and identity for the piece for commissions and exhibitions is still important.



The logos feature the name of the piece, “Zewadi” meaning crown in Amharic, a commonly spoken language of Ethiopia. The idea to call the chair crown comes from the notion that black hair should be worn on the head proudly, and valued highly.

Possible exhibition venues and organisations could include...



Natural hair festival.

## Costings

Component	Material/ process	Standard price	Price per piece
<b>Materials</b>			
Legs, Armrest, Structure	Maple	£15.55 per liner m	£77.75
Headrest, Seat	3mm Plywood	£21.88 per sheet	£49.23
Headrest	1mm Expanded black Cork veneer	£6.12 per sheet	£24.48
Hand rests	Expanded black cork	£50 per block	£100
Seat, backrest	Maple veneer	£9.80 per sheet	£63.20
Edging	Brass angle	£19.70 per m	£19.70
Structure	Domino joints	£15.20 per pack	£1.99
Headrest	male to female screws	£1.99 per pack	£1.19
<b>Finishes</b>			
Whole chair	Bee's Wax	£33.99 per tub	£25.49
<b>Manufacture</b>			
Headrest, Seat	18mm MDF for for moulding	£20 per sheet	£120
Headrest, Seat	Cascamite glue	£41.28 per tub	£10.32
Hand rests	4 axisi CNC hire	£30 per hour	£60
-	Workshop hire (inc. bills and tools)	£120 per week	£240
-	Labour costs	£15 per hour	£900
-	Posting	-	£40
<b>Total costs</b>			<b>£1,733.35</b>
<b>Retail Price</b>			<b>£3,000.00</b>
<b>Total Profits</b>			<b>£1,266.65</b>

## Future

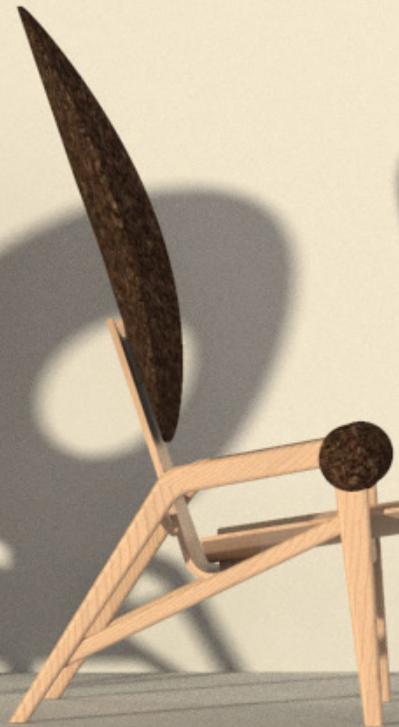
Due to limited workshop access because of Covid-19 unfortunately it was not possible to create a fully finished final piece, Therefore moving forward with this project are:

- To go on to produce a finished chair. Continuing talks with black cork suppliers, attempting to get the relevant pieces manufactured.
- Expanding the Zewadi range with multiple sizes and finishes of the chairs as well as extras such as, foot rests or side tables.
- Contacting some of the organisation mentioned previously as well as Mac Collins, who has kindly offered guidance previously, to get their opinions on any further developments as well possibilities for exhibiting the piece.

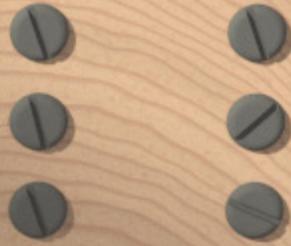
## Conclusion

There is an endless list of issues that black and minority people face for simply being themselves. Failings in laws and policies both within companies and schools, and on a wider national scale, mean that this issue cannot be changed overnight. It is a fight that will likely go on for generations to come. But that doesn't mean that we should stop highlighting issues and fighting for justice and equality.

Is a chair going to change the world? No. But a chair can highlight a majorly overlooked issue. A chair can make someone stop and think. A chair can make someone feel comfortable and confident in that moment.



"I had to teach my daughter from an early age about consent as she used to get very upset when she was 3 years old and people in the park wanted to touch her hair and pat it like a dog! I told her it's her hair and body and if people wanted to touch it they were to ask her and it's fine for her to say no thank you."





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