

Hello, my name is Olivia Bodak.

I am a Contour Fashion Innovation MA student from De Montfort University who specialises in leathercrafts and 3D printing. I have been selected as one of ten students across all art and design courses at DMU, to take part in Artifact Live: Legacy in Leather project which is a collaboration between the Museum of Leathercraft and DMU. Students were asked to consider two unique antique artifacts from museum's archives as source of inspiration for new contemporary design of leather goods and clothing (De Montfort University, 2023). The project focus is combining traditional techniques of leather craft with new technologically advanced methods, experimentation, research of the material and artifacts' heritage. Sustainability is an important focus of my project which considers various ways for improvement. I have aligned my project to UNSDG goal 12 responsible consumption and production (United Nations, 2015).

The Artifact Live is my master's major project which is inspired by a Japanese Samurai Saddle from the 17th century and Bavarian Horse Harness from the 18th century. I chose these objects because of timeless and simple design, colours combination and detailed embellishments with various structures. The Samurai Saddle has a Seigaiha pattern which presents waves and symbolises power and resistance (Baeza, 2019). The artifact inspired me to explore waves and water movement to develop new three-dimensional leather textiles and print. In this object, I also liked the associated hidden meaning of the pattern as it links with the aim of my garment to empower women. The horse harness structure and components inspired me to use multiple boning channels on the corset and sleeves. The object's embellishments such as folded flower-like shapes and weaved texture encourage me to explore different techniques of weaving, pleating, and folding which I applied on the sleeves and belt.

In this project, I wanted to challenge myself in terms of pattern cutting and construction to combine outerwear pieces with my specialisation which is lingerie and corsetry. I selected the trench coat as it is a classic and timelessly sought-after piece of clothing, and I elevated the garment's style and added a structural function inspired by saddle's shape with a built-in corset at the waist.

After extended secondary research about leather as a sustainable by-product of the meat industry and the current issues of the leather industry, I decided to use cow hide leather as nearly 40% of manufactured skins are annually thrown to landfills (Leather UK, 2023).

The garment is mostly made of black, chrome tanned Japanese Plouge leather with aniline finish. I chose this type of cowhide leather as it is extremely thin and soft while having enormous size (my pieces had 31sqf and 29 sqf). It comes from Tajima-Gyu cow which are bred for Kobe meet - one of the most expensive beefs for steak (Imperial, 2020). The cows live in unusually good conditions as they drink beer instead of water and listen to classical music during their meals to significantly increase appetite (Kobe Jones, 2016). Moreover, they're massaged with Japanese rice wine. However, Japanese leather experts are pointing out a serious sustainability issue in their country which is lack of usage of Japanese plouge skins causing a significant waste (Kobe Leather Cooperative Association, 2022). Due to the fact, the Japanese cows are only bred for meat, only small number of skins were exported causing waste as the leather was not used. Currently efforts are being made to improve awareness and promote its use (Kobe Leather Cooperative Association, 2022). Therefore, I

decided to contribute to this project by making a sustainable zero waste garment from Japanese plouge. The green corset is made of soft chrome tanned lamb nappa leather for pop up of colour and contrast but also due to lack of colourful option from Japanese plouge.

The belt is hand weaved from 3mm strips to create thicker straps with texture. Afterwards, the weaved cord is formed in the shape of the waves and hand stitch. This technique was acquired by research into various paper folding technique and applied to leather. The strips are made of vegetable tanned cowhide leather.

Another aim of this project was to create a couture garment which is as sustainable as possible. Apart from using durable and long-lasting leather, I used a pure habotai silk and chiffon interfacing to give garment a fully luxurious finish. I also attempt to create a zero-waste garment by reusing off-cuts of cow-hide leather to create embellishments for the sleeves. Firstly, I placed my pattern pieces in certain distance to leave thick enough strips to later fold them to form a cone shape. Afterwards, I stuffed the cones from thin leather with the small leftovers which were not sustainable for use. This method enabled me to create nearly completely zero waste trench coat*.

In this project, I conducted primary research by experimenting with 3D printing which is another passion of mine. This technology enabled me to create a 3D printed biodegradable shank buttons made of bioplastic PLA filament. (After 6 weeks of incubation in soil, there is less than 10% of PLA pieces remaining in the ground (Wang, 2018)). Moreover, I explored different ways of combining durable and long-lasting leather with innovative and eco-friendly additive manufacturing and I develop a new promising technique of 3D printing directly onto leather to make three-dimensional biodegradable leather textile with embellishments by using PLA or TPU filament.

In conclusion, this project was the most challenging technically in my university career, but I hope to continue my research in the future, working with cow hide leather and exploring various sustainable solutions to employ by the fashion industry.

*To create this garment, I used 1.5 skins and I reused all the leftovers, however the other half of the second skin and leftovers of green lamb nappa will be fully reused for the next garment.

References

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