

Project Title: The Leather Revolution – Crafting Sustainable Combat Boots

Introduction:

The Leather Revolution is a forward-thinking design project focused on the creation of handcrafted combat boots using ethically sourced, vegetable-tanned leather. Inspired by the durability, utility, and cultural legacy of military footwear, this project reimagines the classic combat boot through the lens of sustainability, craftsmanship, and modern aesthetics. The boots are constructed with robust leather uppers, reinforced heel counters (contreforts), padded collars, and grip-enhanced rubber outsoles, offering both strength and comfort. This project not only honors the tradition of leatherworking but also advocates for a new standard of ethical design in footwear

The Leather Revolution is a sustainable design project focused on crafting durable combat boots using vegetable-tanned leather. Inspired by military heritage and modern ethics, the boots combine strength, comfort, and eco-conscious materials—without fur or exotic skins.

METHODOLOGY

Materials Specification Sheet

Project Title: *The Leather Revolution – Combat Boots*

Focus: Sustainable Leather Footwear Design

Component	Material Used	Details / Purpose
Upper	Full-grain vegetable-tanned leather	Durable, breathable, eco-friendly leather
Lining	Chrome-free soft leather	Comfort, moisture control, sustainable processing
Outsole	Natural rubber	Provides traction, weather resistance, long-lasting
Insole	Leather with cork filler	Cushioning, natural support, biodegradability
Heel Counter (Contrefort)	Recycled leatherboard	Reinforces heel structure, maintains shape
Toe Cap Reinforcement	Molded leather insert	Adds protection and form to toe box
Shank	Natural fiber or lightweight steel	Arch support, structural strength

Component	Material Used	Details / Purpose
Stitching Thread	Waxed polyester thread	Durable, water-resistant stitching for longevity
Eyelets & Hooks	Rust-resistant metal	Reliable hardware for lacing system
Adhesives	Water-based, non-toxic glue	Eco-conscious bonding agent

Image

Each part of the shoe (like the vamp, quarter, tongue, etc.) has its own pattern piece, which acts like a template for cutting.

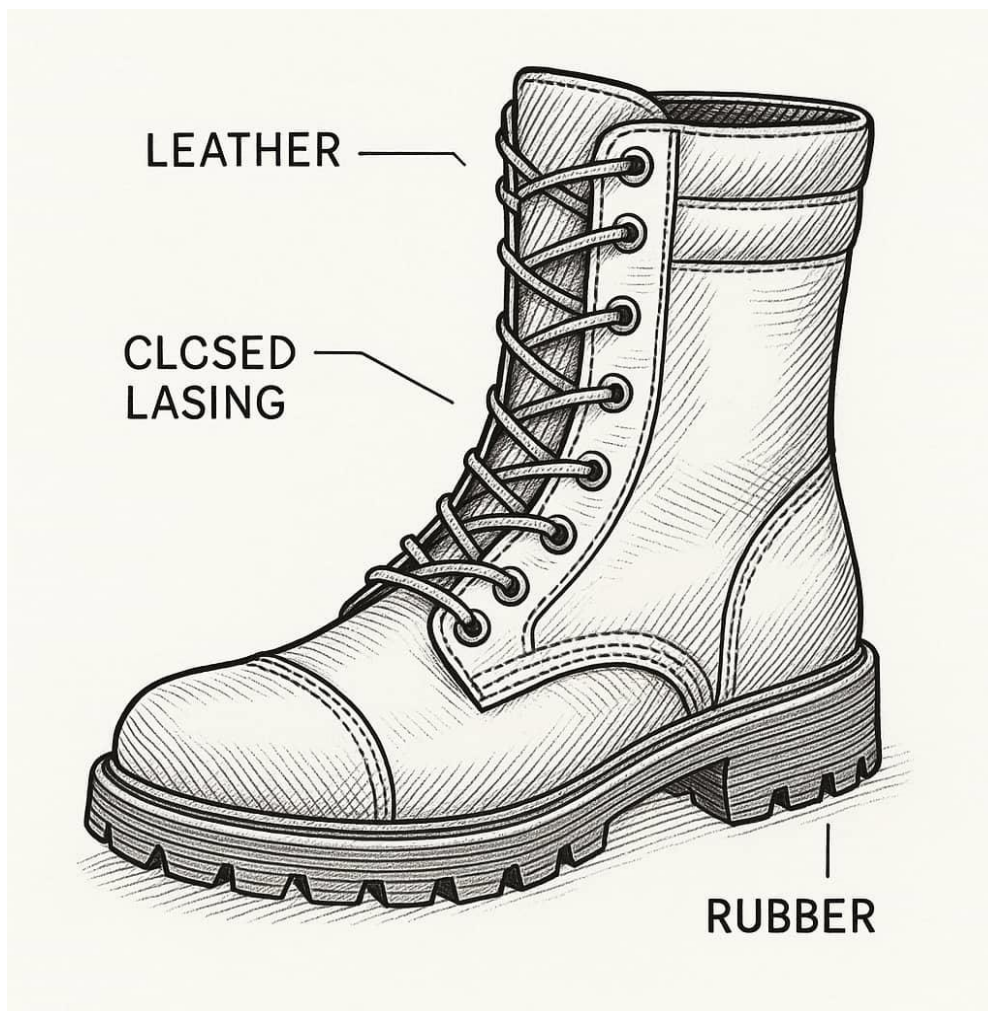




Figure 1 form pattern

a **form pattern** is essentially the **set of flat shapes/templates** used to cut the leather or other materials, which when assembled, form the shoe's structure.

1. Vamp

The **vamp** is the **front part** of the shoe upper that **covers the toes and instep (top of the foot)**.

- **Location:** It extends from the toe to the area under the laces.
- **Function:**
 - Gives shape to the toe area
 - Protects the forefoot
 - Plays a key role in the shoe's fit and flexibility
- **In Combat Boots:** The vamp is usually made from tough leather to resist wear and may include **toe reinforcement** for added protection.

It indicates the **front part of the shoe upper** that covers the top of the foot, starting from the **toe area** and extending **toward the midfoot or instep**.

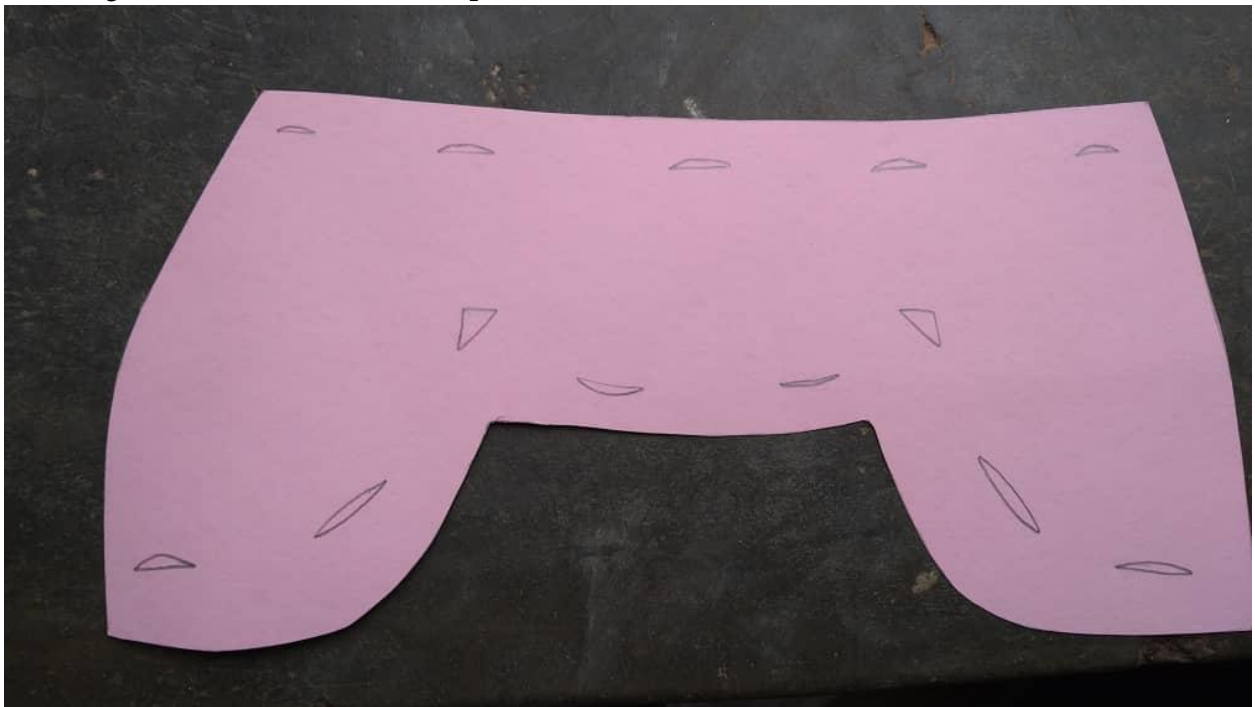


Figure 2. vamp

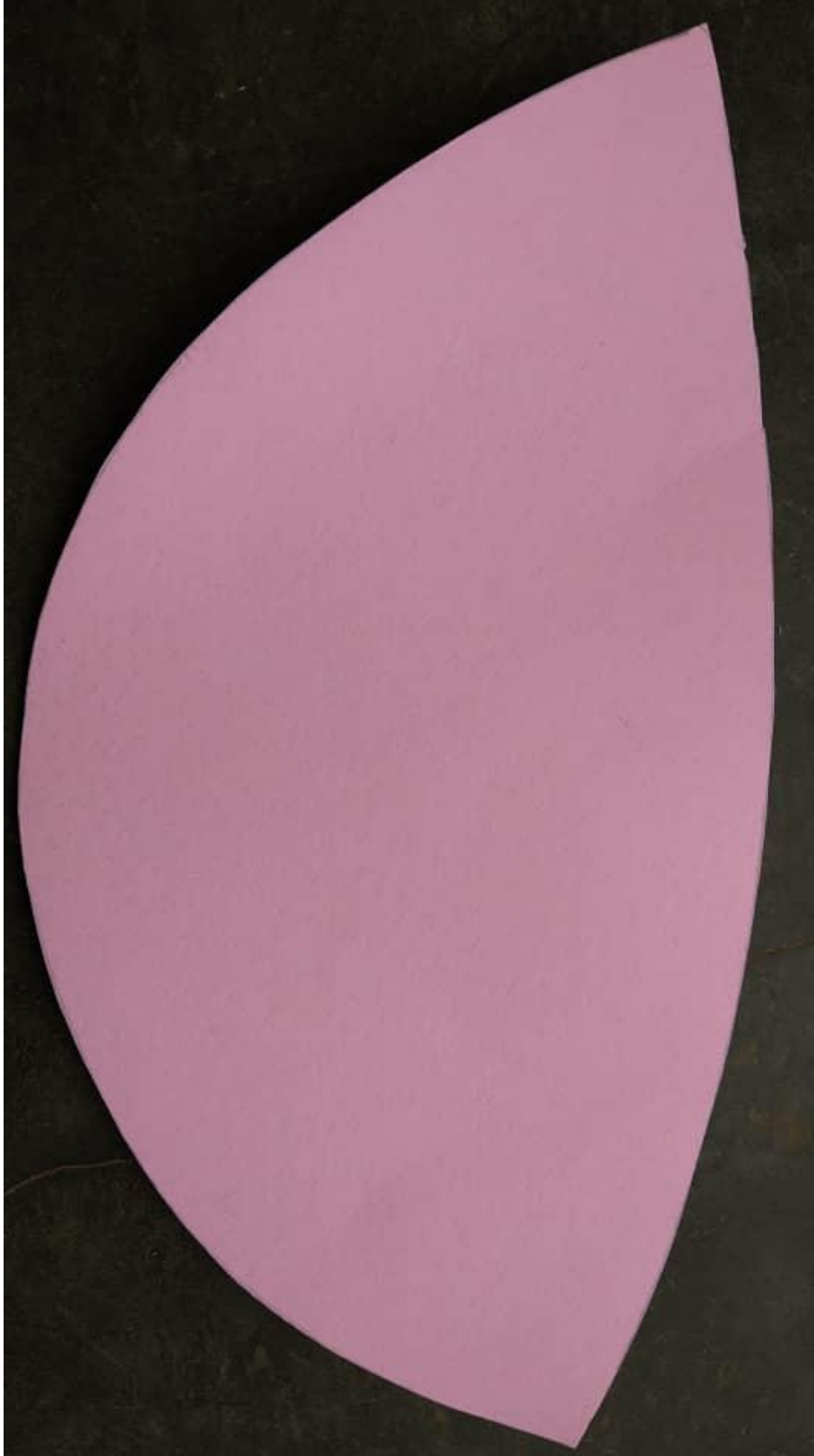
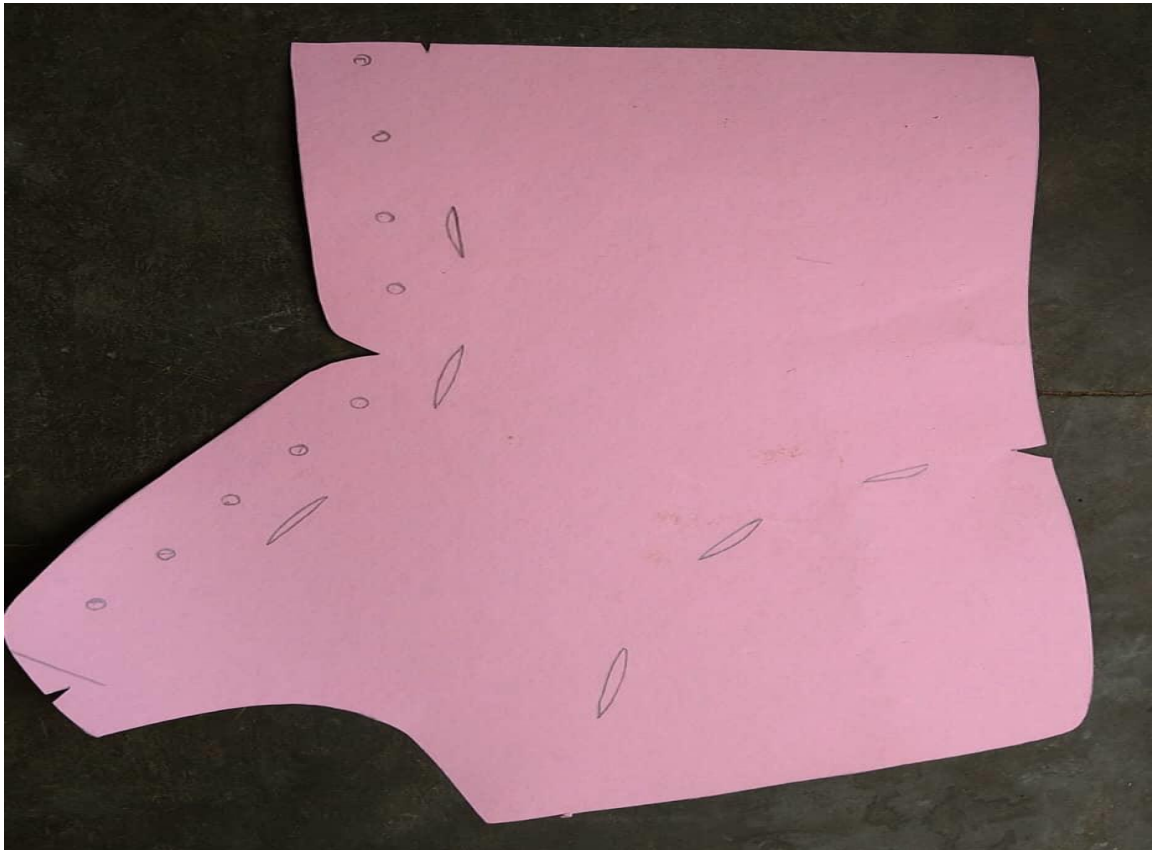


Figure 3 vamp part 2

2. Quarter

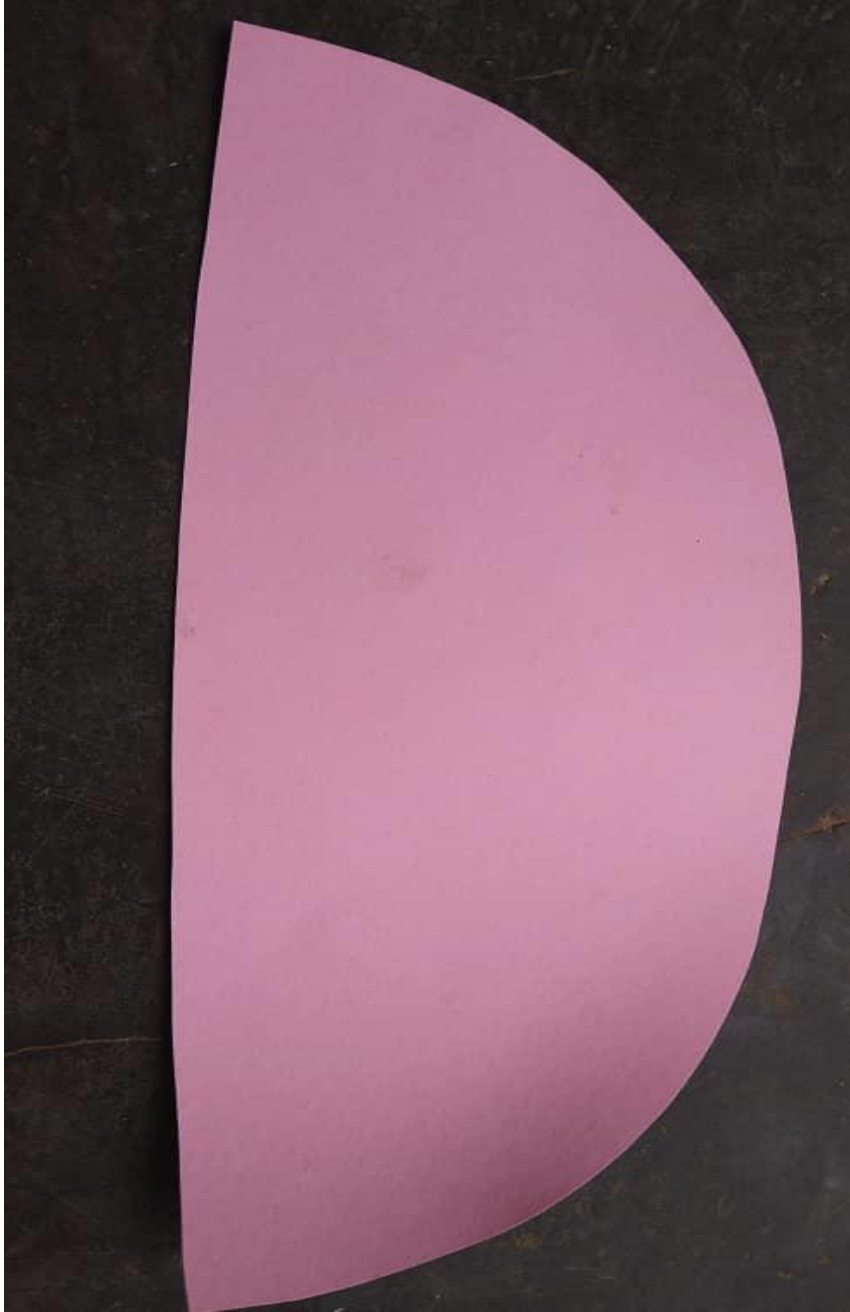
- **Definition:** The **quarter** is the **back and side section** of the shoe upper that **wraps around the heel and sides of the foot**.
- **Location:** It connects with the vamp, usually at the arch or midfoot, and goes around the heel.
- **Function:**
 - Provides structure to the heel and ankle
 - Houses the **eyelets or lacing system**
 - Often includes the **heel counter (contrefort)** inside for support
- **In Combat Boots:** The quarter is often extended up the ankle for extra protection and support, especially in mid-calf or high-top styles.



This sketch indicates meets the **quarter panels** (the sides and back of the shoe).



Figure 4. Quarter



Conclusion

The Leather Revolution – Combat Boots project successfully combines traditional craftsmanship with modern sustainability principles. By using ethically sourced, vegetable-tanned leather and eco-conscious materials, this design demonstrates that durability, function, and environmental responsibility can coexist in footwear production. The handcrafted combat boots reflect both strength and style, with attention to comfort, structure, and long-term wearability. Through careful material selection, technical pattern design, and refined construction techniques, the

project not only honors the legacy of leatherwork but also pushes it forward into a more ethical and innovative future. This combat boot stands as a symbol of resilience—both in its form and in the values it represents.