

# Tumi Mokopane

Real-time 3D Environment Artist

Cinematic visualisation · Environment art · Production assets



SCAN SHOWREEL

[tumimokopane.com](http://tumimokopane.com) · [SHOWREEL](#) · [vimeo.com/1187827117](https://vimeo.com/1187827117)



WHO I AM

# Real-time 3D Environment Artist

Cinematic visualisation · Environment art · Production assets

I'm a real-time 3D Environment Artist based in Glasgow, specialising in cinematic visualisation, environment art and production-ready 3D assets. I build environments with a strong focus on composition, atmosphere and material accuracy – from blockout and trim sheets through to lighting and final look.

My background in communication design and motion means I think about camera, timing and composition as part of the build – not as an afterthought. My MSc project with Strathclyde Partnership for Transport used UE5 to demonstrate how 3D visualisation can improve public understanding of urban infrastructure.

GLASGOW, UK

Open to environment art, cinematic visualisation and production asset roles in games, previs and XR.



CONTACT

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SELECTED WORKS

01 **Clyde Metro Govan Interchange**

Real-time UE5 visualisation

02 **The Tholos of Delphi**

UE5 environment study

03 **Photoreal Portrait Study**

Organic asset / portrait workflow

04 **Morning Star Flail**

Production prop study

TOOLKIT

REAL-TIME / 3D

Unreal Engine 5 · 3ds Max · Maya · Blender · ZBrush

TEXTURING / RENDERING

Substance Painter · Marmoset Toolbag · Arnold

MOTION / DESIGN

After Effects · Premiere Pro · Photoshop · Illustrator · InDesign

EDUCATION

**MSc**

3D Design for Virtual Environments  
Glasgow Caledonian University, 2025 · Distinction

**BA (Hons)**

Communication Design  
Glasgow School of Art



01 · CLYDE METRO · GOVAN INTERCHANGE

# Clyde Metro Govan Interchange

*Real-time cinematic environment built in collaboration with Strathclyde Partnership for Transport.*

UE5 · Lumen GI · Sequencer · Modular Station Kit · PBR Materials · Rain & Wetness FX · Cinematic Export

## ROLE

Real-time 3D Environment Artist

## TOOLS

Unreal Engine 5 (Lumen · Sequencer) · Maya · Substance Painter · ZBrush · After Effects

## CONTEXT

Strathclyde Partnership for Transport · Public-facing visualisation · Glasgow, 2025

Site-accurate real-time environment of the proposed Govan Interchange, built with a modular station kit, PBR material workflow, branded tram livery, rain and wetness FX, Lumen GI lighting and Sequencer camera cuts.

## OUTPUT

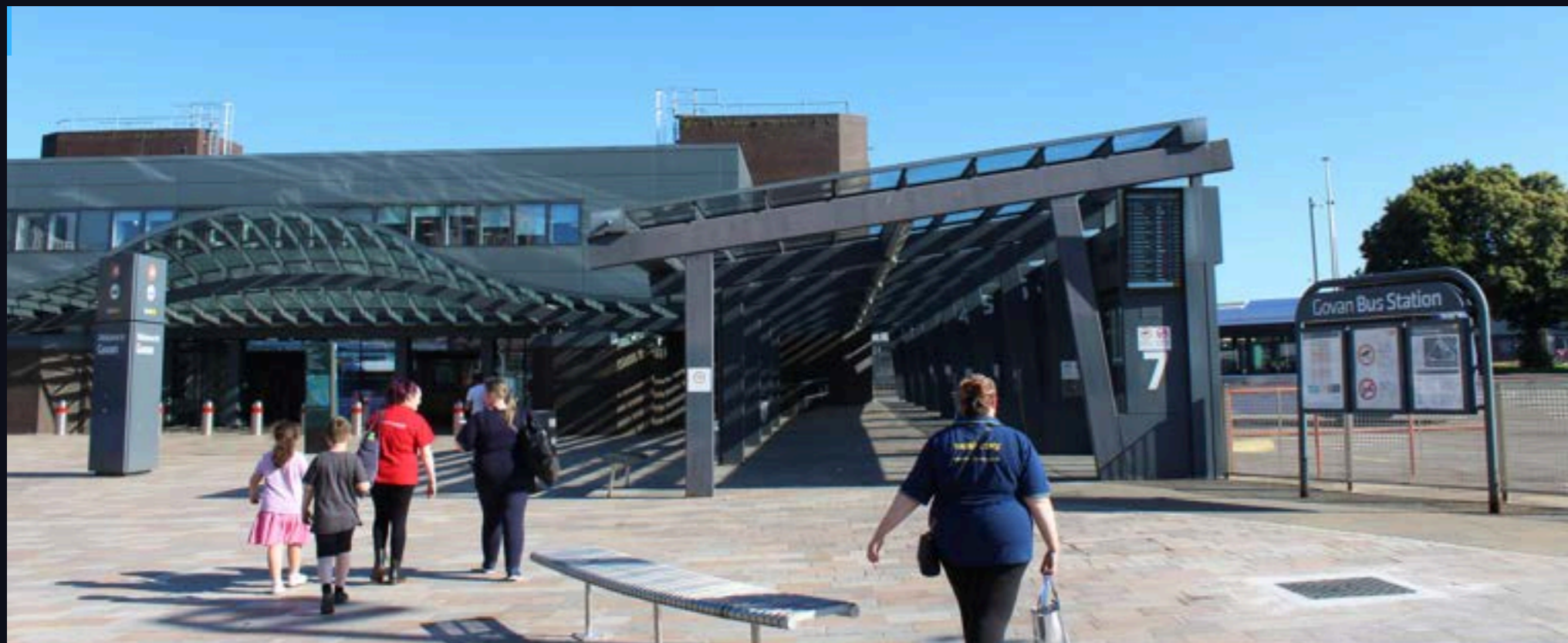
Built scene-first, camera-second – detail concentrated where the lens needed it most.

Full UE5 real-time environment: site photography → modular 3D kit → PBR dress → Lumen lighting → Sequencer camera sequence → presentation export. Delivered as a public-facing real-time cinematic alongside the SPT transport proposal.

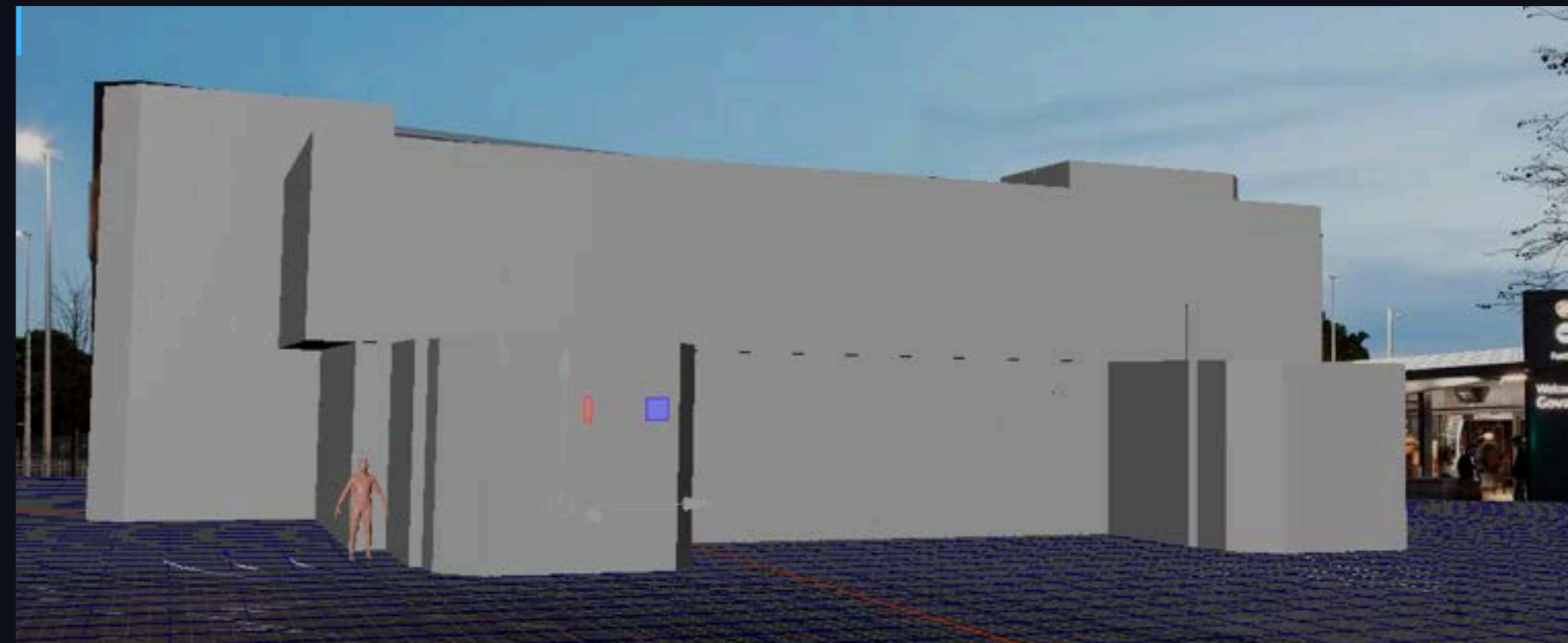
PRODUCTION BREAKDOWN · PROJECT 01

# From Site Research to Real-Time Cinematic

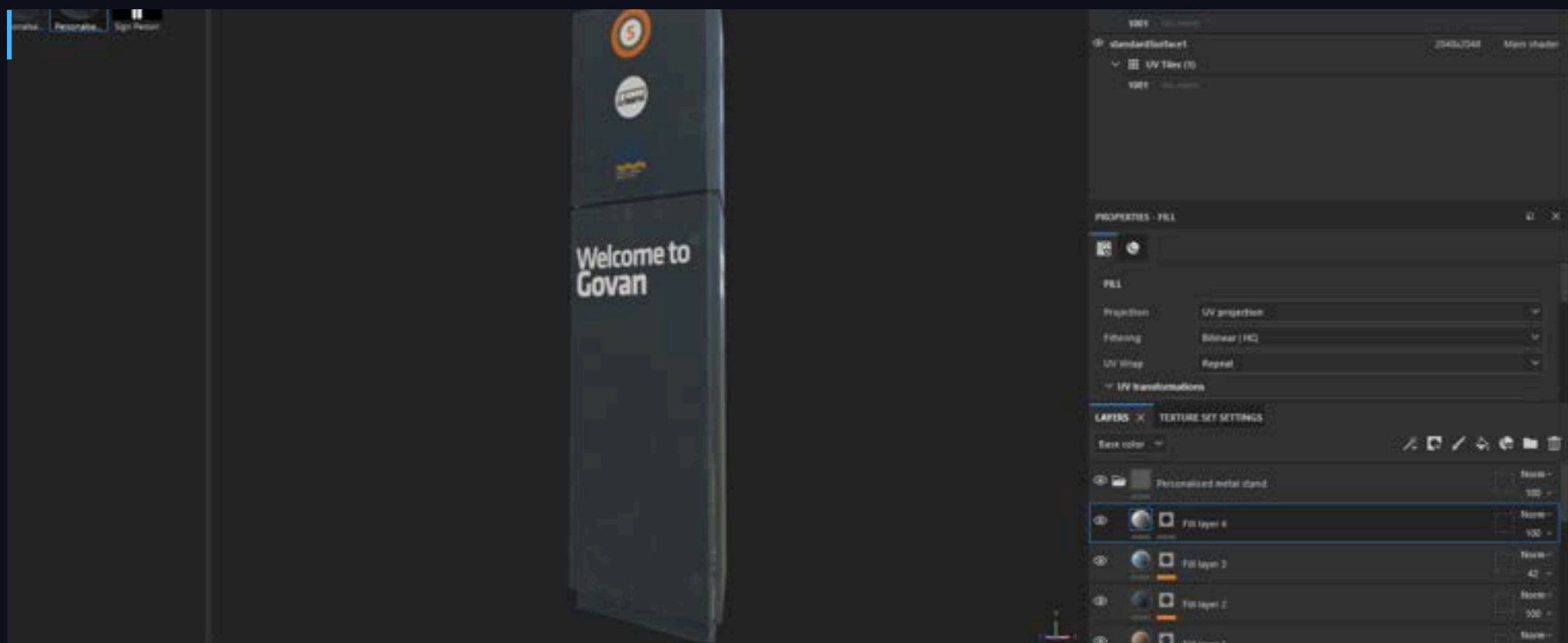
Built scene-first, camera-second – detail concentrated where the lens needed it most.



Location survey, scale reference and material photography at Govan Interchange.



Maya – modular kit modelling, scale-disciplined blockout, quad-dominant topology.



Substance Painter – UV layout, PBR metal/roughness, decals and weathering.



UE5 – scene assembly, Lumen lighting, rain/wetness FX and Sequencer camera cuts.

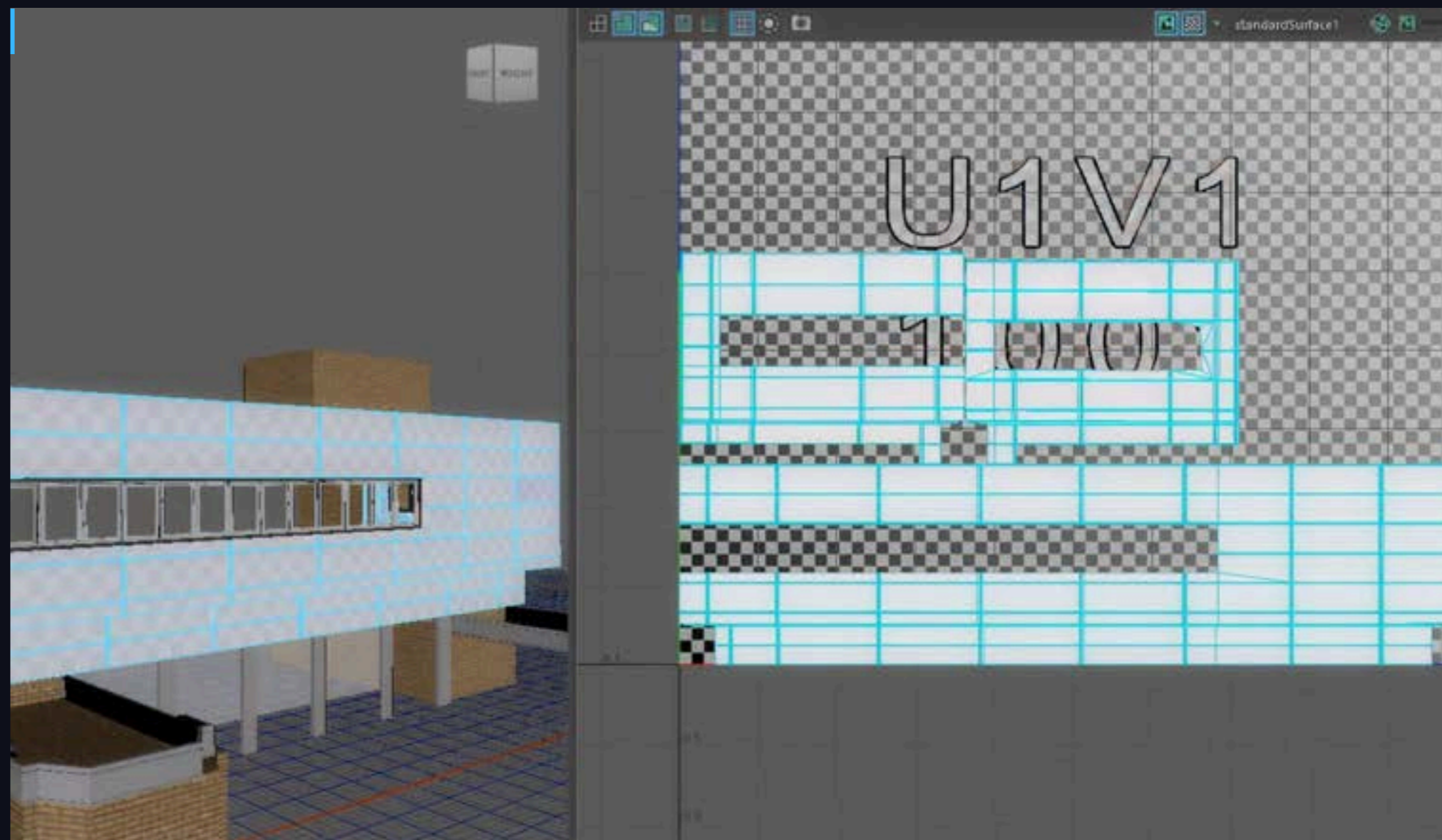
WORKFLOW

Site research → Modular modelling → UVs → PBR texturing → UE5 assembly → Lighting + rain FX → Sequencer → Final edit

01 · MODELLING → 02 · UV LAYOUT → 03 · TEXTURING → 04 · ASSEMBLY



Maya modelling – modular kit, scale-disciplined blockout, Gnomon Workshop pipeline, quad topology



UV layout – hard-edge seams, shell packing, material splits per asset type



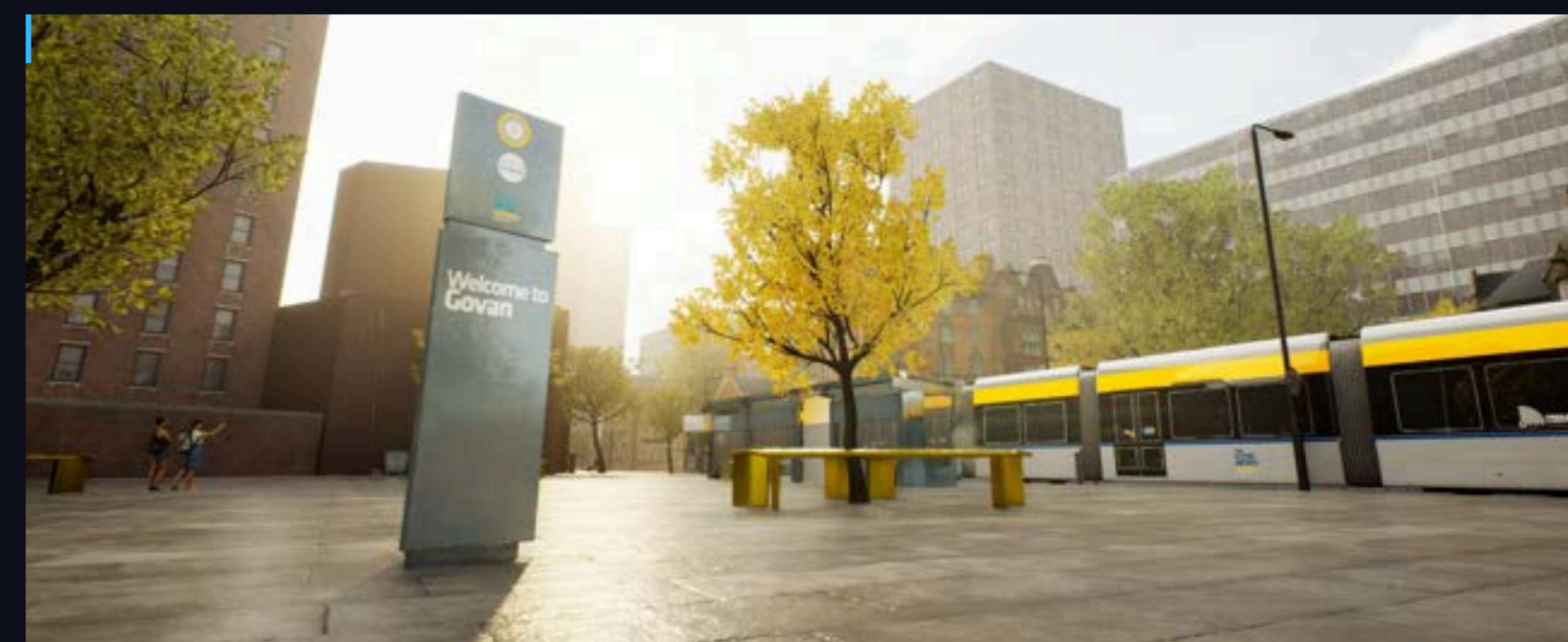
Substance Painter – PBR metal/roughness, smart mask weathering, custom alphas, 4K texture export



UE5 assembly – FBX import, packed texture workflow, Lumen lighting, British City Pack integration

FINAL STILLS + IMPACT · PROJECT 01

# Final Cinematics



## IMPACT

# 21 / 31

respondents rated their understanding highly after viewing the 3D visualisation.

*Viewers called out the wet pavement, street lighting and familiar architecture as making the space feel real. I designed for legibility at eye level – the wet surfaces, tram signage and canopy scale were deliberate choices.*

## RENDERED IN

Unreal Engine 5 · Lumen GI · Nanite · Sequencer · Rain/Wetness FX



# 02

UE5 ENVIRONMENT · PROJECT 02

## The Tholos of Delphi

*Real-time environment – ZBrush stone sculpt, Substance Painter bake, UE5 Lumen lighting.*

### ROLE

3D Environment Artist

### TOOLS

3ds Max · ZBrush · Substance Painter · Unreal Engine 5 · Megascans · PolyHaven

### FOCUS

Trim sheets · Sculpted stone · Vertex painting · Cinematic lighting

Stone trim sheet sculpted in ZBrush, baked in Substance Painter, applied across the full colonnade exterior. Three material variants – clean, dirt and moss – blended in-engine via vertex painting.

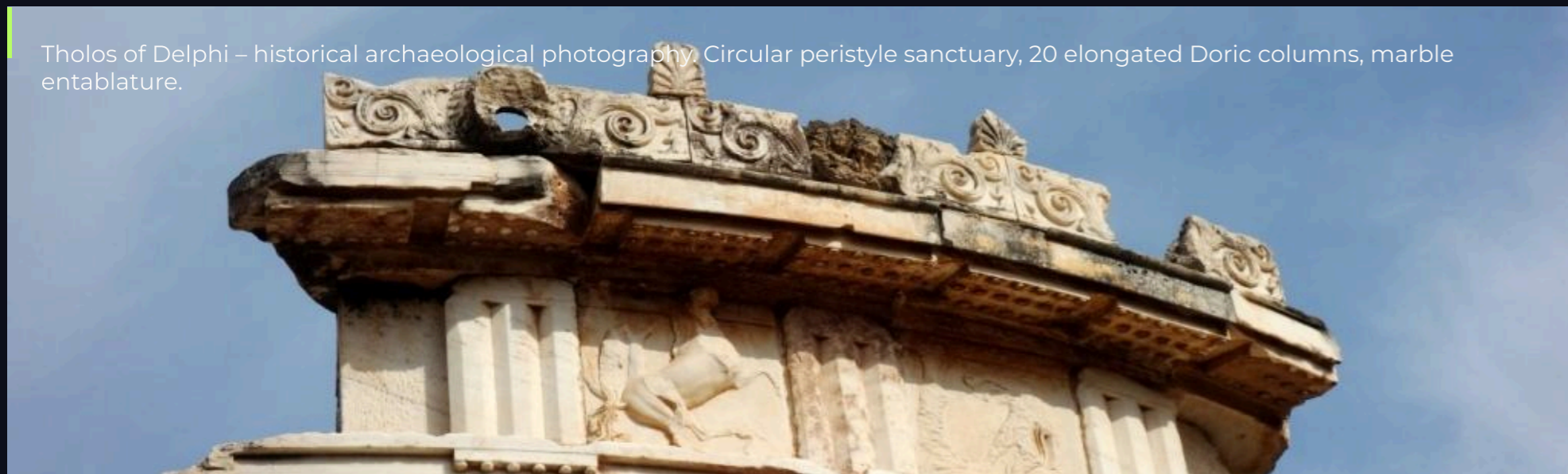
(HISTORICAL RESEARCH & MEASUREMENTS)

# Historical Research.

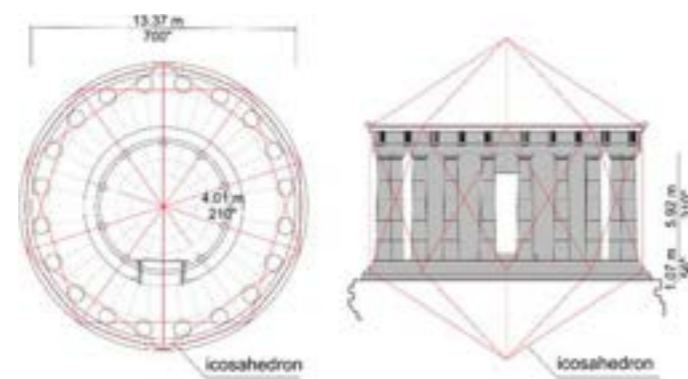
Tholos of Delphi · Doric sanctuary · Trim sheet planning · 2025

(ARCHITECTURAL REFERENCE)

Tholos of Delphi – historical archaeological photography. Circular peristyle sanctuary, 20 elongated Doric columns, marble entablature.



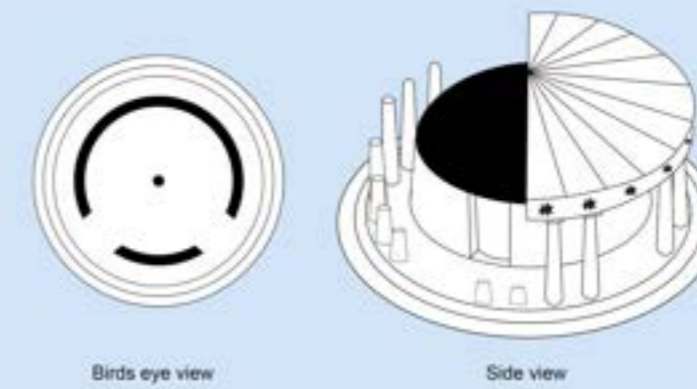
Doric column close-ups – column entasis, fluting, capital proportions. Reference for sculpting in ZBrush and trim sheet UV decisions.



Megascans Electric Dream pack foliage reference – Mediterranean forest environment. Used for scattering and atmosphere matching the Delphi sanctuary setting.



(PLANNING & TRIM SHEET STRATEGY)

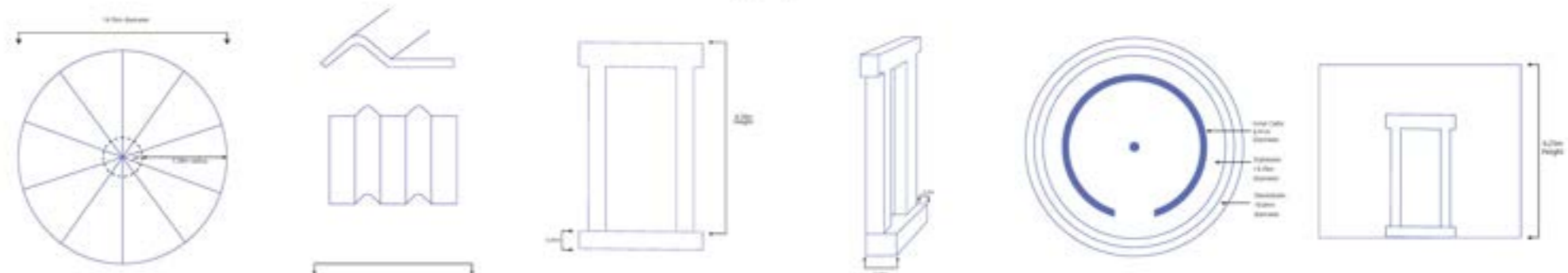


Sketches used to plan modular build strategy and optimise disk space before committing to geometry.

Roof and Tiling

Entry point: Open Arch

Interior Cella, Stylobate and Stereobate



Scale discipline maintained throughout: real-life Tholos measurements used as direct modelling reference.



TRIM SHEET + MATERIAL BREAKDOWN · PROJECT 02

# Trim Sheet and Material Workflow

*Sculpted stone detail, baked material variants and UE5 vertex painting.*



3ds Max – reference overlay and proportional blockout for the circular colonnade.



ZBrush – sculpted metopes, triglyphs and surface weathering.



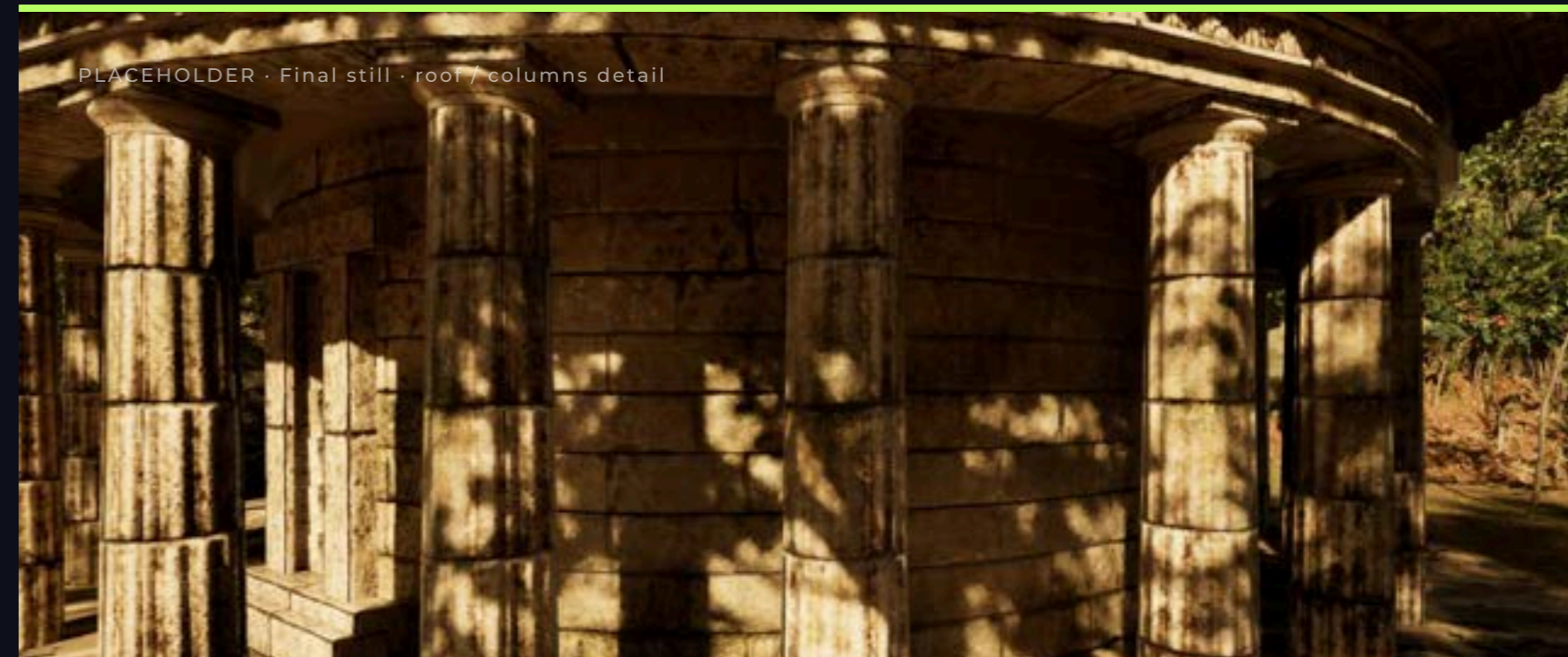
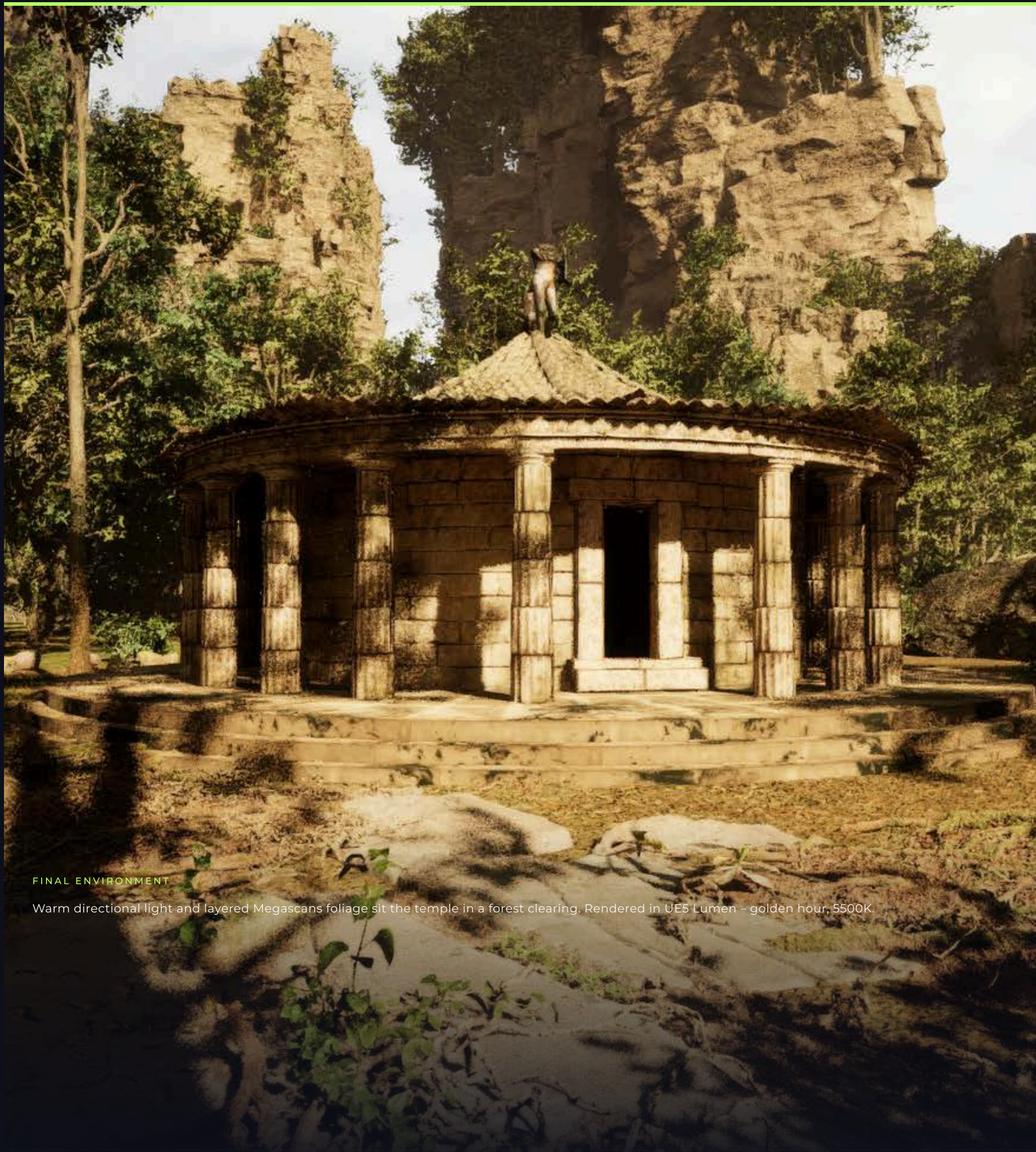
Substance Painter – clean, dirt and moss variants built for vertex paint control.



UE5 – vertex-painted blending, moss weighted by surface exposure and geometry.

## WORKFLOW

Reference → 3ds Max blockout → ZBrush trim sculpt → Substance bake → Clean / Dirt / Moss variants → UE5 vertex paint → Final lighting



PLACEHOLDER · Final still · roof / columns detail



ENVIRONMENT FOCUS

- Sculpted stone trim sheets
- Clean, dirt and moss material variants
- UE5 vertex painting
- Megascans foliage integration
- Golden-hour cinematic lighting
- Forest composition and depth layering

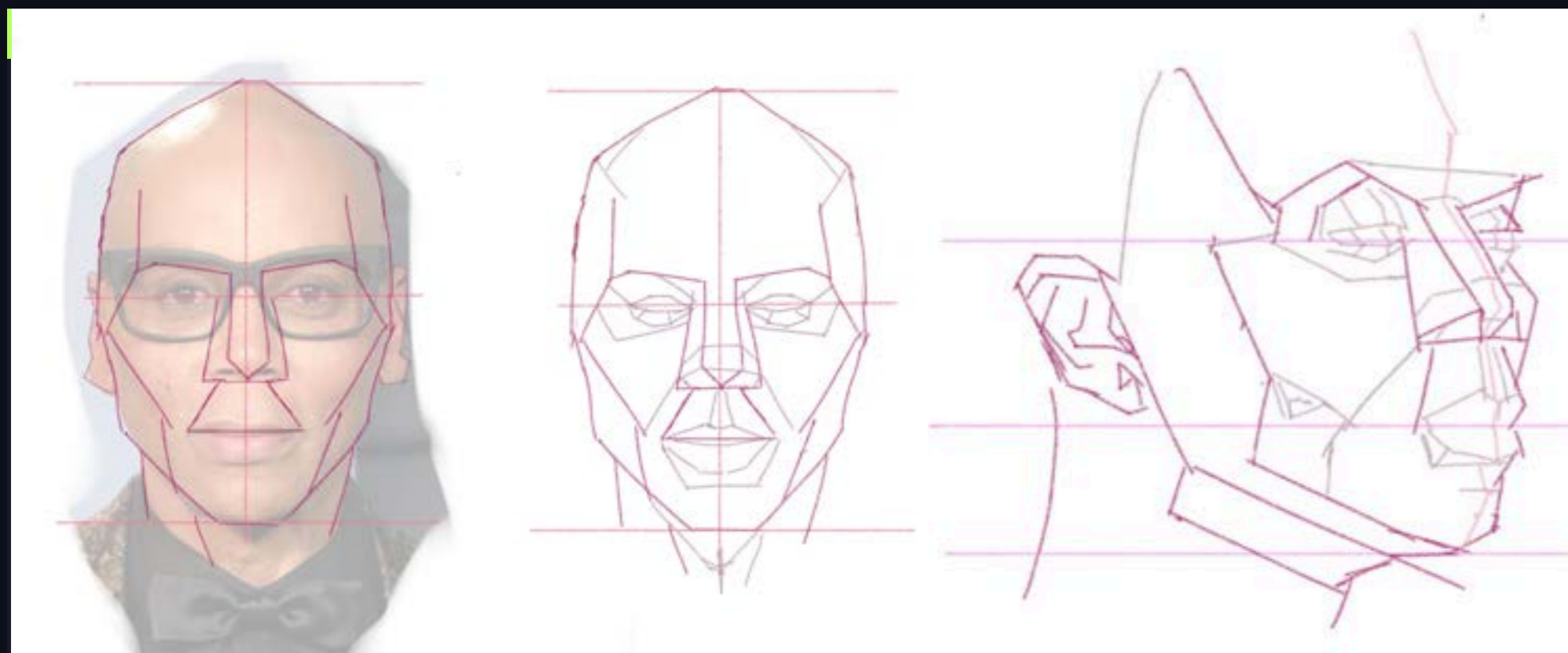
FINAL ENVIRONMENT

Warm directional light and layered Megascans foliage sit the temple in a forest clearing. Rendered in UE5 Lumen – golden hour, 5500K.

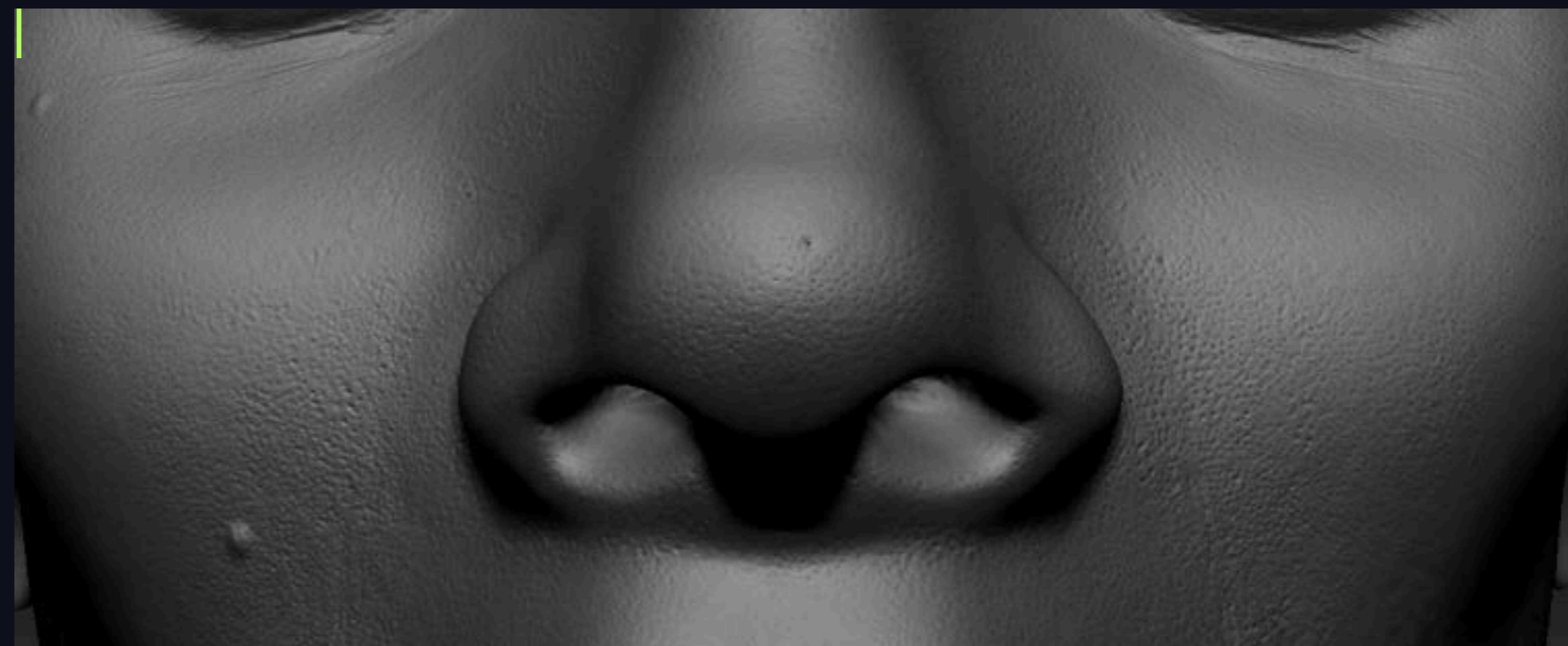
ORGANIC ASSET / PORTRAIT STUDY · TECHNICAL RANGE · PROJECT 03

# Organic sculpt and material workflow

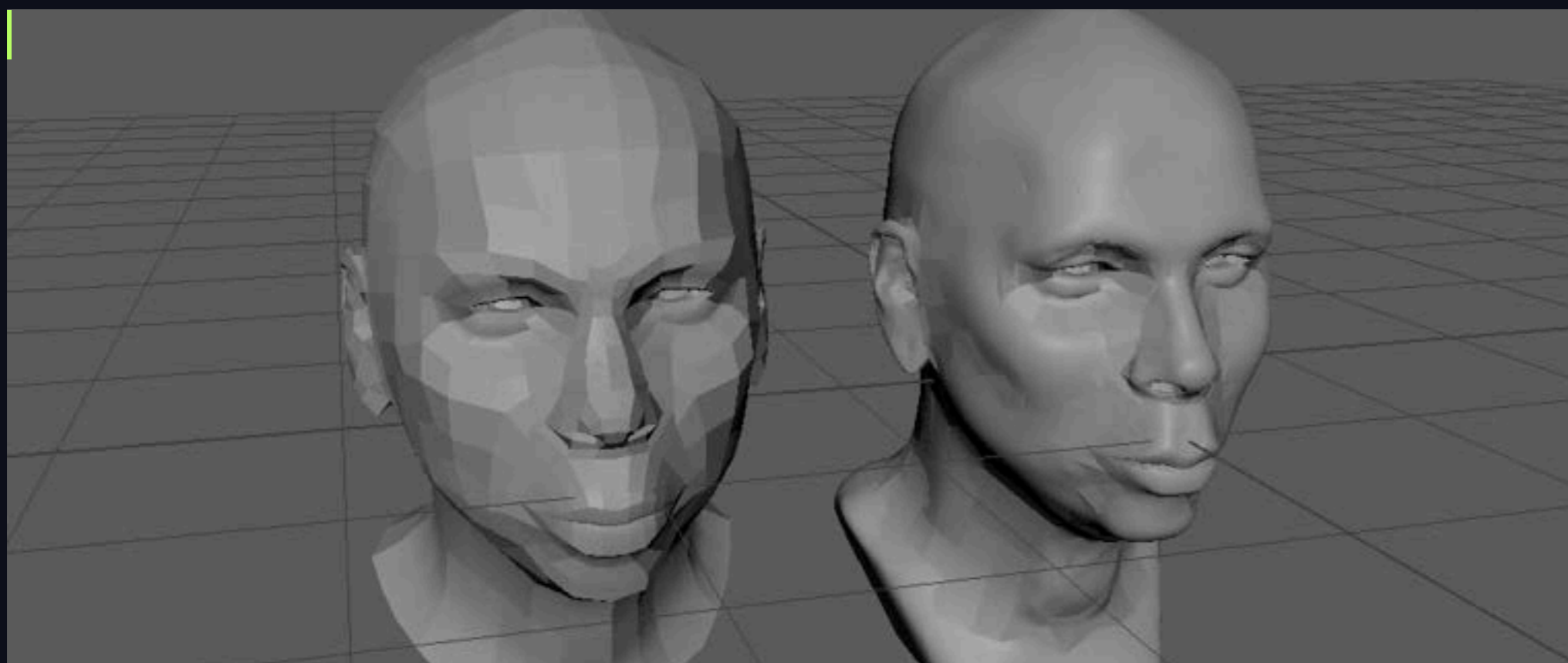
Likeness · Anatomy · Retopology · Skin materials · Marmoset lighting



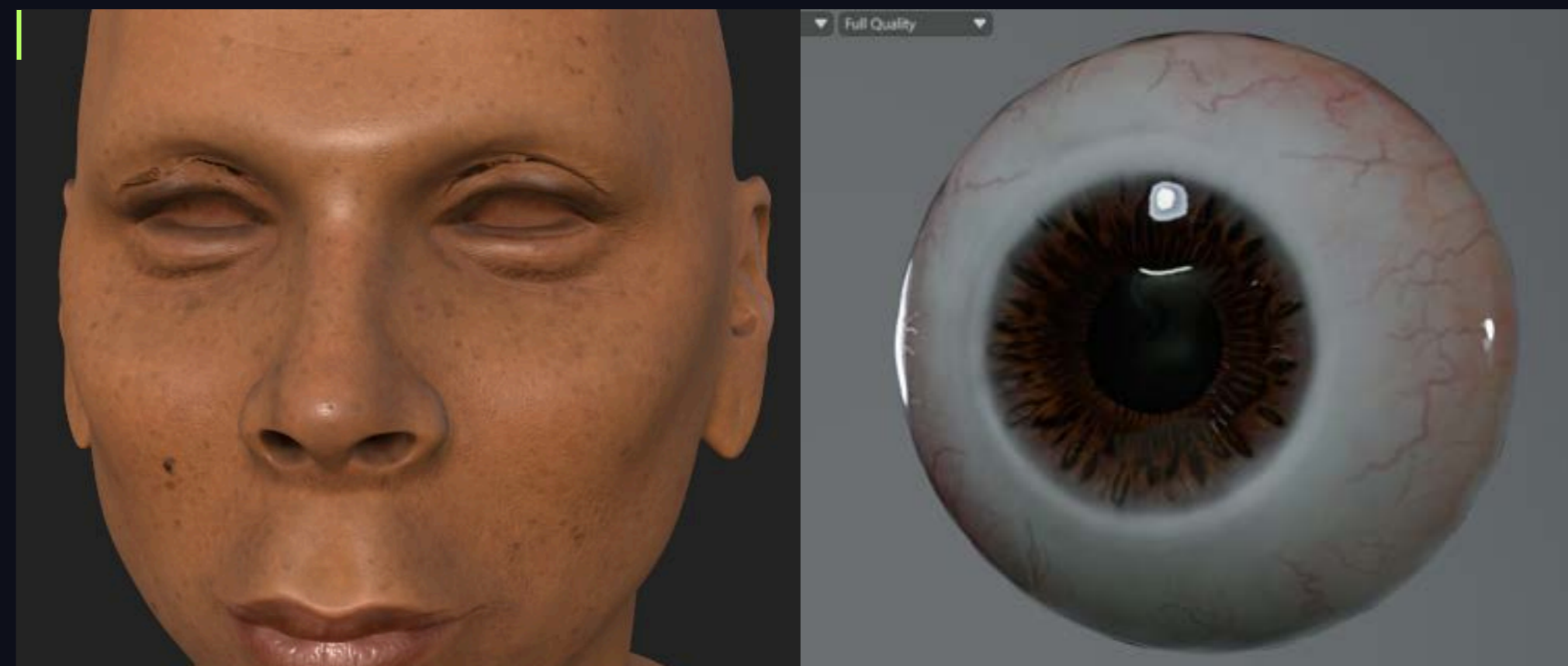
Primary forms, facial structure and likeness planning.



Secondary and tertiary forms, pores, wrinkles and surface detail.



Maya quad draw retopology, animation-aware edge flow and UV preparation.



Layered skin colour, roughness variation, freckles, pores and eye material detail.

Built to develop organic sculpting discipline – facial anatomy and primary form in ZBrush, tertiary surface detail, quad-draw retopology in Maya and layered skin material work in Substance Painter. Presented in Marmoset Toolbag to demonstrate real-time rendering capability and material accuracy.

## WORKFLOW

Reference → ZBrush blockout → Sculpt refinement → Retopology → UVs → Substance skin layers → Marmoset lighting



FINAL PORTRAIT RENDERS

Photoreal skin pipeline – layered SSS, roughness variation, and eye shader construction as an extension of organic surface workflows.



Close crop – subsurface + pore depth



Profile – silhouette geometry + ear SSS

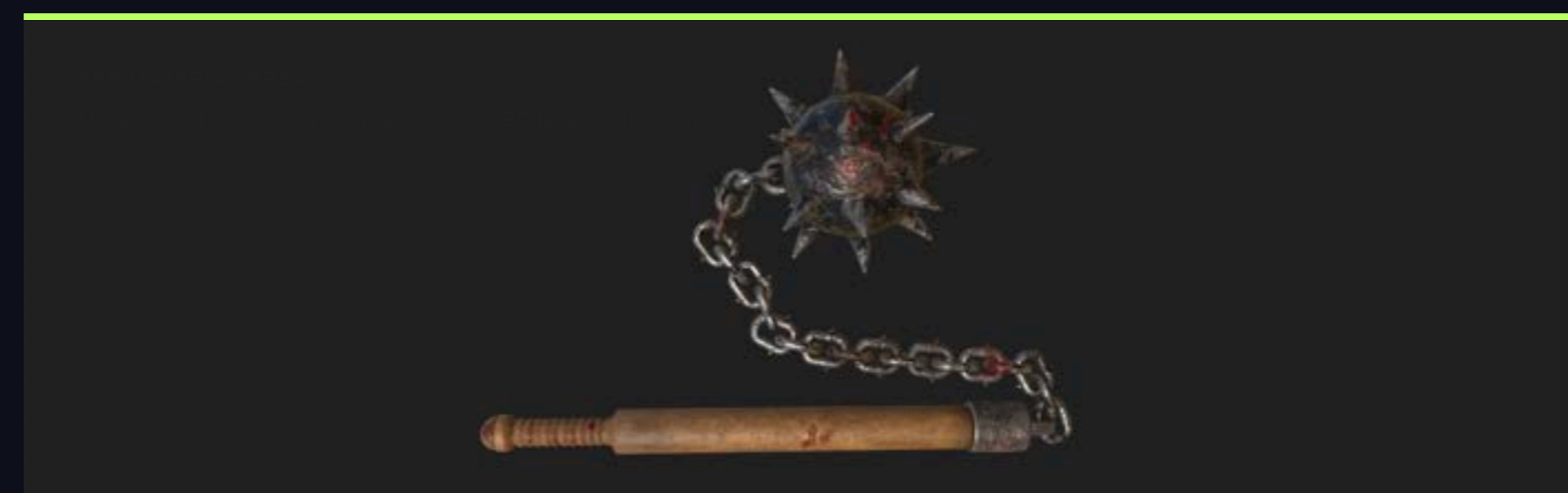
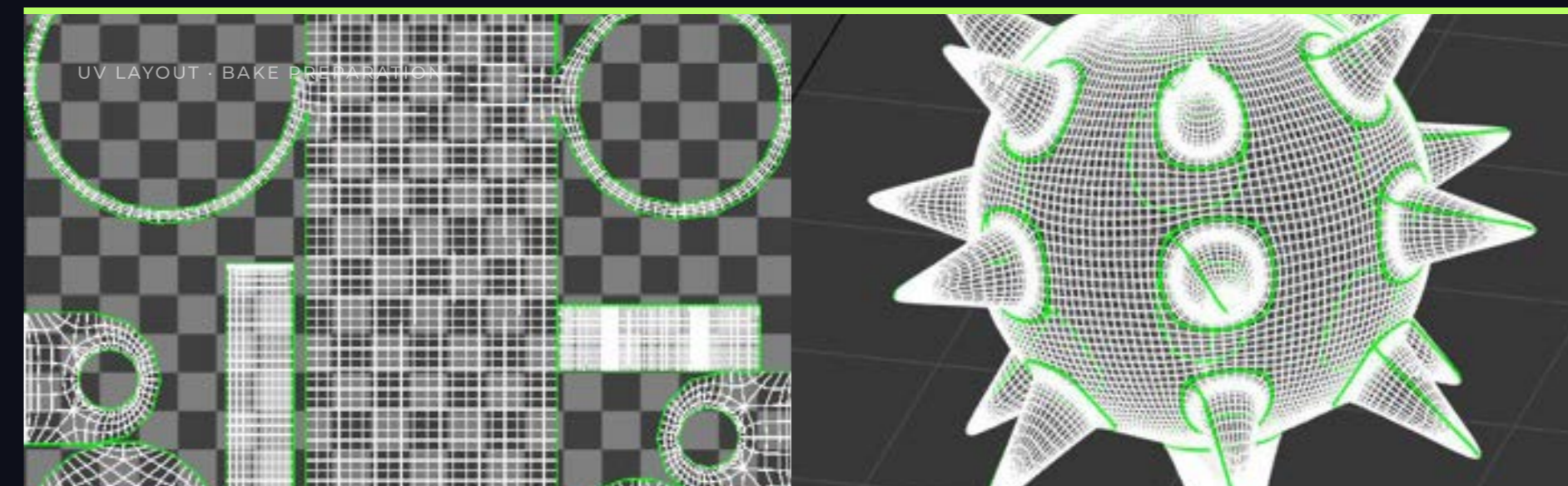
RENDER FOCUS

- SSS layering
- Tertiary skin detail
- Layered skin texture
- Roughness variation
- Eye material
- Marmoset lighting



PRODUCTION PROP · ARNOLD LIT

Shot-ready silhouette, Arnold studio lighting, three-material PBR breakdown.



### MORNING STAR FLAIL

#### ROLE

3D Asset Artist

#### TOOLS

3ds Max · Substance Painter · Arnold

#### FOCUS

Silhouette · Hard-surface modelling · UV layout · Low-to-high bake · PBR texturing · Prop presentation

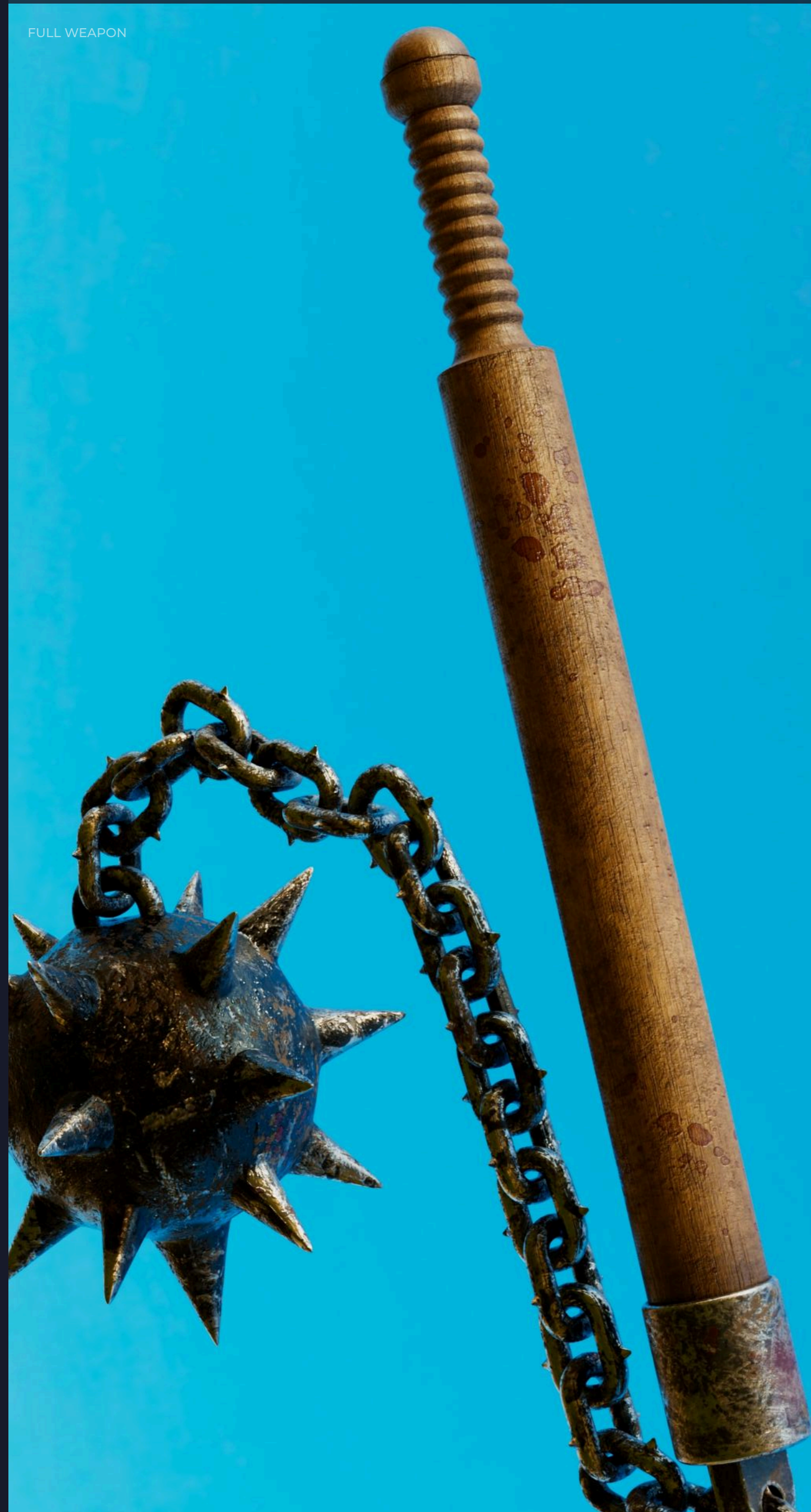
Production prop study demonstrating hard-surface modelling, UV layout, baking preparation and PBR material wear. Built across the full 3ds Max → Substance Painter pipeline – metal, wood and chain textured as three distinct PBR layers with roughness, colour and wear variation.

Presented as a turntable-ready prop asset with emphasis on silhouette, material contrast and surface detail.

- AGED METAL
- SCRATCHED WOOD
- CHAIN WEAR
- EDGE HIGHLIGHTS
- ROUGHNESS RANGE
- SURFACE DAMAGE

PIPELINE | 3ds Max blockout · Turbosmooth high-poly · Array chain links · Substance Painter bake/textures · Arnold/HDRi render

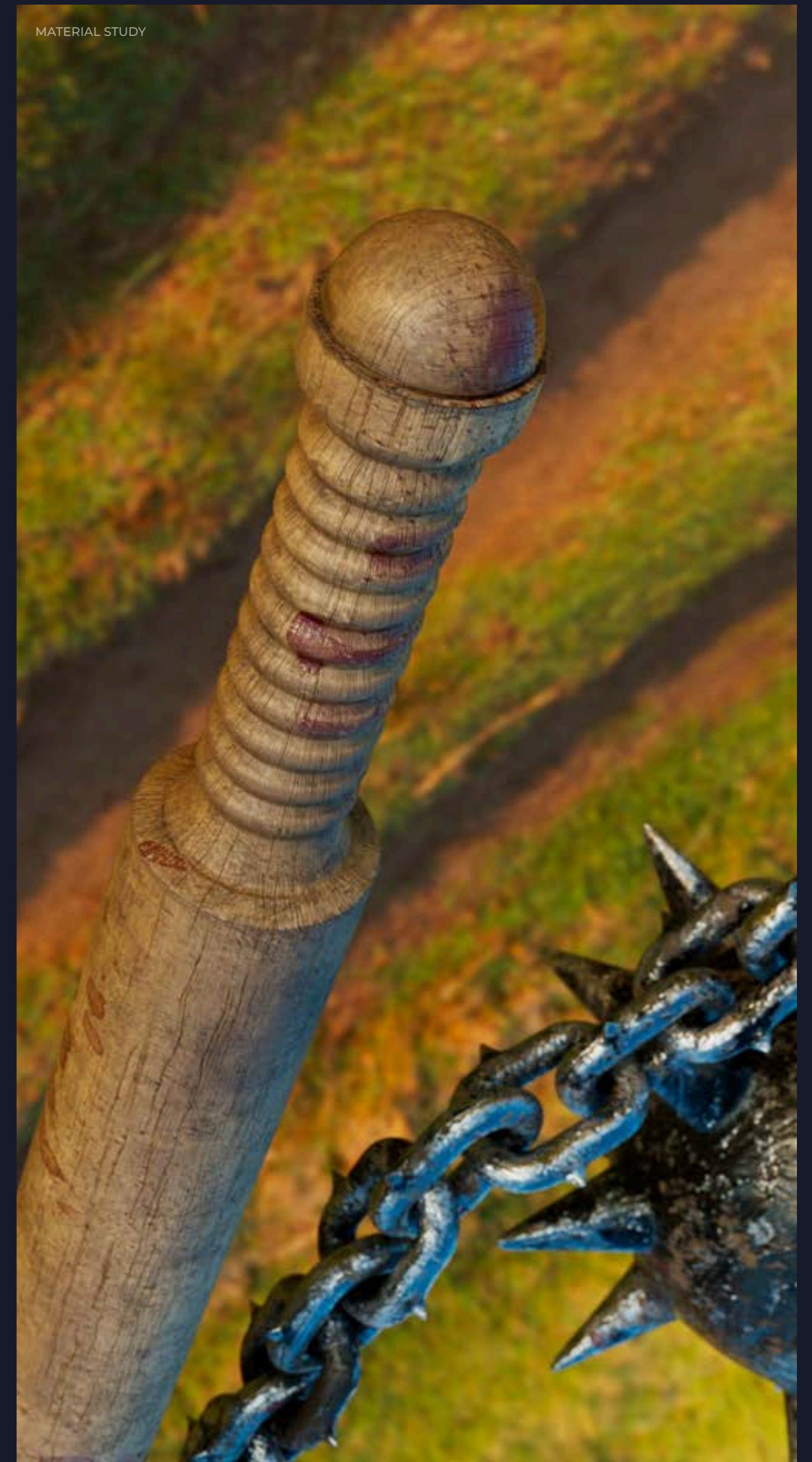
FULL WEAPON



CHAIN DETAIL



MATERIAL STUDY



# Available for real-time 3D environment art, cinematic visualisation and production asset roles.

Open to full-time and freelance roles across games, previs, cinematic visualisation, XR and interactive production.

GLASGOW, UK

## SELECTED WORKS

### 01 The Clyde Metro Interchange Visualisation

UE5 · SPT Collaboration · 2025

### 02 The Tholos of Delphi

UE5 Environment Art · 2025

### 03 Photoreal Portrait Study

ZBrush · Marmoset Toolbag

### 04 Morning Star Flail

3ds Max · Substance Painter · 2024

## GET IN TOUCH

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