

Press Release
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Wedge Transforms London Storefront with 3D Printed Sand Facade

FOR IMMEDIATE RELEASE

Wedge reimagines the storefront as a living façade for the London Design Festival 2025. It is printed in sand, scanned from the street, and intended to be disassembled and rebuilt.

Category
Installation, Technology, Art

Subject
Architecture, Additive Manufacturing,
Artificial Intelligence, Computation,
Material Ecology



[High Res Images ↗](#)

Project Title

The Black Shop – Facade Intervention

Project Location

11 Caledonian Road, King's Cross, London N1 9DX

Project Date

2025/09/14 - 2025/09/20

Project Team

Andy Zhang, Lei Zhang, Peiyan Zou

Construction and Fabrication Support

Cem Dilekci, Peter Cook Architecture Studio, Shusheng Wang, Tina Wu, Yinuo Pan, Yuhan Wu

Wedge presents a new façade intervention at The Black Shop in King's Cross that treats the building's street-facing surface as a living interface between digital data and public space.

The project begins with a LiDAR scan of the storefront, capturing a dense cloud of XYZ points with RGB values. Unlike conventional workflows that clean or correct the scan, Wedge deliberately preserves drift, occlusion, glare, and compression artifacts. These “errors” are parsed by a custom VDB-based procedural model and reconstructed as a porous volumetric geometry in which confidence scores and color vectors regulate voxel thickness. Stable areas accrete; gaps, motion blur, and spectral distortions erode; errors become physical structure.

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This formal strategy underpins a broader inquiry into how digital mediation calibrates perception. The façade is not presented as a static surface but as an ontological threshold where object and image, signal and noise, and digital and physical environments continuously interfere. The work extends research into “micro-tuning” perception — an idea developed through Wedge’s ongoing experiments with LiDAR, computational design, and machine learning.

At The Black Shop, the instability of the dataset becomes perceptible: approaching the façade from different angles reveals alternating conditions of clarity and blur; pausing versus moving changes how volume and edge are understood; reflection and shadow behave like a live feedback loop between the street and the scan that generated it.

Rather than asking viewers to passively look, the installation invites them to actively calibrate how they perceive. As Sir Peter Cook commented during his visit, “This brings Ron Arad to mind — a jolly, brave attempt by you and your colleagues to negotiate between technology and design.”

Materially, the façade is realized through binder jetting in recyclable quartz silica sand. The grain of a pixel becomes the grain of a print; finite resolution is sedimented as matter. Each component is designed for disassembly, re-crushing, and re-printing, enabling the project to evolve with subsequent scans of the site. This circular workflow — data → volume → matter → data — means the façade can be updated as the street changes, and the material can be recirculated with minimal waste. In this way, The Black Shop operates as a public experiment in sustainable fabrication as much as it is an aesthetic proposition for the future.

Notes to Editor

The Black Shop facade is an installation designed for *Mise en Abyme: London*, a group exhibition curated by Wedge for London Design Festival 2025. The exhibition gathers artists and designers whose works probe material recursion and the intersections of digital process and ecological form. **A separate press release for *Mise en Abyme: London* is available upon request.**

About Wedge

In differential geometry, the Grassmann product, represented by a wedge, constructs higher dimensional objects by adding existing dimensions. Wedge draws from this idea both technically and conceptually, treating design as a process of separating, adjusting, and recomposing matter, meaning, and form.

Co-Founded by theoretical physicist Andy Zhang, together with artist-designers Lei Zhang and Peiyan Zou, Wedge is a design and research studio based in London. Lei and Peiyan lead the studio’s artistic, design and spatial direction, while Andy contributes expertise in theoretical physics and material science.

Read more about wedge at wedge-design.com

General Information

For further information, images or to arrange interviews please contact:

Press Contact Ray Zhang
E ray.zhang@wedge-design.com
T +44 7536970449

Social Instagram - [@wedge.obj](https://www.instagram.com/@wedge.obj)

Press Images: High-Res images and full media kit can be found here:
<https://drive.google.com/drive/folders/1K3TTyJ-d812VVUcQm1zqfafmeuN7ks8x?usp=sharing>.