

# Daniel Madeley

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## Summary

Structural Engineer with four years' UK experience in structural analysis, design verification, and BIM coordination. Proficient in Eurocodes and UK standards, with hands-on experience in steel, masonry, and reinforced concrete structures. Skilled in fast-paced, multidisciplinary projects with exposure to international codes and multi-jurisdictional designs. Experienced in automating workflows using Python and Grasshopper. Project experience spans high-end residential, advanced motorsport, defence, and industrial sectors.

## Skills

**Codes & Standards:** Eurocodes, UK National Annexes, BS / EN standards

**Materials:** Steel, Masonry, RC, Timber

**Structural Analysis & Design:** Tekla Structural Designer, SCIA, StatiCa

**Engineering Calculations & Verifications:** Tedds, Masterseries, Hilti Profis

**BIM, 3D Modelling & Coordination:** Revit (Structure), Rhino, FreeCAD

**Drafting, Detailing & Technical Review:** AutoCAD, Bluebeam

**Automation, Parametric Design & Data:** Python (workflow automation), Grasshopper (parametric modelling)

## Professional Experience

### Structural Engineer

*Ridge, Oxford*

*2025 – ongoing*

Lead Structural Engineer delivering high-value projects (£25–115M) in advanced motorsport, industrial, and defence sectors. Led full-cycle structural analysis, design verification, and coordination with multidisciplinary teams, overseeing BIM workflows, technical drawings, and calculations to ensure constructability and compliance with international standards. Mentored junior engineers and enhanced efficiency through automation using Python and Grasshopper.

### Structural Engineer

*OCSC, London*

*2024 – 2025*

Designed reinforced concrete residential structures for major London developers (Berkeley Group, Barratt, Clarion Housing Group). Conducted calculations, design checks, and technical reviews in line with Eurocodes and UK National Annexes, while coordinating with architects, MEP teams, and contractors. Gained client-facing and construction stage experience.

### Graduate Structural Engineer

*Austin Partnership, Cardiff*

*2022 – 2024*

Designed single-dwelling and small multi-storey residential projects (up to five storeys), gaining experience in analysis, detailing, and engineering calculations. Assisted with BIM modelling, drawing production, and multidisciplinary coordination, building foundational knowledge in Eurocodes, UK standards, and material-specific design (RC, steel, timber).

## Featured Projects

### F1 Design Projects

#### *Advanced Motorsport*

Performed back analysis of Formula One design facilities for Ferrari, Cadillac, and Williams, including portal and truss-based frames on pad or piled foundations. Retrofitted warehouses into design offices with new roofs and PV panels, strengthening critical connections.

### Fugro

#### *Industrial Office Facility*

Conducted back analysis of a curved steel portal frame, including design and verification of piled foundations and connections to ensure structural integrity.

### Kidbrooke Village

#### *Residential Tower Blocks 9-16 Storeys (341 Homes)*

*Designed reinforced concrete structures, including flat slabs, columns, and pile foundations. Managed the design process from Stage 2 to Stage 4, coordinating with architects, MEP teams, and contractors.*

### Sheerwood

#### *Residential Tower Blocks 11-20 Storeys (200 Homes)*

Designed reinforced concrete structures with flat slabs, columns, and pile foundations. Oversaw the design progression from Stage 2 to Stage 3, ensuring compliance with Eurocodes and constructability standards.

## Education

### Degree

#### **BEng Civil Engineering (2:1)**

(2019 – 2022)

#### *Leeds Beckett University*

Structural Analysis, Computational Design, Material Science, Statics, Continuum Mechanics, FEA.

### Professional Development:

Engineering Skills (FEA)

Additional: DataCamp (Data Science)