

Gaurav Kataria

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EDUCATION

University College London (UCL), MSc. Built Environment: Environmental Design and Engineering (Merit)

2020-2021

- Efficient Building Services Systems
- Building Solar Design
- Natural and Mechanical Ventilation in Buildings
- Energy Systems Modelling

GD Goenka University, Bachelor of Architecture (B.Arch.) (5 Year)

(8.5/10) (Distinction)

2015-2020

Architectural Design, Interior Architecture, Materiality and Buildability, Building Services, Structural Design in Architecture

Thesis: Employing the use of data to make informed design decisions in Architecture (9/10)

PROFESSIONAL EXPERIENCE

Harley Haddow Ltd.

Senior Engineer

London, UK

(April 2024-Present)

- **Operational Energy Assessments:** Modelling and evaluating a design's operational energy requirements using CIBSE's TM54 or NABERS DfP methodology. Calibration of models against metered energy data using CIBSE TM63 to provide a robust modelling baseline to support development of decarbonisation pathways for refurbishment projects. Utilizing ApHVAC to perform detailed HVAC modelling of Airside, Waterside, and Refrigerant side components, including part-load curves, staging, and control strategies.
- **Compliance Modelling:** Developing geometrically accurate energy models in IESVE and undertaking compliance studies to guide projects towards target performance ratings.
- **Daylight Studies:** Developing models fit for daylight assessments and undertaking climate-based daylight modelling to inform design teams about optimal fenestration and compliance against daylight criteria set forth by IWBI (for WELL) or BRE (for BREEAM).
- Commenced as Building Performance and Sustainability Engineer. From August 2023 to April 2024 (8 months)

Cundall Johnston & Partners LLP

Graduate Sustainability and Building Physics Engineer

Birmingham, UK

(September 2021-August 2023)

- **Compliance Modelling:** Developing geometrically accurate energy models in IESVE and generating draft Part L compliance documents (BRUKL report as well as EPCs) for both new build and existing schools, offices, hospitals, warehouses, leisure centres and residences.
- **Overheating/Thermal Comfort Assessments:** Undertaking overheating assessments of schools, offices, and residences against CIBSE's TM52/59 criteria and DfE's BB101 criteria where required. Assess thermal comfort of occupants in offices for BREEAM's HEA04 credit.
- **Daylight Studies:** Developing models fit for daylight assessments and undertaking climate-based daylight modelling of schools and offices to inform design teams about optimal fenestration and compliance against daylight criteria (sDA, UDI 100-3000lux).
- **Operational Energy Assessments:** Modelling and evaluating a design's operational energy requirements based on CIBSE's TM54 or NABERS DfP methodology. Developing profiles & internal heat gains best suited for the project as well as presenting an improvement pathway.
- **Sustainability Consulting:** Leveraged WELL AP credentials to champion health and wellness initiatives in buildings, spearheaded the role of WELL coordinator for an office renovation targeting WELL 'Gold', and contributed towards achieving multiple BREEAM credits.
- **Embodied carbon assessments:** Utilizing experience with One Click LCA and Revit to break down BIM models (Architectural, Structural, MEP) and utilizing the broken down data to assess the design's embodied carbon footprint (A1 to C4, barring B6, B7).

Verte Ltd.

Graduate Energy and Carbon Consultant

London, UK

(May 2021-September 2021)

- **Dynamic Thermal Modelling and Part L compliance:** Developed accurate energy models in IESVE and generated Part L compliance documents whilst experimenting with novel means to reduce BERs and comply with the London Plan of 2021 as well as LETI benchmarks.
- **Sustainability assessments and visual communication:** Closely worked with the senior consultants to formulate due-diligence studies and produced several graphics to express ideas. Designed report & presentation templates as well as sustainability trackers.

RELEVANT SKILLS

- **Modelling and Presentation:** Revit, AutoCAD, SketchUp, 3Ds Max, Corona Renderer (3Ds Max), Lumion and Adobe Photoshop.
- **Analytical:** Autodesk Insights (Revit), IESVE, One-Click LCA, THERM (via Honeybee + standalone), Ladybug Tools (grasshopper)
- **Other tools:** Rhinoceros, Twinmotion (UE4), HBERT (Revit) and Adobe Premier Pro.
- **IES modules:** MacroFlo, VistaPro, MicroFlo, Apache, ModelIT, ApHVAC, RadianceIES, FlucsDL and SunCast.

ACCREDITATIONS

- **Health and Wellbeing:** WELL AP
- **Professional Bodies:** Full Member; ASHRAE, Member; CIBSE (MCIBSE), Chartered Engineer (CEng), European Engineer (EUR ING)
- **Energy Assessments:** CIBSE Low Carbon Energy Assessor (LCEA), IESVE Level 5 Certified (England and Wales)
- **Others:** Licensed Architect (licensed granted by the Council of Architecture, Government of India), OneClick LCA summer school (2021)