



# CAPABILITY STATEMENT

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base  
haus.



# What we do

Base Haus is an innovative energy modelling firm dedicated to providing optimised, sustainable, and buildable solutions for residential and commercial buildings. Our technology driven approach means we go beyond standard compliance, integrating energy efficiency from the feasibility stage to deliver superior, cost-effective outcomes. With hands-on experience in design and construction, our team understands the complexities of the built environment and offers practical, buildable solutions.

## Our services

### Building Performance Modelling

Base Haus specialises in providing detailed modelling of a building's energy and sustainability performance. Using historical and forecasted climate data we can model the expected efficiency of a building, identifying potential risks and highlighting areas for cost savings.

Our reports are modular in nature and can be combined to give coordinated solutions or used as standalone data to help target and resolve specific building design outcomes.

#### Performance & PassivHaus Certification

- Thermal Bridge Simulations
- Critical Room Overheat Analysis
- Air Tightness Study
- Surface Temperature Modelling
- PassivHaus PHPP Modelling and Consultancy

#### Energy & Mechanical System Design

- Heating and Cooling Loads
- Mechanical Cooling and Heating Requirements
- Solar and Battery Sizing
- Mechanical Room Modelling
- Window Shading and Façade Simulations

#### Environmental & Carbon Strategy

- Embodied Carbon Options
- Climate Resilience Report
- Hygrothermal Analysis
- Non-Conditioned Space Analysis

#### Design & Decision Support Tools

- Feasibility Stage Optimisation
- Mass Modelling and Optimisation
- Product Comparison
- Advanced Energy Modelling Tools

### PassivHaus Consultancy & Modelling

We are here to support anyone committed to achieving PassivHaus. Home owners, builders and developers, architects, and PassivHaus consultants can all benefit from our modular workflow that adapts to each project's needs. We can lead the full process - including certification - or step in where needed most. Our process integrates PassivHaus principles from the start, reducing redesign risk and keeping budgets on track.

### Advanced NatHERS Modelling

Our ability to run thousands of simulations at the beginning of a project makes our NatHERS approach unique and ensures the most optimised solution is found. Our custom built NatHERS dashboard will confirm the exact material specification for compliance and energy efficiency in any climate zone. It visually shows the relationship between elements of the building envelope, climate zone and orientation to further your understanding of their impact towards energy efficiency in your design.

### The PassivCollection

Sustainable PassivHaus certifiable designs that are ready to build. Houses, duplexes and townhouses that are pre-modelled for all climate zones in Australia. The convenience of a pre-designed, pre-priced home without compromising on PassivHaus standards or great architecture. Scalable, repeatable and affordable designs that can be built anywhere in Australia.

We are committed to transparency and collaboration, sharing the details of our processes to foster better results for all parties involved.

We are currently engaged in ISO compliance for 9001, 14001, 45001 and pursuing B Corp certification.

# Flagship project



## CORNERBLOCK: The beginning of Base Haus

The Base Haus journey began with CORNERBLOCK, a mixed-use commercial building on the Gold Coast that set a new standard for small-scale sustainable development. This project was our first, and it pioneered achievable, sustainable outcomes in a compact development setting.

By being both the designer and builder of CORNERBLOCK, we were able to control every detail, resulting in a world-class outcome. This unique opportunity allowed us to integrate sustainability seamlessly into every aspect of the project, from initial design through to construction.

The lessons learned from CORNERBLOCK form the foundation of Base Haus today. Our first-hand experience with traditional energy modelling tools and their impact on both design decisions and on-site construction inspired us to rethink the entire process. We re-engineered the typical workflow for energy-efficient design, enabling greater detail at the feasibility stage, more accurate results during design, and quicker responses to challenges on-site.

Our on-the-ground experience delivering CORNERBLOCK, combined with our in-house parametric workflows, gives us a unique skill set when delivering energy efficient design in the built environment.

[cornerblockgc.com.au](https://cornerblockgc.com.au)



# Our team



## **BEN SINCLAIR - Founder**

A visionary leader with hands-on design and construction experience. Ben's innovative mindset drives Base Haus' mission of energy efficient outcomes accessible to everyone.



## **LUKE PEARCE - Computational Design**

Expert in thermal envelope analysis and automation, Luke ensures the technical viability of ambitious designs.



## **DAVID PLUMB - Architectural Lead**

With extensive architectural experience, David brings creativity and professionalism, ensuring projects meet both aesthetic and performance goals.



## **SARAH CHAN - IT**

Sarah bridges the gap between technology, design and implementation, ensuring seamless integration of solutions.



## **MARKELLA VOULCARIS - Operations**

Ensuring smooth operations across the team, Markella manages everything from ISO implementation to our carbon reduction strategies.