



Milton Road Passive House

Auckland

Services

Architecture
Sustainability

Sector

Private residential

Brief

Design a family home to Passive House standards to create an efficient and future-proofed house with high levels of thermal comfort.

Clean, green with comfort and efficiency built in

Our clients – from central and eastern Europe – knew about the Passive House standard, given its prevalence in Germany, and looked for an Auckland architect with Passive House experience. They had higher expectations of thermal comfort than typical New Zealand built-to-code homes deliver.

The two-storey volume creates efficiency, but careful energy modelling and design have left nothing to chance regarding thermal comfort. The home is beautifully warm in winter, with the heat pumps only needed a handful of times a year. Even in the hottest summer temperatures, the home stays delightfully cool. Overhangs are used to good effect, and automated external shutters connected to a weather station protect against strong afternoon sun and associated overheating.

Compared to typical New Zealand houses, the home's energy use is higher in summer than in winter, mostly due to heating the outdoor pool to a comfortable temperature for the clients' young children.



The house generates energy via rooftop PV, and more panels may be added to accommodate summer power demands.

The homeowners were highly engaged throughout the design and development stages, carefully considering the home's functionality and how it would suit their needs over time. Their intention was never to build to resell. Rather, they figured out what they needed as a family and designed each room. For instance, a studio space currently used as a children's playroom can also be used as a granny flat for an elderly parent in the future.