



Passive House Institute New Zealand

Te Tōpūtanga o te Whare Korou ki Aotearoa

PASSIVE HOUSE SOCIAL HOUSING POSITION PAPER V3.0 30/06/2020

Introduction

The Passive House Institute New Zealand (PHINZ) *Te Tōpūtanga o te Whare Korou ki Aotearoa* is an Incorporated Charitable Trust whose aim is to advance education about the Passive House Standard and the benefits it can bring to the people and communities of Aotearoa NZ.

Background

The Passive House standard is a rigorous international standard for energy efficiency and indoor environmental quality applicable to all building types. It is a voluntary performance standard with ambitious, yet achievable, benchmarks.

Adoption of the standard has been growing exponentially world-wide and the same trend can be observed in NZ. The first certified Passive House in NZ was completed in 2012 and in the 8 years since a further 29 Passive Houses have been certified. At the time of writing, PHINZ is aware of at least double that number currently being designed or constructed with the aim of being certified. This includes a 21-unit housing project in Dunedin where the city council has purchased two units for social housing purposes.

Benefits

There has been extensive monitoring of completed certified Passive House buildings worldwide. The monitoring confirms that certified Passive House buildings use significantly less energy than typical buildings. Additionally, the indoor air temperatures, surface temperatures and air quality are exceptionally good all year round with no condensation or mould growth. This provides comfortable and healthy indoor environments for the inhabitants that meet the World Health Organisation's recommendations. Typical buildings fall far short of this.

Social Housing

There are several social housing providers in Europe, the UK, North America and Central America that have adopted or incentivised the Passive House standard. The providers report that they see the Passive House standard supporting their social responsibilities as follows:

- Lifting tenants out of fuel poverty – certified Passive House reliably reduces the cost of keeping a home warm, dry and well-ventilated
- Protecting the health and well-being of the tenants – there is emerging evidence that respiratory illnesses (including asthma) are reduced or relieved by living and/or working in certified Passive House buildings. This has been observed in certified Passive House schools, offices and homes. While this directly benefits to the individuals and families involved, there is clearly a wider societal benefit in reducing demand on the public health service and tax burden.

Additional benefits that have been observed and reported include:

- Less rental arrears due to lower energy bills – tenants are no longer forced to choose between paying rent or paying for heating.
- Less voids – people don't want to move out after they have experienced the financial and comfort / health benefits of living in a certified Passive House.
- Less administration costs and time for the Social housing provider – due to reduced rental arrears and less voids. One social housing provider in Europe is even reported to have stopped charging for energy as the administration costs outweighed the energy charges.
- Quieter homes due to better quality construction, insulation, airtightness and windows and doors
- Less anti-social behaviour thought to be due to a reduction in noise nuisance from neighbours or outside.
- Better social outcomes due to lower energy bills – tenants have money at their disposal to use on Christmas presents or holidays that they couldn't afford previously.

Conclusion

There is a desperate need for quality social housing in Aotearoa NZ and there are many reported benefits of certified Passive House social housing from around the world. PHINZ are actively looking for opportunities to support and assist the development of certified Passive House social housing in Aotearoa NZ.

Examples

High Street Cohousing Project, Dunedin

Project website: <http://highstreetcohousing.nz>

News article confirming the city council purchase:

<https://www.stuff.co.nz/business/property/91205260/cohousing-touted-as-the-future-of-home-ownership>

Norwich City Council: https://www.norwich.gov.uk/news/article/19/city_council_leading_the_way

Carrowbreck Meadow developed by Broadland Growth (Broadland District Council and the Norfolk County council): https://broadlandgrowth.co.uk/carrowbreck_meadow/

Hastoe Housing

Approach: <http://www.hastoe.com/page/617/Hastoes-Passivhaus-Approach-for-2013.aspx>

Wimbish project: <http://www.wimbishpassivhaus.com> (with extensive monitoring data and reporting from tenants)

Exeter City Council, Hastoe Housing, Bristol City Council, Norwich City Council - videos and presentations: http://www.passivhaustrust.org.uk/competitions_and_campaigns/passivhaus-for-local-authorities/

Mexico EcoCasa Programme (includes 600 certified Passive Houses): https://www.passivehouse-international.org/index.php?page_id=482

Ottawa multi-unit Passive Housing for adults with severe mental illness: <http://www.passivehousecanada.com/projects/salus-clementine-karens-place/>

New York affordable Passive Housing (one of many): <https://ny.curbed.com/2016/4/29/11540744/nyc-largest-passive-house-mott-haven-241-affordable-apartments>

Philadelphia: <http://www.onionflats.com/projects/affordable/belfield-townhomes.php>

Prefabricated Housing for indigenous people in Bella Bella, Canada: <http://www.passivehousecanada.com/projects/bella-bella-passive-house/>

Novia Scotia: <https://www.cmhc-schl.gc.ca/en/corp/nero/nere/2017/2017-01-17-0915.cfm>

Neue Heimat Tirol, Austrian social housing provider: <http://www.buildup.eu/en/practices/cases/largest-passive-house-project-europe-has-been-opened-tirol-austria>