Fact sheet

Choosing a house or site

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Do you want the most sustainable property? Do you want a house which is or can be made to be healthy, comfortable, and cost the least to run? Here are some points to help you choose.

They're mostly about thermal performance, since that can be difficult and expensive to remedy if you make a bad choice. Some things will be more important, or easier to achieve, than others. No property will tick all the boxes, but with rising energy and water costs, a property that initially costs a little more will save you in the long run.

Choosing a neighbourhood

Buying (or building) a new house also means choosing a neighbourhood. That choice is just as important as decisions about house style and design. In fact it may even be more important. Houses can be adapted, renovated and changed. Making changes to your neighbourhood are much, much harder. Perhaps impossible.

Here are a few things to consider when you're ready to make a move.

Will the neighbourhood suit your changing needs over time?

Great neighbourhoods cater for diverse needs and different life-stages. Don't just consider your current needs. If you're planning a family, think about child-care facilities and schools in the area. What about when the kids leave home? Does the neighbourhood provide smaller homes that would suit you then, or will you be forced to leave the area, perhaps losing touch with friends and neighbours?

Are there places to meet and socialise?

Does the neighbourhood have a good local park, play area, reserve or cafe? Neighbourhoods with such facilities tend to be safer because locals get to know and look out for each other

Is it safe?

Neighbourhoods that are designed to let people to "see and be seen," with good lighting, low or see-through fencing and homes that open onto streets and parks, are safer neighbourhoods. Does the neighbourhood have good walkways, wide pavements, adequate pedestrian crossings and cycle tracks so that you and your family can safely walk or ride a bike?

How reliant will you be on your car for doing everyday things?

Cars are expensive to run and they have significant environmental costs too: they deplete limited fossil fuels, pollute, and emit greenhouse gasses. When neighbourhoods include shops, businesses, schools, and recreational facilities, residents need to travel less. A good bus or train service that connects with other neighbourhoods, your workplace or the city centre, is important too.

Will it maintain the value of your investment?

What sort of condition are neighbouring houses in? Are they well-maintained or rather shabby? The quality and maintenance of surrounding homes will inevitably affect the value of your own.

Finding the ideal site

In addition to the location and size of your site, you should also consider whether the site gets plenty of sun and lets you build a house that maximises the benefits of passive solar design. Homes which maximise solar access will need less space heating and, with good design, will be cooler in summer. Your home will be more comfortable and healthier to live in.

Look at whether the site:

- Provides the opportunity to place the house facing within 30 degrees of due north
- Slopes down to the north
- Has no tall obstacles (such as buildings, fences, protected trees) within 30 degrees of north, that are less than twice the obstacle's eventual height from the building platform (to allow unobstructed winter sun)
- Has a street, park, or paddock to the north (so the winter sun can't be built out)
- Has minimal obstruction of summer breezes

Choosing your next home

Buying a home can be a daunting prospect. Crucially, the homes we live in play an important role in our well-being. So a home should be healthy: warm in winter, cool in summer, dry all year round and part of a strong community. Equally, your choice of home will also make a big difference to your costs over the next few years. Choosing a home with reduced running costs will be a big saving over time.

What to look for in an existing home

- At least 1.4 times longer in the east-west direction than the north-south direction
- Facing within 30 degrees of True North (note that in most parts of NZ magnetic north is about 20 degrees East of True North)
- At least two living areas (lounge, dining, family) on northern side
- Insulated (particularly ceiling, but also underfloor) to highest level. Walls already properly insulated (unlikely with any pre-1978 house)
- Double glazing or secondary glazing
- Some thermal mass (such as a concrete slab floor or concrete/brick wall) exposed to winter sun or other heat source and preferably insulated on the outside
- Efficient heating source (which heats or is transferred through the whole house)
- No more than 30% of total wall area is glazed with minimal glazing on southern and western sides
- No (or small) skylights or roof windows
- Overhangs on northern side. External shading against low western sun, or smaller glazed area on western side (to keep out summer sun and stop overheating)
- Able to ventilate house (get cross-draughts) without compromising security
- Solar or heat pump water heating with wetback
- Hot water services closely grouped (to minimise pipe runs)
- Any conservatory can be shut off from the house (summer overheating, winter heat loss)
- Garage thermally insulated from house
- Shelter from cold winter winds
- Water tank of at least 4000L, and easy access to pipework to toilet and laundry
- Minimal impermeable paving

One family's example:

No family is more aware of this, perhaps, than the former residents of Beacon Pathway's Waitakere NOW Home®. The Waitakere NOW Home® was Beacon's first live research project, designed and built to show the benefits of a sustainable.

From the start the family of four loved the NOW Home®. They'd come from a cold, damp house that was difficult to heat and needed dehumidifiers on 24/7. Now the sun poured into the new house during the day. At night warmth radiated off the polished concrete floor, which was designed to store heat from the sun and release it when the air temperature dropped. Extra insulation and double glazing kept the warmth in and the family only needed an extra heater on a couple of days a year.

Good air flow negated the need to air the house out, and there was no condensation or mould – they didn't unpack their dehumidifier at all.

The solar water heater reduced their power bills to a mere 45% of their previous bills and the water tank reduced their water bills to a bare minimum.

The family recently moved into their own home and cite their NOW Home® experience as a strong influence in their decision-making process. Here's what they looked for:

- a north-facing sun trap
- good natural light indoors
- full insulation (ceiling, walls, floor)
- double-glazed windows to keep the heat in and the noise out
- dry – free from mould and other moisture-related problems (they had potential homes moisture tested)
- a rangehood in the kitchen and an extractor fan in the bathroom to remove moisture in these very wet areas
- well ventilated to keep down moisture and avoid overheating
- wide eaves that let the winter sun in but keep the summer sun out
- no wasted walls – good design and layout

For more information:

- See Fact sheets on
  - Passive solar design
  - Thermal mass
  - Keeping the heat in: Overview
  - Introduction to heating your home
  - Keeping cool in summer
  - Healthy indoor air
  - Saving with hot water
- There's a good discussion at www.smarterhomes.org.nz/help/checklists-tools/checklists/top-tips-for-buying-a-house-or-property