Can we build it?

Medium-density housing (MDH) is making up an increasing proportion of New Zealand's homes, but there are roadblocks in the way of its delivery. Upskilling the workforce and attracting more people into it, building consumer confidence and more government partnerships are key to delivering the quality MDH New Zealand needs.

SUPPLY AND DEMAND analysis suggests that, by 2025, around 35% of new homes in New Zealand will be MDH. Who in the building industry has the interest and ability to deliver this housing, and what are the skills gaps that may prevent its delivery?

BRANZ searched New Zealand literature on the topic, and there is relatively little. These are the main points:

- Larger organisations are considered more likely to have the interest, ability and expertise to deliver MDH than smaller firms.
- There is little data specifically about skills gaps in MDH.
- The boom/bust nature of the industry has an impact on skill levels.
- The tendency to subcontract specialists rather than training existing employees means that the industry lacks a workforce of people skilled in multiple areas.
- Interest in and ability to deliver MDH relies on demand, profitability and being at the right point in the boom/bust cycle.
- The industry sees public wariness about MDH over construction quality, privacy issues, overcrowding and access to public amenities.
- The consenting process is seen as slow and costly.

Some building consent authorities (BCAs) have reported more building inspection failures with MDH because of, for example, the inexperience of builders installing inter-tenancy walls, acoustic sealant and fixing patterns for fire ratings. This may be linked to skills gaps.

Industry stakeholder interviews

BRANZ carried out telephone interviews with 103 industry stakeholders. Most worked in design (38), building/construction (48) or BCAs/government (8). Interviews took 20–60 minutes, the average lasting 30 minutes. The interviews focused on these questions:

- What is the level of interest and ability to deliver MDH in the industry currently?
- Do we have the skills to be able to build the MDH we need? If not, where are the gaps?

The findings described here are based on the opinions of the interview participants. Table 1 shows the main themes that emerged.

Finance is fundamental to delivery

Gaining finance is a barrier to building MDH for some. Security of contract and the ability to deliver volume are issues, with significant risks in making a large investment with no secure pipeline of work. Bigger companies and developers were seen as the only ones

Table 1. Major themes identified by industry stakeholders.	
Theme	**Mentions**
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Company size matters – bigger is better	117
MDH is challenging to deliver	113
Skilled professionals required to deliver MDH	105
Affordable MDH must be delivered	103
Public and private parties to contribute to delivery	93
Experience of MDH important	82
International learnings to help delivery	80
Skills gaps/shortages barrier to delivery	72
Prefabrication and innovation required to deliver MDH	61
Hobsonville Point as an example of good delivery of MDH	21
New Zealand industry must deliver MDH	20
Total	**1,999**

in the position to take on MDH work. The government could support access to funding. (The research was done before full details of the KiwiBuild initiative were made public.)

Regulations are a barrier

Getting resource consent, building consent and Code compliance certification is described as inefficient and time consuming and significantly increases the cost of MDH. The resource consent process discourages smaller companies from MDH work.

Consenting issues were seen as a roadblock by both consenting officials and the building industry. Building officials said consent applications often have elements missing, which slows the process. Some in industry saw a lack of MDH experience and expertise in BCAs. There was wide acknowledgement that BCA resources were stretched.

Community acceptance of MDH

Successful delivery of MDH requires broad public acceptance of MDH. New Zealanders prefer stand-alone living, and a change in thinking is required to increase demand for MDH.

If MDH is not welcome in neighbourhoods, these homes will be seen as undesirable places to live, and this may discourage industry from building more MDH. Where amenity (such as recreational or green spaces) or infrastructure is insufficient, community acceptance is further eroded.

This is a circular issue. Industry needs to see demand to deliver more MDH, but the benefits of good MDH are less visible and less likely to create demand if the industry keeps building mostly stand-alone homes.

The drive for profit discourages quality MDH delivery

Industry follows the greatest profit, and buildings other than MDH offer lower risks and greater profit margins. On top of this, some larger companies with experience and skills to deliver MDH more efficiently and competitively discourage others from entering the market.

Cutting costs to increase profits leads to poorer-quality products. This is not limited to MDH, but if margins on MDH are tighter, the motivation to cut costs may be stronger.

Government needs to support MDH delivery

Lower profit margins may be more acceptable to industry if government reduces the risks. At the moment, there is limited incentive to entice builders and developers away from stand-alone houses. Government can partner with industry to deliver MDH across the building pipeline. Hobsonville Point is a successful example of central government, local government and industry partnerships.

Analysis: skills gaps and shortages

Skills gaps are widely seen as an impediment to delivery, costing time and money and negatively affecting build quality.

Gaps were identified in:

- technical areas – such as the competent installation of building products related to ensuring weathertightness and fire safety
- design – the buildability of design and how design affects liveability and comfort
- prefabrication, automation and innovation
- building, developing and project management
- regulatory knowledge and BCA resources
- engineering
- finance.

Medium-density housing at Hobsonville Point, Auckland.

While there is an industry-wide skills gap, there are MDH-specific skills gaps that prevent some tradespeople from moving into MDH delivery. MDH requires a skill set that few tradespeople have. Unskilled/inexperienced labour on an MDH site costs time and money and creates more work for others.

Skills gaps are a consequence of many factors:

- The boom/bust cycle – the bust phase undermines skill development and retention.
- The building industry being an undervalued career choice, making it difficult to attract good people. This is not specific to MDH, but it impacts on MDH skills gaps and consequently building quality.
- A lack of training in MDH during apprenticeships and limited opportunities for learning MDH on the job once apprentices are qualified.
- The relative newness of MDH and the industry's lack of experience, which means training providers may not have recognised the increasing demand for MDH skills.
- Trades failing to stay abreast of best-practice approaches to building MDH.
- Employers who are unskilled or inexperienced in MDH themselves are ill equipped to pass on MDH knowledge.
- The labour-only or subcontracting models can undermine investment in skills and quality work. When a subcontractor works for a fixed price and is motivated to complete the job as quickly as possible to maximise profit, there is little time or incentive to invest in upskilling tradespeople on site. Work quality also suffers, and the impact of mistakes made on traditional stand-alone houses are amplified for MDH.

Upskilling the existing workforce

Often skills with MDH were equated with experience of MDH, leading to another circular situation. You need skills to gain experience, but you require experience to gain skills.

The word 'qualified' was used interchangeably with the word 'skilled', indicating that the industry values education for skill development. Training specific to skills gaps in MDH could improve MDH delivery. MDH training at apprenticeship level would make it easier for the employer to rotate tradespeople around tasks on an MDH building site. Tradespeople with skills across the MDH building process would be more versatile and valuable (and more satisfied) workers.

Formal study and qualifications beyond the completion of an apprenticeship were recommended. Skill development could be incentivised by providing a structured career path for tradespeople, with position and pay dependent on the level of skill. This would incentivise skill development once qualified and attract more aspirational people into the industry.

To achieve more immediate results, skills gaps around MDH should be addressed by upskilling the existing workforce.

On-the-job learning is a valuable tool for developing MDH skills but relies heavily on quality mentorship and experienced on-site supervision. Without this, there is a risk of learning techniques that are less than best practice. More-senior industry members with experience delivering MDH will need to oversee the aspects of learning on the job required to upskill the workforce.

KiwiBuild should also set wider and longer-term objectives, with industry upskilling a clearer component of the scheme. This is required to ensure New Zealand gets the good-quality MDH it will need beyond 2028.

More information

BRANZ Study Report SR408 *MDH: Can we build it?*

The work described here is part of an extensive research programme BRANZ began in 2017 aimed at improving the quality and delivery of MDH in New Zealand.

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