

Concept: Pioneer Village

Submitters

Dr David Goodwin and Dr James Berghan, School of Surveying, University of Otago.

Introduction

The proposed 2GP Variation 2 changes offer some hope of increasing Dunedin's housing capacity and housing variety. In particular, the provision of a diverse range of housing options (e.g. objective 2.6.1), including alternative housing forms and alternative tenure arrangements, has strong potential to offer housing solutions that cater to a wider cross-section of the community who may be overlooked in the provision of additional, typically high-end, greenfield developments. To this end, we propose a 'pioneer village' concept for consideration as an alternative to traditional forms of residential activity and development.¹

Guiding principles

Research undertaken by the submitters² suggests that housing of a different character is urgently needed, and the following two factors could help to make more homes accessible to first-time buyers and also help build cohesive communities:

- First, to make some land available through secure, long-term land rents rather than through purchase. If land is not marketable property, it is immune from marketplace distortions that contribute to unaffordability for first-time buyers. Community Land Trusts and shared equity arrangements are now well established and offer precedents.³
- Second, to provide opportunities for mahi/sweat equity for those with skills and energy but little or no capital equity, to contribute to do all or part of the work on a dwelling themselves or together with family and friends.⁴

It is submitted that what is below termed "Pioneer Villages" would provide an avenue by which those with vision and energy can own a home in a strong, supportive community, either as a stepping-stone to accumulate sufficient capital to get into the formal market or as longer-term (albeit small) residence.

Pioneer Village

The term Pioneer Village is chosen to reflect the fact that these communities would be progressive and forward looking; would cater for those prepared and able to draw on their own resources and

¹ While this concept description goes beyond some of the specific considerations and scope of the proposed variation, we offer this more detailed explanation to provide context for the suggested changes, and to offer ideas on alternative development potential.

² E.g. Berghan, J. (2020) "Ecology of community: Exploring principles of socially-based tenure in urban papakāinga and cohousing communities" (Thesis, Doctor of Philosophy). University of Otago. Retrieved from <http://hdl.handle.net/10523/10529>; Berghan, J, and Goodwin, D.P. (2020) "Social mortgages and affordable housing." *Build* 177, April/May 2020: pp53-54. BRANZ; Berghan, J, Carter, L., Goodwin, D. P., Rawiri, A. (forthcoming) "Planning for community: The Kāinga Tuatahi papakāinga in central Auckland". Chapter in J. Hutchings, J. Smith & F. Cram (Eds.), *Kāinga tahi, Kāinga rua: Māori housing realities and aspirations*.

³ Such as The Village model framework plan: https://4260ae65-1974-4bdc-a104-1e300c21f389.filesusr.com/ugd/6e1afc_84e97d5bb8e44cb1b60973a02d7551f5.pdf and Canberra's Land Rent Scheme: <https://www.revenue.act.gov.au/home-buyer-assistance/land-rent-scheme>

⁴ E.g. "Lego for adults" approach in Saettedammen, Denmark (see Berghan, 2020, pp. 196-199).

are motivated by a survival instinct; and would entail a common-sense relaxing of rules yet without compromising health and safety of individuals or the group. A working definition of a Pioneer Village (PV) is a greenfields development (or brownfields redevelopment) where rights are held under secure, inheritable land rent on small sections with road access and serviced with mains water, grey and foul water sewerage and waste disposal.

Certain restrictions would be tighter than for regular subdivisions, for example:

- A section area ceiling of 300 sq.m.
- A maximum floor area for dwellings of 60 sq. m. (a first guess only) excluding passageways and decks.
- Land cannot be bought and sold, and therefore cannot be mortgaged.
- New dwellings should be separable into modules with a maximum size of 10sq metres so as to ensure that modules can be added or subtracted according to changes in family size or circumstances, or could be taken away as moveable property if a resident left the community.
- A maximum roof height of 3.7m above floor level (rationale: this would permit low mezzanine sleeping areas while avoiding double-storied and structurally unsafe buildings. Altering the existing 3.5m restriction to 3.7m would make the ruling inclusive of Tiny Homes, some of which would be precluded by the 3.5m limit).
- In order to streamline inspection, plumbing and electrical work should be accessible, either in roof or floor cavities or else external to walls (trunking being the norm for electrical work).

Other rules would need to be relaxed, for example:

- The Building Act restriction on separation of 10sq m modules. It is envisaged that up to six 10sqm modules could be aggregated into a single effective dwelling provided that each module could stand alone. This would mean that for two adjacent modules, effectively two outside walls would be abutting, and larger room sizes could still be achieved through putting two ranch-slider dimension doorways together.
- 10 sq. m. dwellings could house water and sanitation so long as this was inspected by the Council for common-sense safety and for leaks.

Governance

A governance body could be established to ensure the smooth running of the village, including managing relationships between residents, Council, and the wider community. For example, occupants could be interviewed and screened for such things as employment record, credit rating and police record. Those accepted would need to sign declarations that limited liability to the Council; acknowledged acceptance of certain rules; and affirmed buy-in to certain more general principles (e.g. to be a good neighbour and community member). This would help to put the onus of safety, good health, and community cohesion on individuals and families rather than on local councils.

It is envisaged that a meeting house site would be reserved in case residents voted to build one, much like the case in other alternative housing models such as cohousing (but providing the space for it, rather than the full facility, to enable residents to co-construct any shared facility based on their collective wants and needs). This could have a recycle area where building materials and superfluous 10sqm modules could be stored. Also, a community garden site would extend opportunities for safe composting and offer more cultivable land if 300m sections proved restrictive.

Finance

Such a proposal would require some development costs or contributions upfront to provide the necessary infrastructure (e.g. roading, three waters reticulation to sites), with potential for partnerships between interested groups, Council, philanthropic individuals or organisations, Community Land Trusts or shared equity groups, for example. Residents would pay a land-rent for as long as they used land, and a development levy for a finite time – perhaps five or ten years – to help recoup some or all of the development cost. If residents only had to pay this for a finite time, this could provide an incentive for long-stay residents to give continuity to the development.

Thereafter, only a weekly land rent would need to be paid, plus rates for waste management and services. There would also be a levy for rates and services, and making this variable according to which services were used, this could be an incentive for eco-friendly practices. For example, if residents had composting toilets, they would be exempt from the foul water levy. Similarly, if grey water was treated and filtered on individual sections, or residents collaborated to create a larger scheme, this levy would not be payable. A land-rent could perhaps in first instance could be pegged at those typical for Tiny Houses (in Dunedin and Christchurch, these seem to be of the order of \$80 per week.) A cost-benefit analysis would need to be done with the aim of setting payments at a level that was not punitive could permit motivated residents to save enough capital to get into the formal housing market.

Surveying

The outside figure of the development would need to be surveyed to existing cadastral standards, but within the development there is an opportunity to introduce a surveying model that is less expensive and more streamlined than the existing vector-based Landonline system. A model is envisaged that adheres to monument-based principles for land-right parcels, but where monuments taking the form of permanent reference marks distributed throughout the development rather than marking all parcel boundaries. This model could save survey costs but still provide rigour where there is seismic movement.⁵

Scenarios

- 1) A person in an off-grid Tiny Home moves to the development, connects to water, and commences paying the development levy charge and a weekly land rent. Affordable rates are also charged for refuse collection and roads, which will continue while she stays there, but the TH has a composting toilet, so she does not hook up to the foul water and her rates are accordingly less. Part of her initiation by the community management committee is to explain the system that residents follow for composting humanure. She initially hooks up to grey water, but starts making a sand filtration system that, when finished, will allow her to cap off the grey water drain and reduce that charge as well. She soon begins work on two 10sqm dwellings that will augment her TH. These are standalone units positioned side-by-

⁵ Goodwin, D.P. (2012) "Deferred Monumentation and the Shakedown factor" *Survey Review* 45(328):19-24.; Goodwin, D.P. and McKinnon, D (2010) "An Alternative Cadastral Survey Dataset for New Zealand." *New Zealand Surveyor* (300): 33-42.

side so as to be accessible through a door from the Tiny House. A friend does the wiring and plumbing and she has the work inspected by a DCC inspector, who is able to view all pipes and wires because they are either in roof or floor cavities or external to walls. In ten years' time, she finishes paying the development levy and thereafter only pays rates, land rent and the service charge.

- 2) A single, apprentice builder moves to the development, pitches a tent, borrows a small petrol generator and over a weekend puts up a temporary shed with a toilet and shower. He immediately begins building a 10sqm dwelling, and within a month, the temporary shed has been re-purposed and the toilet and shower are now housed in half of the 10sq m room and a kitchen the other half. By the following month, this apprentice is living in a second 10sqm room, positioned immediately next to the first, and has folded his tent. He is soon in a position to buy a solar system for power and to return the generator. For some years, in addition to his day job, he has a cottage-industry building 10sqm rooms for those in the development who have money but lack building skills. After five years he takes his savings, sells his house, and gets into the formal land market.
- 3) A retiree with limited capital begins paying land rent on a section and plants a vegetable garden there, but she stays with a friend while the apprentice builder builds her four abutting 10sqm dwellings. She investigates getting mains power connected, which is a possibility, but decides to "go green" and install an off-grid system. Fifteen years later, she moves to a rest care home and sells her 40sqm house, two modules to the newcomer who takes over her land rent, and one module each to two other residents, who forklift them onto a double-axle trailer to move them. The new residents commence paying the development levy, which is paid from scratch even for newcomers, in order to make up deficits and later to fund new capital projects for the community.

Example layout

See figure below (indicative only).

Concept sketch of a Pioneer Village Community

