

# **Building for Shared Rental Homes by Non-profit Community Housing Providers**

## **Building Costs**

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Centre for Research Evaluation and Social Assessment Ltd

Building Better Homes Towns and Cities  
A Component of the Building Solutions Project  
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## **Acknowledgements**

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# 1 Introduction

This study is a component of the Building Solutions Project focused on how building solutions that address barriers to making our building stock, both new build and retrofit, perform better for the needs of older people. This component responds to the limited opportunities for older people to find affordable rentals. This report is the second report for this component. The previous report presented a set of concept plans for shared rental for older people and an analysis of the yield associated with that concept and the implications for land costs. It analysed the number of rooms and residents relative to the land use of the concept design. A comparative analysis of yield and amenities was enabled by Abbeyfield New Zealand providing data for two recent Abbeyfield builds. That report<sup>1</sup> focused on land and the impacts on costs associated with the very compact nature of the design. It also set out the context of this component of the Building Solutions Project and the concept design.

This report focuses on the estimated build costs of the concept design. Those costs are estimates only and may vary according to specific sites and cannot take account of changes in construction costs subsequent to July 2019 nor costs arising from different councils' district plan requirements and building consent pricing regimes. Indeed, the object of this report is to understand how the yield delivered by way of a compact design such as contemplated here can affect the relative costs of building shared rental. This report includes material also found in the previous report related to concept design and context. It also includes a summary of the key findings of the previous report.

## 2 Background and Context

This component of the Building Solutions Project is effectively a design experiment which seeks to establish whether the yield of shared rentals could be increased while providing homelike building envelopes and adaptability to potential future changes in use. It responds to the increasing proportion of future older people who will depend on rental housing as previously very high rates of owner occupation decline. As Figure 1 shows as each birth cohort moves through their life course the probability of being in owner occupation at the age of 65 years falls (Figure 1).<sup>2</sup>

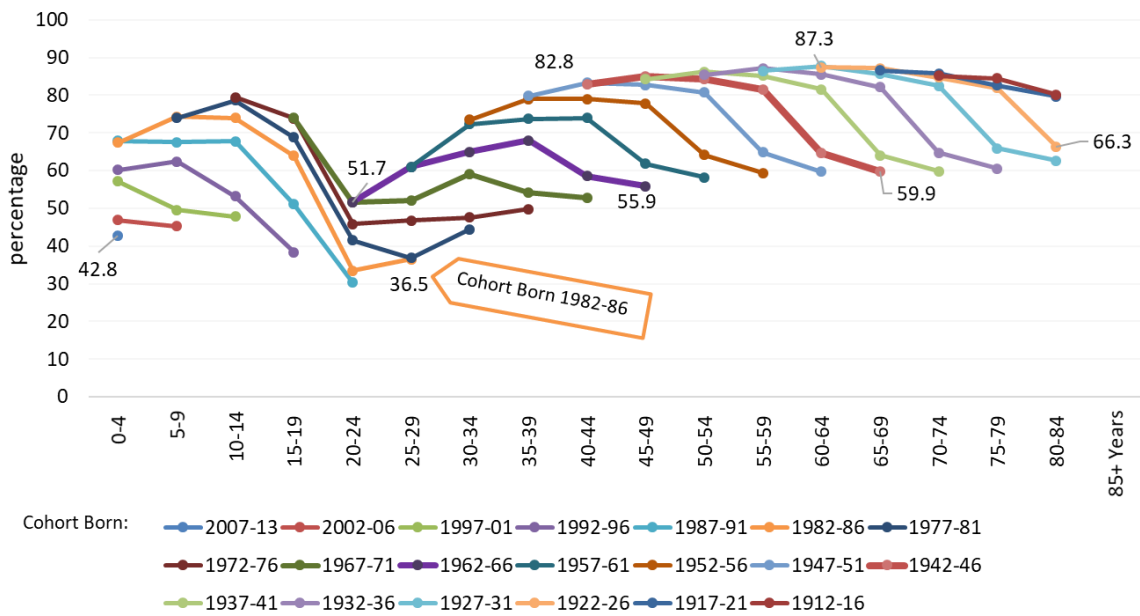
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<sup>1</sup> Saville-Smith, K., (2019).

<sup>2</sup> Jackson, N., and B. James (2016) *Ownership, Renting and Residence in a Home Owned by a Family Trust for the Western Bay of Plenty and Total New Zealand, by birth cohort for the period 1986-2013*. Report prepared for Population Ageing Technical Advisory Group and SmartGrowth. Cohort analysis prepared by Dr Natalie Jackson.

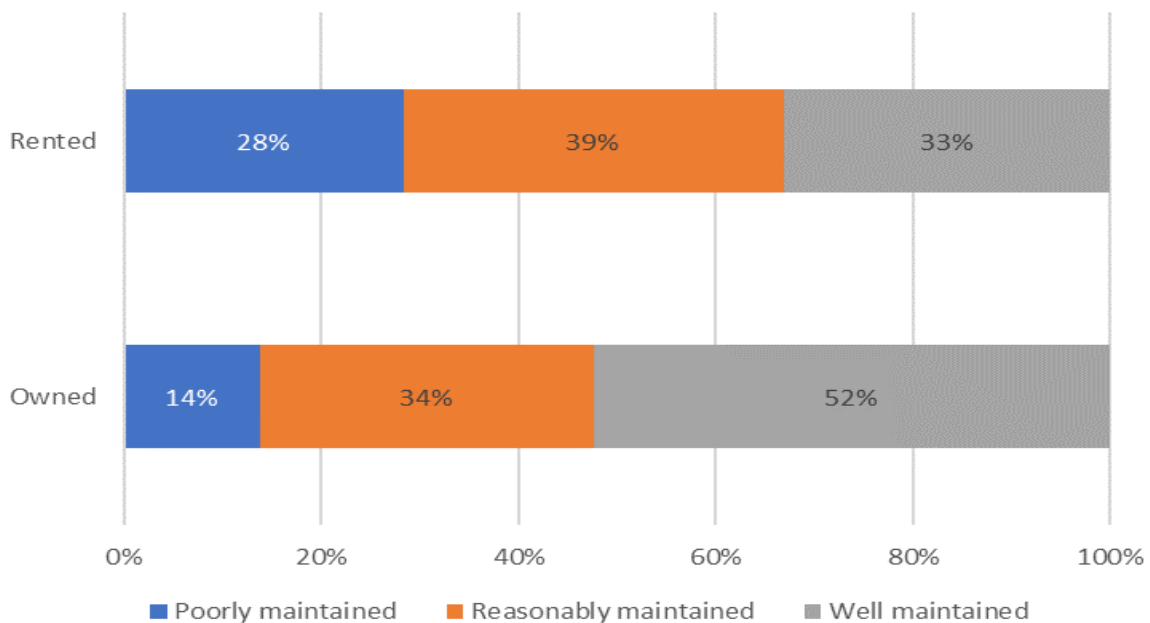
\*Final observation for each cohort is +2 years, due to 7-year gap between 2006 and 2013 censuses.

Figure 1 Home Ownership by Birth Cohort\*, Total NZ



That fall exposes more and more older people to a precarious position as tenants. That precarity is in part associated with the limited incomes of older people, but it also reflects the rental market’s association with insecure housing and housing in poorer repair (Figure 2).<sup>3</sup> Rents are a challenge for older people. National superannuation is calibrated according to

Figure 2 Repair and Maintenance of Dwellings with 65+ year old residents (BRANZ NZ House Condition Survey 2015/16)



<sup>3</sup> Data from the BRANZ NZ House Condition Survey.

assumptions of mortgage-free home ownership<sup>4</sup> And it is notable that older tenants are more likely than older owner occupiers to report affordability stress in the form of forgoing accessing some health services including filling prescriptions because of affordability problems.<sup>5</sup> Moreover, while the demand for rental housing among older people is increasing, community housing providers who are committed to affordable rental housing provision are struggling to access capital funding that would allow them to build affordable, long-term housing for older people. The pensioner housing stock delivered through councils is not expanding with demand. The capital funding previously directed to pensioner housing by central government has been largely curtailed since early 1990.

Under those conditions there is an increasing interest in older people sharing rental accommodation and building to meet the demands of older people rent-sharing. Some models involve on-site house management and meal preparation. In others, house management may be off site and residents are more likely to be sharing domestic activities such as cooking and cleaning. Community housing providers are confronted with trying to reduce costs through maximising the number of residents in shared rental housing while ensuring that housing is home-like and non-institutional. Catering for more residents can lead to shared rental using larger blocks of land, reduced land use efficiency, and using building typologies which are less adaptable for future changes of use and changing resident numbers. The design experiment in this project was directed to addressing some of those issues.

### 3 The Concept Design

To explore the impact of higher yield on a smaller land block, a concept design was developed using a real site under three titles with a long north boundary. The south consists of a wide laneway. The west boundary is with a modest single storey dwelling. The east boundary has a single storey garage servicing one a set of 'sausage' flats. The site is a back section and located about eight to ten minutes walk from Blenheim's city centre. The site is used purely for design demonstration purposes.

Developed over three iterations by the design team under leadership of Peter Freeman, General Manager Social Housing and Community Projects and with planning consultants for MikeGreerCommercial, the design features:

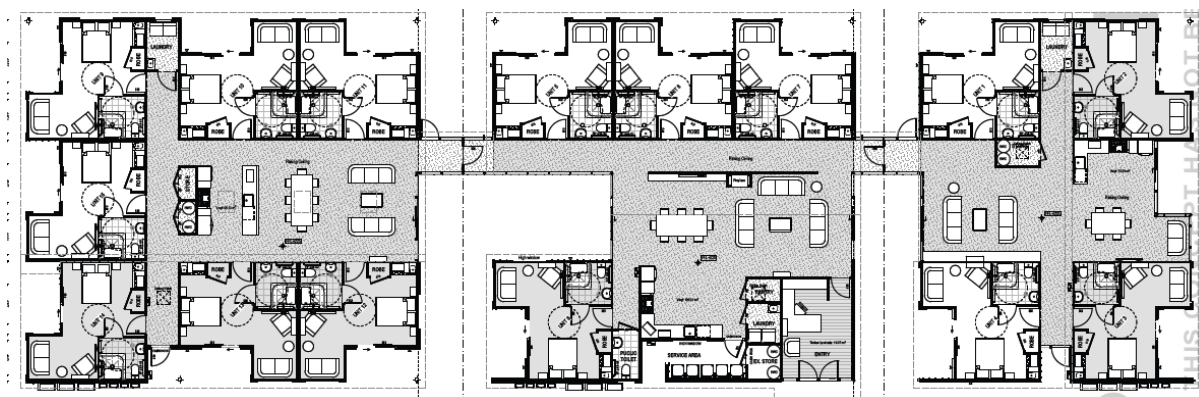
- Three building envelopes within each of the titled sections respectively.
- Buildings being integrated by way of connecting corridors running across title boundaries.
- Provision of fifteen ensuite rooms of 23.31 sqm interior and around 4 sqm covered patio.
- Predominately north, east or west facing rooms and use of clerestory windows to increase natural light.

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<sup>4</sup> Saville-Smith, K., 2013 *Housing Assets: 2013 Review of Retirement Income*, Prepared for Commission for Financial Literacy and Retirement Income. See Life When Renting programme [www.goodhomes.co.nz](http://www.goodhomes.co.nz).

<sup>5</sup> Pledger, M., McDonald, J., Dunn, P., Cumming, J., and Saville-Smith, K. (2019) The health of older New Zealanders in relation to housing tenure: analysis of pooled data from three consecutive, annual New Zealand Health Surveys *Australian and New Zealand Journal of Public Health*.

- Consolidated parking, service and shared storage areas.
- Full kitchens, storage, seating and dining areas in each building envelope.
- A laundry in each building envelope.
- Wide circulation spaces.
- A foyer and office in one block.



The roofed areas of these buildings are 869.76 sqm with the entire footprint 822.45 sqm on a site area of 1,601 sqm. The concept design is presented in Annex A.

## 4 Land Consumption Findings

A comparative analysis of land consumption and estimates of associated land costs was undertaken by reference to two recent Abbeyfield builds (Table 1).

**Table 1: Land, Dwelling Areas and Residents for Concept Design and Comparators**

	Land Area m <sup>2</sup>	Dwelling Area m <sup>2</sup>	Dwelling to Land Coverage	Resident Rooms	Land per Resident m <sup>2</sup>	Dwelling Area per Resident m <sup>2</sup>
Concept Design	1,601	822	51%	15 <sup>6</sup>	107	55
Comparator 1	2,171	854	39%	15 <sup>7</sup>	145	57
Comparator 2	1,914	760	40%	13 <sup>8</sup>	147	58

Results are presented in the previous report on this component which broadly were as follows:

- The land cost per person was consistently smaller in the concept design relative to the two comparators although the value of that difference varied between Auckland, Wellington and Christchurch.
- The overall capital requirements for land was lower in the concept design.
- The concept design offers both additional and reduced amenities compared to the comparators. Reduced amenities relate to the smaller room sizes in the concept design but there is increased amenity in relation to increased access to kitchen space and

<sup>6</sup> No Housekeeper's unit

<sup>7</sup> Including Housekeeper's unit

<sup>8</sup> Including Housekeeper's unit

reduced density of sharing in relation to shared amenities. In the concept design, each pavilion has a kitchen and laundry space.

## 5 Construction Costs and Yield

The concept plan involves effectively three dwellings associated with each other by corridors. The provision of laundries and kitchens in each envelop optimises ‘homeliness’ and enhances proximity to facilities but comes with a cost. Consequently, we have used a mid-point of currently prevailing building costs of \$2,460 (excl GST) per metre squared to provide an indicative build cost while using a low-end cost of \$2,069 (excl GST) for the comparators. Those comparative costs exclude consent-related costs associated with the production of drawings and fees for building consent and resource management consent respectively. Those are estimated conservatively in the region of \$55,000.

Table 1 sets out the key parameters of the Concept Design and two comparators. The concept design is mid-range in terms of building footprint. The higher cost applied per square metre to the Concept Design means that the total building cost as well as the per resident cost exceeds those of the comparators (Table 2).

**Table 2: Square Metre and Construction Costs for Concept Design and Comparators**

	Square Metre Cost Estimate (excl GST)	Construction (excl GST)	Construction per resident (excl GST)	± Cost per resident (excl GST)
Concept Design	\$2,460	\$ 2,022,120	\$ 134,808	Baseline
Comparator 1	\$2,069	\$ 1,766,926	\$ 117,795	-\$ 17,013
Comparator 2	\$2,069	\$ 1,572,440	\$ 120,957	-\$13,851

The extent to which there is a significant land and build cost depends on the price of land. As our previous report showed, the Concept Design is extremely cost effective in relation to land consumption. Depending on prevailing land costs for greenfield developments, the high yield in relation to land consumption narrows, or in the case of Auckland greenfields entirely offsets, the gap between the indicative build costs for the Concept Design and the two comparators.

Table 3 provides a comparison of the indicative land and construction of the Concept Design and the comparators on greenfield land. Indicative land costs are drawn from the report commissioned by Fletcher Building Limited in 2018 entitled *Cost of residential housing development: A focus on building materials*. Using those land cost estimates, Table 3 shows the Concept design is associated with a lower land and build cost per resident of \$13,000-\$18,000. It remains higher, however, where land costs are lower in Wellington and Christchurch.



**Table 3: Estimated Land and Build Costs per resident for City Greenfields**

	Land & Build Auckland per resident	Auckland ± Cost per resident (excl GST)	Land & Build Wellington per resident	Wellington ± Cost per resident (excl GST)	Land & Build Christchurch per resident	Christchurch ± Cost per resident (excl GST)
Concept Design	\$220,408	Baseline	\$159,739	Baseline	\$154,389	Baseline
Comparator 1	\$233,795	+\$13,387	\$151,580	-\$8,159	\$144,330	-\$10,059
Comparator 2	\$238,557	+\$18,149	\$155,208	-\$4,531	\$147,858	-\$6,531

## 6 The Issue of Land

Land has long been identified as critical factor in the viability of community housing provision.<sup>9</sup> This analysis reinforces that. The amenity value of separate pavilions in the Concept Design are associated with a build cost. The extent to which that build cost is translated into an overall increase in cost per resident is driven in part at least by the extent to which use of land costs do or do not offset those addition construction costs. The analysis using indicative 2018 pricing for land in greenfields in Auckland, Wellington and Christchurch shows that those construction costs can be offset. Moreover, even when not offset, there are indications that land and build costs for the Concept Design in Christchurch and Wellington do not exceed Auckland costs even where they exceed the costs of the comparators in those cities.

Unlike most private developers, the cost of the dwellings that the community housing sector builds must allow them to be affordable to low income households including the increasing proportion of older people who will be reliant on the rental market. For community housing providers, this reinforces the importance of designs that utilise land effectively. Unlike private developers, the community housing sector tends to be land price takers rather than land price creators.

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<sup>9</sup> Joynt, J. (2019); Saville-Smith *et al.*, (2016); Saville-Smith, K. (2019).

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# ANNEX A Concept Plan

PROPOSED NEW RESIDENCE

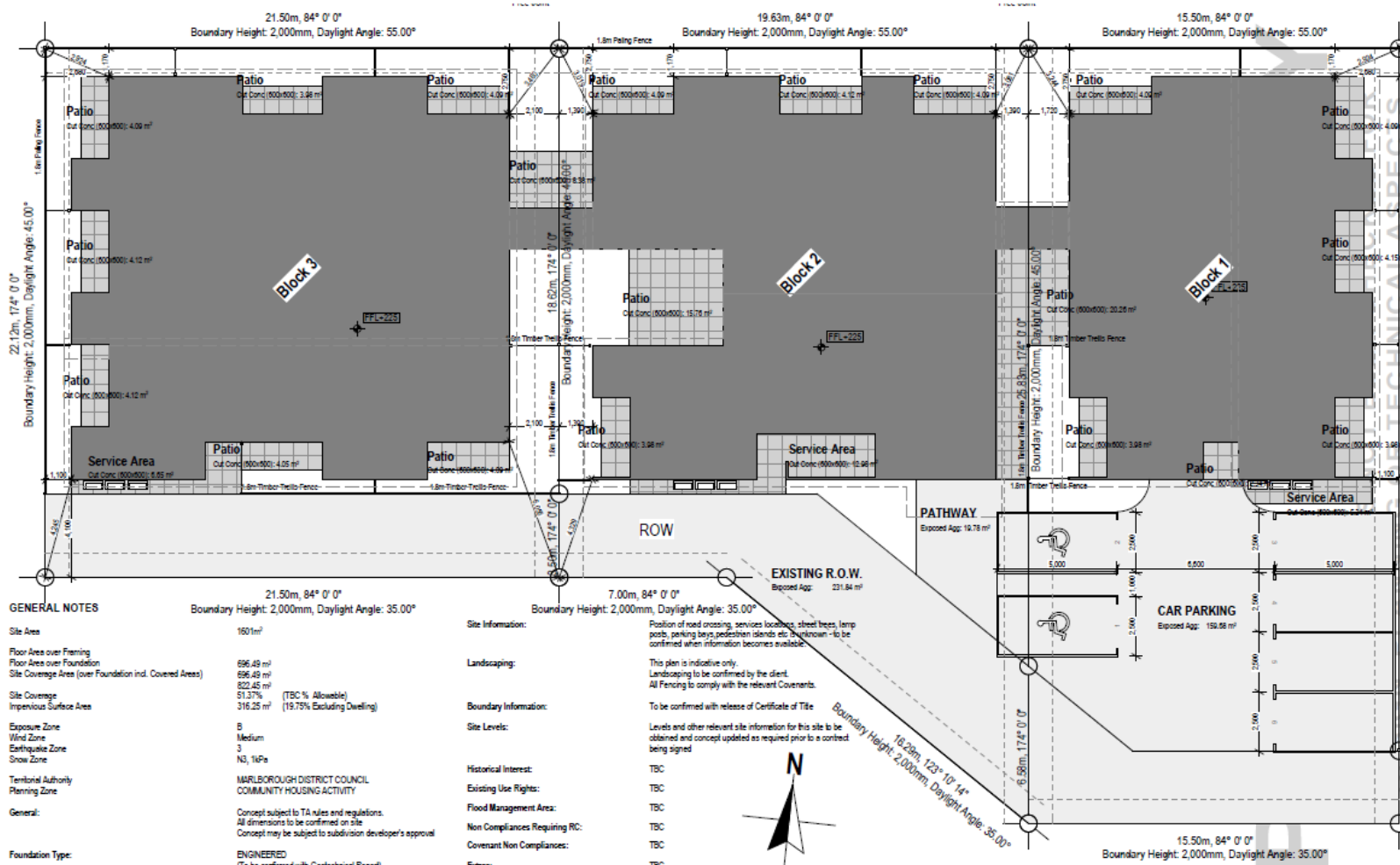


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**GENERAL NOTES**

Site Area	1601m <sup>2</sup>
Floor Area over Framing	696.49 m <sup>2</sup>
Floor Area over Foundation	696.49 m <sup>2</sup>
Site Coverage Area (over Foundation incl. Covered Areas)	622.45 m <sup>2</sup>
Site Coverage	51.37% (TBC % Allowable)
Impervious Surface Area	316.25 m <sup>2</sup> (19.75% Excluding Dwelling)
Exposure Zone	B
Wind Zone	Medium
Earthquake Zone	3
Snow Zone	N3, 11Pa
Territorial Authority Planning Zone	MARLBOROUGH DISTRICT COUNCIL COMMUNITY HOUSING ACTIVITY
General:	Concept subject to TA rules and regulations. All dimensions to be confirmed on site. Concept may be subject to subdivision developer's approval
Foundation Type:	ENGINEERED (To be confirmed with Geotechnical Report)

Site Information:	Position of road crossing, services locations, street trees, lamp posts, parking bays, pedestrian islands etc to be confirmed when information becomes available.
Landscaping:	This plan is indicative only. Landscaping to be confirmed by the client. All fencing to comply with the relevant Covenants.
Boundary Information:	To be confirmed with release of Certificate of Title
Site Levels:	Levels and other relevant site information for this site to be obtained and concept updated as required prior to a contract being signed
Historical Interest:	TBC
Existing Use Rights:	TBC
Flood Management Area:	TBC
Non Compliances Requiring RC:	TBC
Covenant Non Compliances:	TBC
Extras:	TBC

<b>Block 1</b> Lot 1: Area over Foundation (incl. Covered Areas) Site Coverage:	<b>Block 2</b> Lot 2: Area over Foundation (incl. Covered Areas) Site Coverage:	<b>Block 3</b> Lot 3: Area over Foundation (incl. Covered Areas) Site Coverage:
626m <sup>2</sup> 222.96 m <sup>2</sup> 36.67%	499m <sup>2</sup> 278.35 m <sup>2</sup> 55.78%	476m <sup>2</sup> 321.36 m <sup>2</sup> 67.51%

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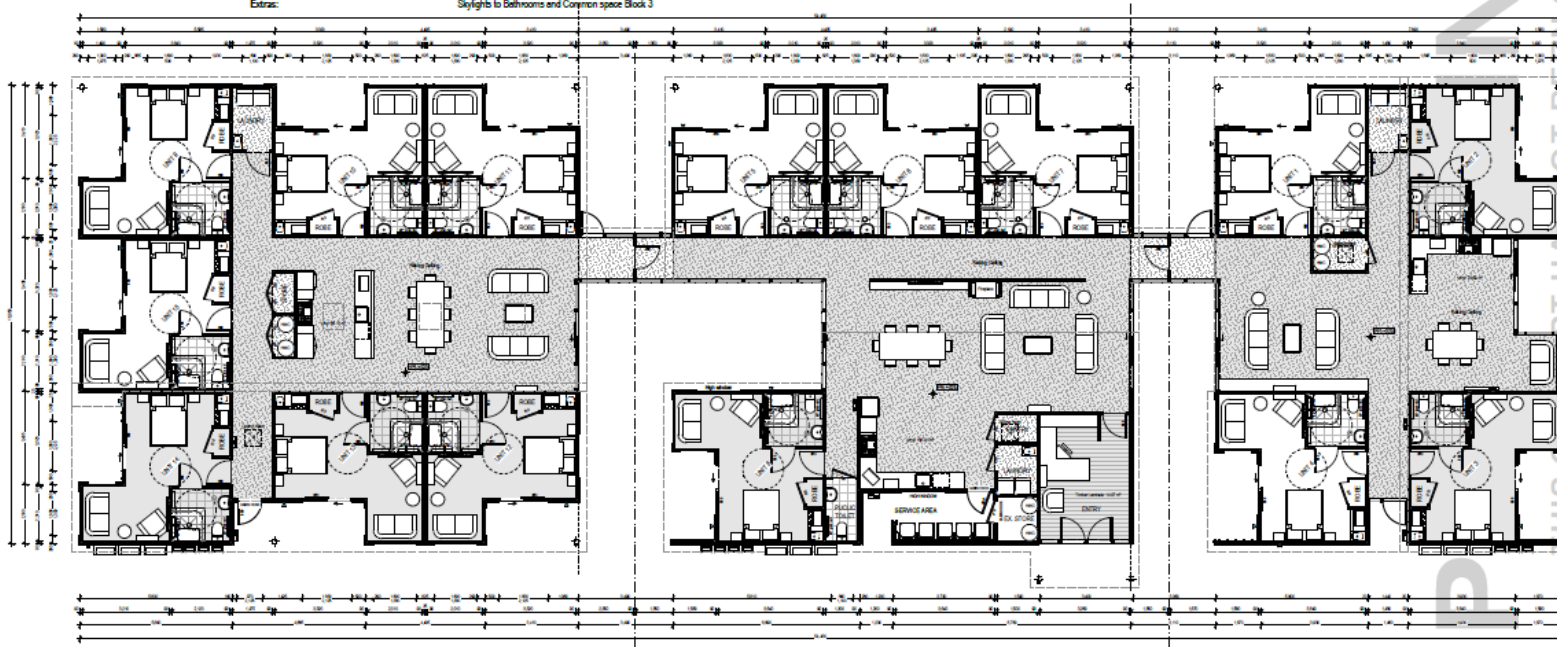
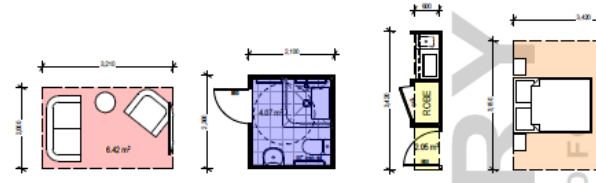


**GENERAL NOTES**

Perimeter (Over Foundation)	258.0m
Roof Pitch	20°, 5°, 2°
Eaves Width	300mm
Gable Width	300mm
Height To Underside Of Truss	2455mm
Slab End	310mm to 5° roof, 90mm to 2° roof
Lintel Height	2304mm to 20° roof, 2387mm to 5° roof, 2407mm to 2° roof
Soffit Height	2309mm to 20° roof, 2392mm to 5° roof, 2412mm to 2° roof
Soffit Type	Raking
Raised ceiling	N/A
Raking ceiling	to Common spaces and Units 2-3-8-12-13-14
Internal Door Leaf Height	Standard
Wall Cladding Materials	50mm Rodicore Integro panel on 20mm cavity JSC Cedar Vertical Shiplap weatherboards, 135mm JS1 on 20mm cavity
Roofing Materials	Colorcoat Longrun Trimline Butylm Membrane to 2° roof
Engineering:	Beams, Foundation, Steel Porch
Extras:	Skylights to Bathrooms and Common space Block 3

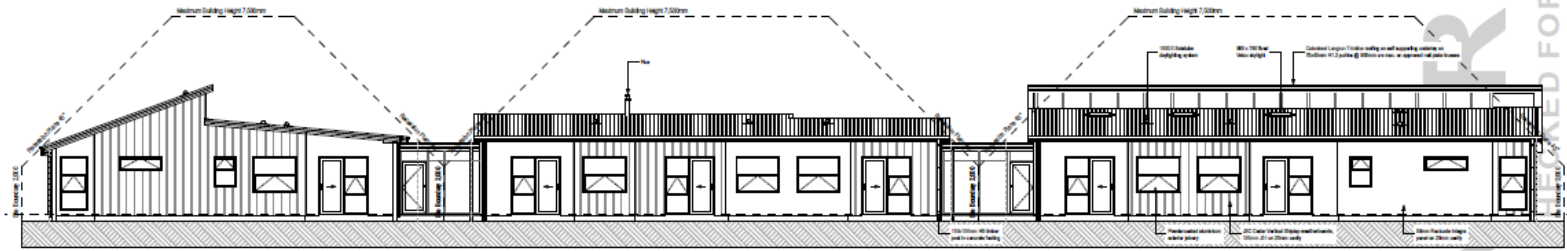
**KEY**

- Meter Board/ Distribution Board
- Contra Panel
- Gully Trap
- Hose Tap
- Downpipe
- Internal Heat Pump
- External Heat Pump

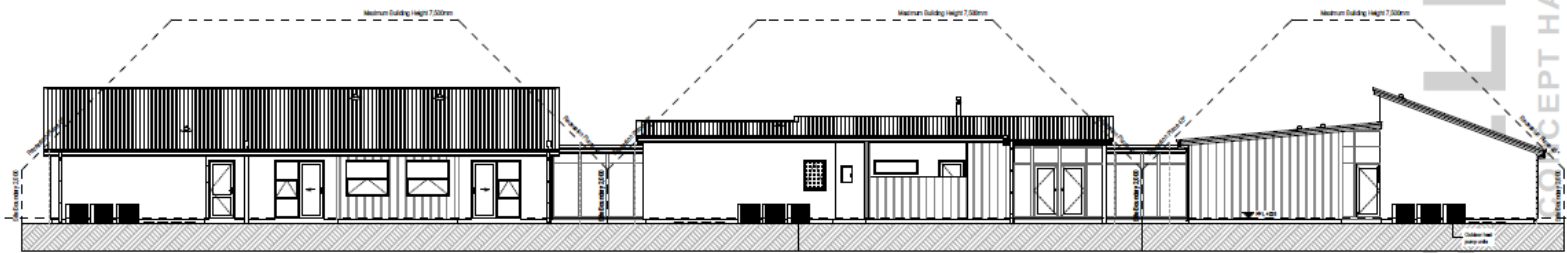


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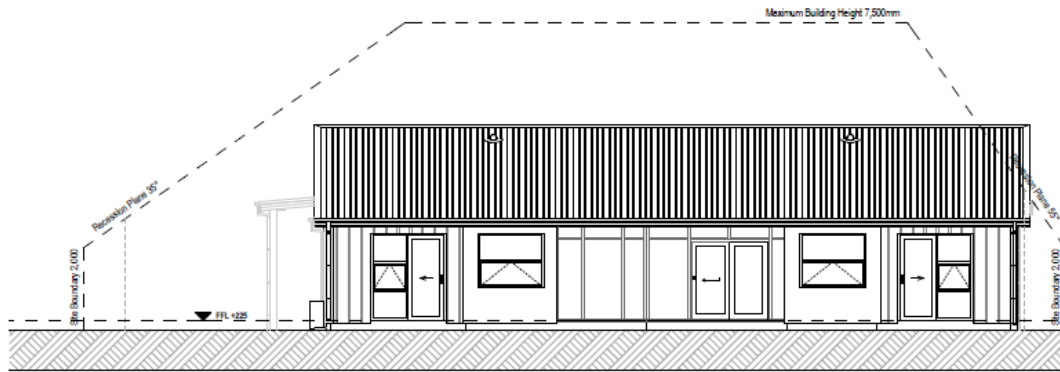


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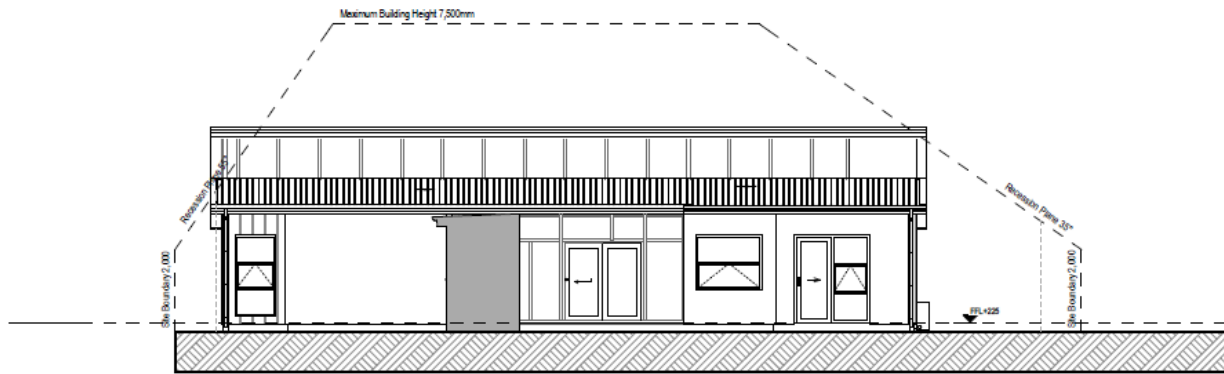
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East Elevation Block 1  
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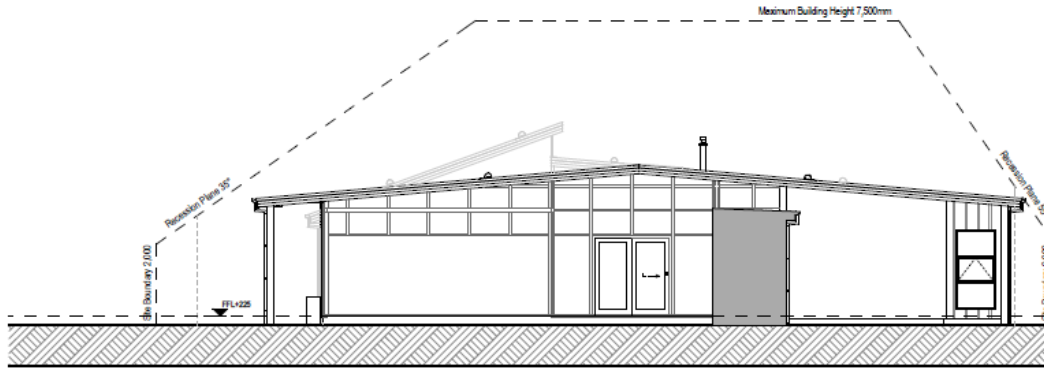
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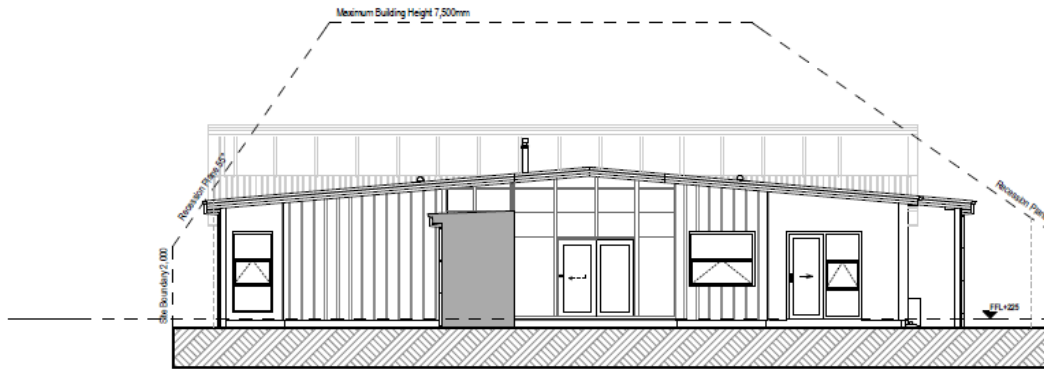
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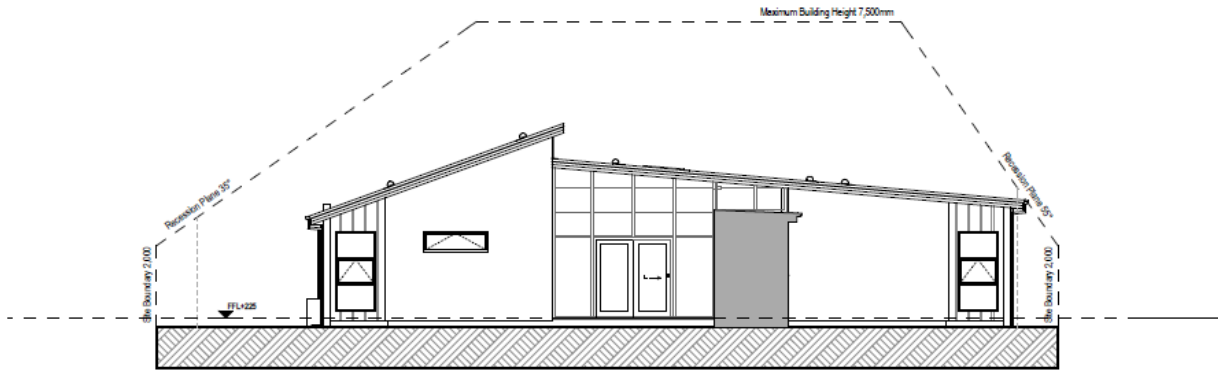


West Elevation Block 2  
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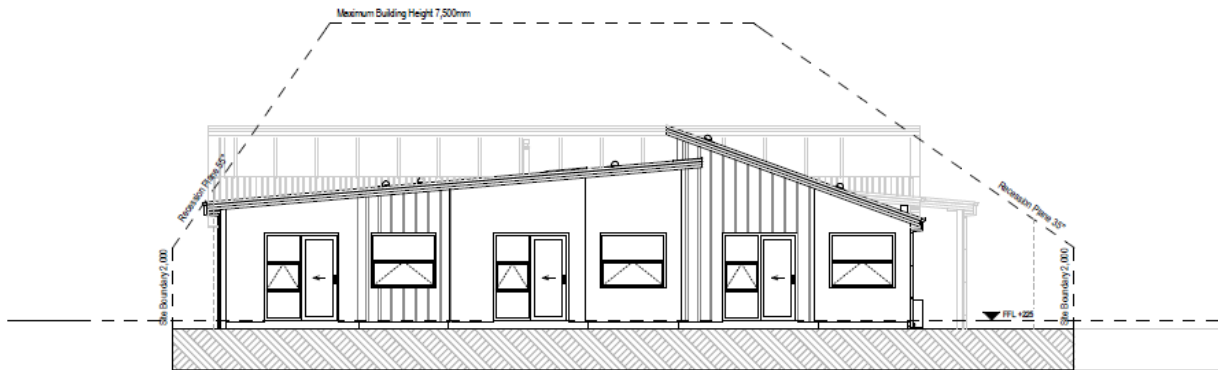
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East Elevation Block 3  
SCALE 1:100 @A3

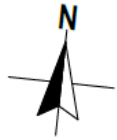


West Elevation Block 3  
SCALE 1:100 @A3

**PRELIMINARY**

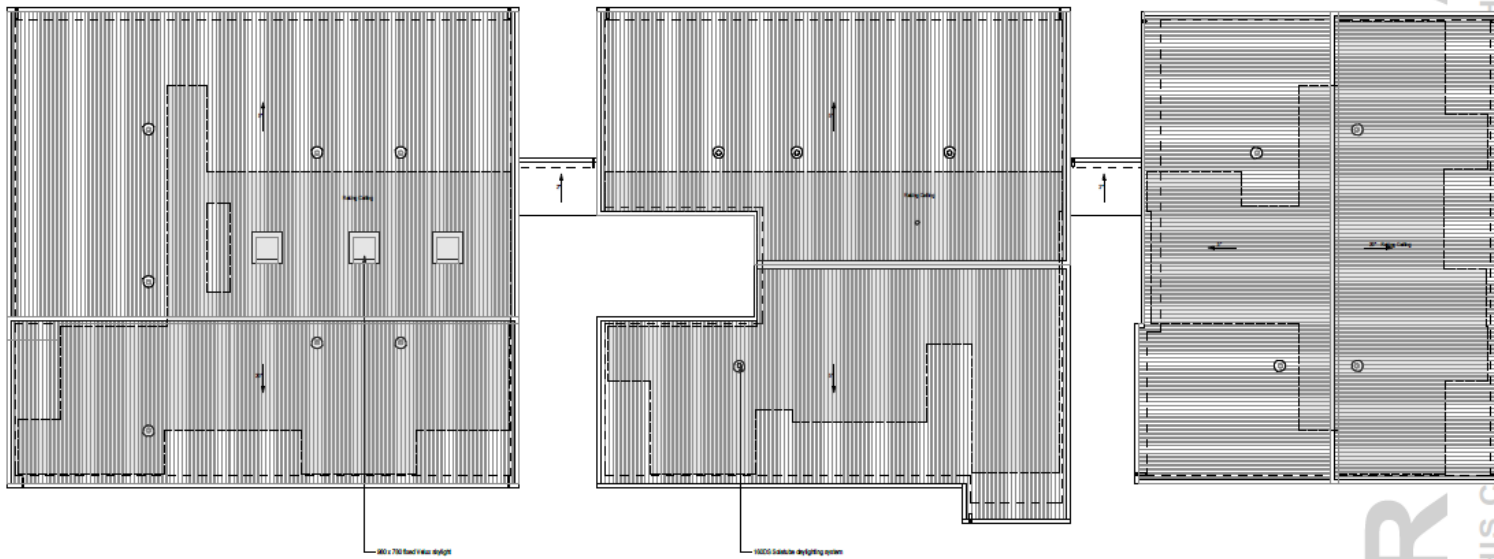
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					<p>AMENDMENT DATE:</p> <p>24.05.2019</p>	<p>TECHNICIAN:</p> <p>TBC</p>	<p>JOB #</p> <p>MC0214</p>	



**GENERAL NOTES**

Area Over Roof (on flat) to face of fascias: 969.76 m<sup>2</sup>



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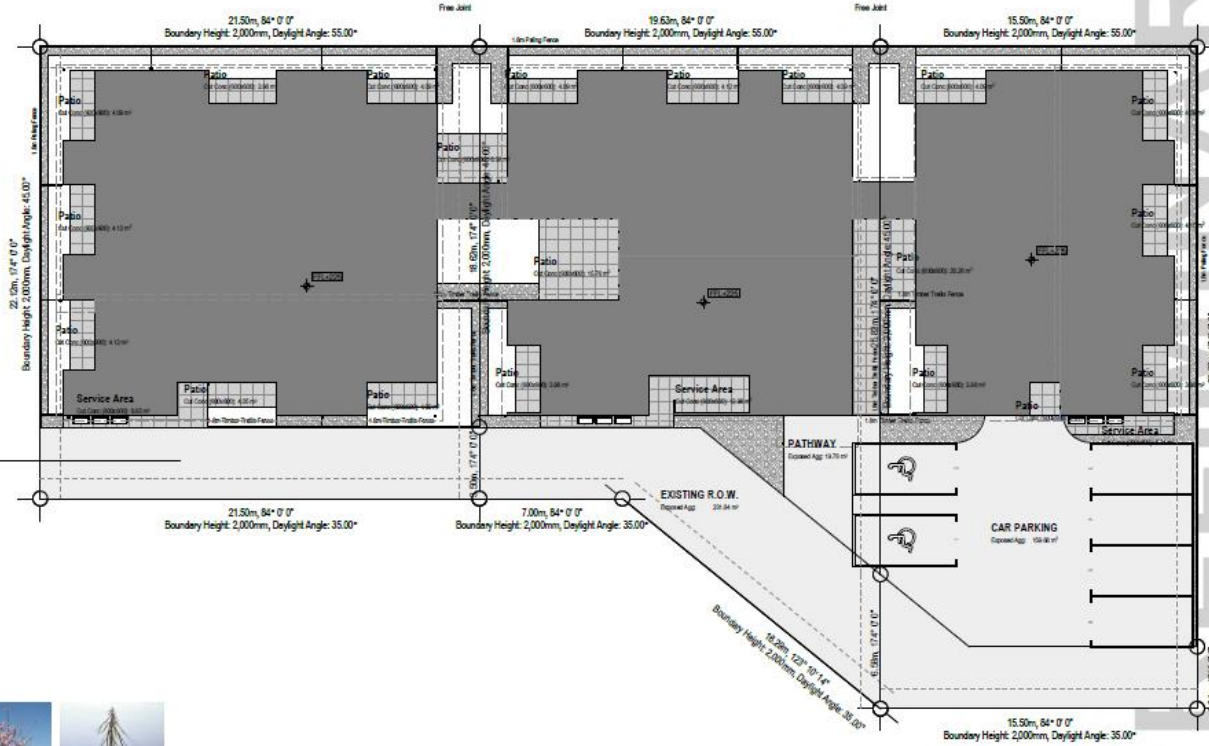
**GRASSES AND FLAXES**



**SHRUBS AND HEDGING**



**TREES**



PLANNING  
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