AUCKLAND
TĀMAKI MAKAURAU
+64 9 489 3464
Unit 5c, 187 Queen Street

WELLINGTON
WHANGANUI-A-TARA
+64 4 473 9803
Level 1, 28 Cuba Street

NELSON
WHAKATŪ
+64 3 548 8781
Studio 180, 180 Bridge Street

CHRISTCHURCH
ŌTAUTAHI
+ 64 3 366 9837
279 Montreal Street

WĀNAKA
+64 3 565 7500
Level 1 Brownston House,
21 Brownston Street

Tasman District Council Intensification

Plan Change 81 –Medium Density Residential Design Matrix Testing

Summary Report

1. Purpose

JTB Architects was engaged to undertake sample testing of the Medium Density Residential Design Rules and Matrix proposed under Plan Change 81 to understand:

- The practical outcomes of the rules when applied to typical residential sites
- The achievable density and form across a range of scenarios
- The flexibility and robustness of the design matrix in supporting quality intensification
- Its effectiveness for the market and developers
- How user friendly the rules and matrix are along with any interpretations required

A series of test schemes across multiple sites and configurations were developed to explore and test these outcomes. These schemes are provided in an accompanied drawing package along with the completed Matrix for each site.

1.1 Design Testing Approach

A series of design test schemes were undertaken across multiple representative sites within Richmond:

- **9 Wensley Road**
- **3 Alfred Sheat Street**
- **6 Edward Street**
- **11 Herbert Street**

Each site was tested using at least two development options, exploring different approaches to layout, density, and built form, and testing of the extremities of development, minimum and maximum likely within the Plan Change 81 framework.

Typical real world unit designs from other JTB intensification projects were used in in the testing, which also aligned with current developer thinking around economic intensification development.

A workshop was held to review our approach and the different development options proposed, the workshop team was comprised of planners, developer and quantity surveyor to test our approach and feasibility to a wider field of experts.

Summary of Options Tested

Site	Option	Units	Site Area (m²)	Site Area (ha)	Units per Hectare
Wensley Road	Option 1	8	1,023.94	0.102	78.1
	Option 2	7	1,023.94	0.102	68.4
Alfred Sheat Street	Option 1	5	685.42	0.069	72.9
Edward Street	Option 1	6	1,216.07	0.122	49.4
	Option 2	8	1,216.07	0.122	65.8
Herbert Street	Option 1	5	1,043.55	0.104	47.9
	Option 2	7	1,043.55	0.104	67.1

Wensley Road

- **Option 1:**
  - Higher density outcome with apartment design
  - Smaller building footprint concentrated into a higher number of dwellings
  - Greater external space and reduced site coverage pressure
- **Option 2:**
  - Combination of three story and two-story town houses.
  - Parking in lower floor of town houses is more efficient circulation and layout

Alfred Sheat Street

- **Option 1:**
  - Compact 5-unit scheme achieving density targets
  - Efficient building footprint with moderate site coverage
  - Good balance between built form and outdoor space
- *(Single primary typology tested, as site constraints limited variation)*

Edward Street

- **Option 1:**
  - Moderate density scheme with a mix of unit sizes
  - Larger units included, resulting in lower overall yield
- **Option 2:**

- Higher density configuration with smaller, more uniform units
- Improved efficiency of site layout and circulation
- Demonstrates potential to exceed minimum density requirements

Herbert Street

- **Option 1:**
  - Lower intensity scheme with fewer, larger units
  - Significant open space and reduced site coverage pressure
- **Option 2:**
  - Higher density arrangement with additional units
  - More efficient land use while maintaining compliance with key controls
  - Increased complexity in layout and servicing requirements

2. Key Findings

2.1 Building Height and Form

- While the Plan provides for up to 11m–14m building height depending on zone, and four stories, in practice, 3 storeys generally provide the most appropriate outcome.

This reflects:

- The need to accommodate:
  - Roof forms
  - Raised floor levels for inundation
  - Topography
- Improved compatibility with surrounding neighbourhood scale, stepping from one, two, three stories. Four stories are deemed a large step change in some existing areas.
- A three-storey typology is sufficient to achieve required density while maintaining design quality. Noting resource consent is always available for further stories.

2.2 Site Coverage and Permeability

- Maximum site coverage of 70% (including impervious surfaces)
- Test schemes frequently approach or exceed practical limits when:
  - Parking
  - Accessways
  - Built form are combined
- This necessitates use of:
  - Permeable paving solutions, which we understand is also a requirement from the TDC engineers for stormwater control.

Permeable surfaces will be essential to enable compliant development outcomes without reducing density.

2.3 Medium Density Residential Design Matrix

Application across all units

- Current framework requires all units to comply

Issue identified:

- A single non-compliant unit (e.g. a constrained middle unit) can cause failure of an otherwise high-quality scheme, eg 1 x clothesline in the outdoor area of one of eight units.

Consider:

- Introduce limited discretion (e.g. ~10% of units) to not fully comply
- Enables more realistic layouts while maintaining overall quality

The matrix took approximately 30 minutes to an hour to complete, which was deemed an appropriate time frame.

2.4 Density Outcomes

- Minimum densities tested:
    - 30 dwellings/ha (standard MDRZ)
    - 40 dwellings/ha (proposed Richmond Intensive Development Precinct)

Findings:

- These densities are:
    - Achievable
    - Provide a balanced outcome, allowing:
        - Retention of trees and green space on existing infill projects
        - Adequate open space
        - Functional site layouts
    - The Design Matrix allows densities to exceed minimum thresholds while still achieving compliance.
- The density provisions strike a workable baseline, not a cap
- Opportunities exist to achieve higher densities where they are well-designed

2.6 Consenting Pathway

- Current rules rely on:
    - Restricted discretionary activity pathways
    - Design matrix compliance
- It was discussed at our workshop if it was an option to consider enabling fully compliant developments as permitted activities
- **This would:**
    - Improve certainty

- Encourage uptake of intensification
- Reduce consenting burden

3. Overall Conclusions

The Design Matrix under Plan Change 81, works well in principle, delivering:

- Achievable density
- Encourages good design outcomes, with emphasis on addressing the street.
- Flexibility across different sites
- Provide developers with confidence when making early site selection decisions

4. Key Recommendations

1. Adopt 3-storey built form as the typical outcome, while retaining height flexibility
2. Allow limited non-compliance (≈10%) within the Design Matrix
3. Recognise and integrate permeable surface strategies into site coverage rules
4. Enable compliant developments as permitted activities, where possible