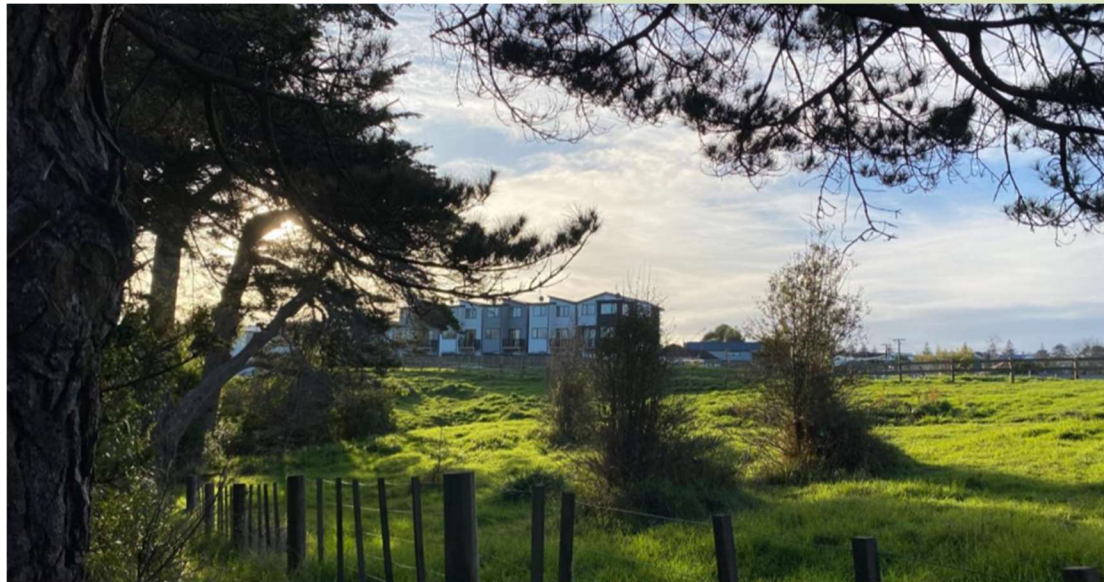


# Housing vs Biodiversity: Can medium-density housing help enhance Aotearoa New Zealand's urban biodiversity?

By Mia Te Tana

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The pressure for more affordable housing has resulted in intensification of residential development and biodiversity loss. The research project focused on three questions:

- How can medium-density housing be improved to support urban biodiversity within Aotearoa New Zealand?
- What provisions exist to implement and enhance indigenous vegetation in residential developments within New Zealand's current formal planning framework?
- Are there any measures in proposed future New Zealand planning instruments to improve biodiversity in residential areas?

The development with the highest housing density (82 units/ha) had very poor vegetation quality. However, there was no correlation between housing density and vegetation quality for those with less than 60 units/ha, indicating potential for improving the ecological value of permeable areas.



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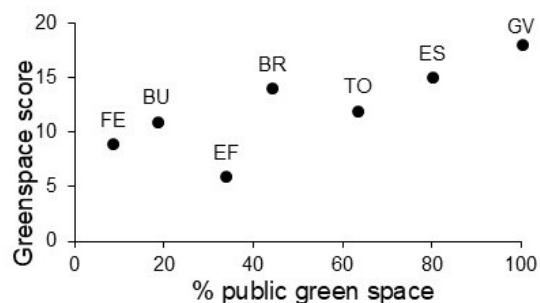
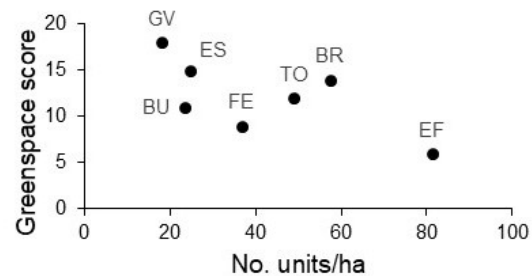
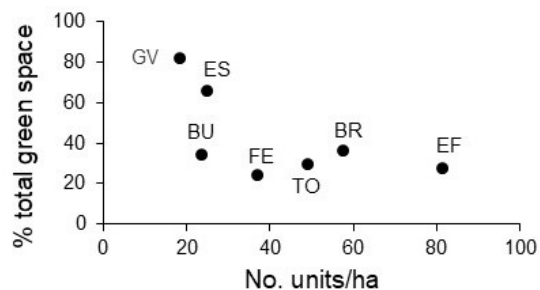


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Medium-density developments prioritising communal space had the highest provision of permeable space. The policy analysis suggested that:

- Current frameworks show a strong focus on significant natural areas, with limited policies for biodiversity enhancement in residential areas.
- Vegetation retention is prioritised, but active restoration and native planting are underrepresented.
- Habitat connectivity is acknowledged but often limited to rural or coastal zones.
- Integrating biodiversity into urban design requires early planning, permeable surfaces, native planting, and reducing car infrastructure to support resilient urban ecosystems.

**Graphs:** Housing density in relation to % total green space (top), the greenspace score, measuring vegetation quality (middle), and the greenspace score in relation to the % public green space (bottom) for seven medium-density developments: GV: Garden's View; ES: Earthsong; BU: Buckley Precinct; FE: Fenchurch; TO: Toiora co-housing; BR: Brougham St; EF: East Frame.



## Key recommendations

- Policymakers and local authorities should create specific policies, rules, and incentives at a district plan level to encourage residential properties to incorporate indigenous vegetation and enhance biodiversity.
- A mix of regulatory (e.g., greening incentives, education) and non-regulatory approaches (e.g., supporting collective action across communities) should be implemented to improve uptake of more biodiversity-friendly management in urban green space.
- Developers and designers should greatly reduce car infrastructure, preserve maximum levels of permeable space, incorporate more semi-permeable paving to allow flexibility for vegetation and run-off, and create corridors to adjacent vegetation while providing high-quality greenspace for residents on-site to enable their connection to nature close to home within an urban setting.

