

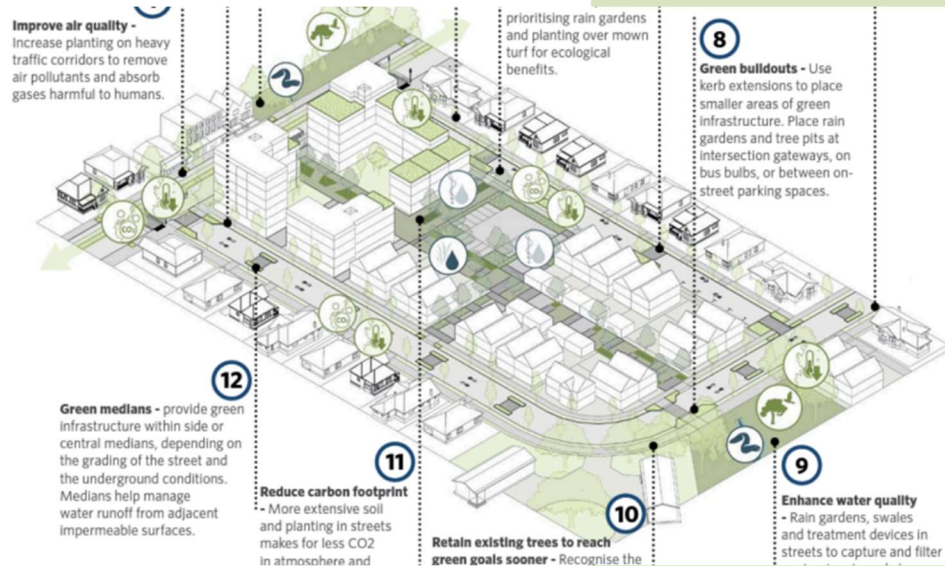
Biodiversity in suburbia: Exploring strategies for retrofitting biodiversity into residential space across Aotearoa New Zealand

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Green infrastructure can contribute to the restoration of ecosystem function in urban spaces. Since about 87% of buildings that will exist in 2050 are already built, transforming our urban areas so that they are more sustainable for both environmental and social wellbeing must involve retrofitting. This research carried out an online resident survey and a policy analysis to explore preferences, barriers, and realities of implementation of green infrastructure in residential spaces in Dunedin, Christchurch, and Wellington.

- Over two-thirds of people agreed that medium-density development should be encouraged. Most popular housing types were stand-alone homes within a biodiverse environment and stand-alone townhouses; least popular were apartments.
- People preferred greening strategies in their neighbourhoods over hard landscaping options, including green roofs, planted chicanes and roundabouts, vegetated driveways and verges with diverse plantings.
- Costs and council and community support were most commonly cited barriers.

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Provisions for urban biodiversity should include suburbs and residential neighbourhoods, yet there is very limited specific recognition of the biodiversity of these spaces. There is no database on loss of vegetated spaces in residential areas or the type of species and habitats being lost.



Key recommendations

- Apply a mix of regulatory and non-regulatory approaches.
- Explicitly identify green roofs in certification schemes such as the New Zealand Green Building Council or use the NZBF-B evaluation tool.
- Provide financial rebates for green roofs to incentivise installation and retrofitting. Integrate the GardenStar tool into certification schemes like the New Zealand Green Building Council.
- Provide localised educational opportunities to engage and upskill public and emerging industry along the lines of what is demonstrated at the Peggy Notebaert Nature Museum in Chicago.
- Develop and provide specific planting guides that include species that are climatically and ecologically suitable for the area and for rooftop planting, with information about their long-term maintenance.
- Integrate streetscapes into strategic planning that spans across the public and private realm to reduce siloed decision-making.
- Include environmental health factors as indicators for biodiversity in a tool like the Healthy Streets Index.
- Consider actualising an urban ecological network to facilitate stronger regulations to protect existing biodiversity and incentivise the creation of habitat on private land.
- Promote a new aesthetic of care which incentivises undesigned landscapes that support biodiversity. Establish spaces for knowledge co-production amongst a wide range of community members.
- Integrate a tool like the Healthy Streets Index into certification schemes and strategic planning to enable financial incentives for 'healthy streets'.
- Promote a holistic approach to city scale green infrastructure by including domestic gardens in strategic planning.
- Explore the functionality of a new aesthetic of care in real world scenarios. Further explore the functionality of neighbourhood care groups as a facilitating body for the promotion of biodiversity in residential space.

