# Green Space in Wellington central city: is there enough for our future wellbeing?

**Wellington City Council presentation. 11 March 2020**


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new zealand centre for Sustainable Cities
te pokapū rōnaki tāone-nui

VICTORIA UNIVERSITY WELLINGTON

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WELLINGTON

Absolutely Positively Wellington City Council
Me Heke Ki Pōneke

# What is urban green space?

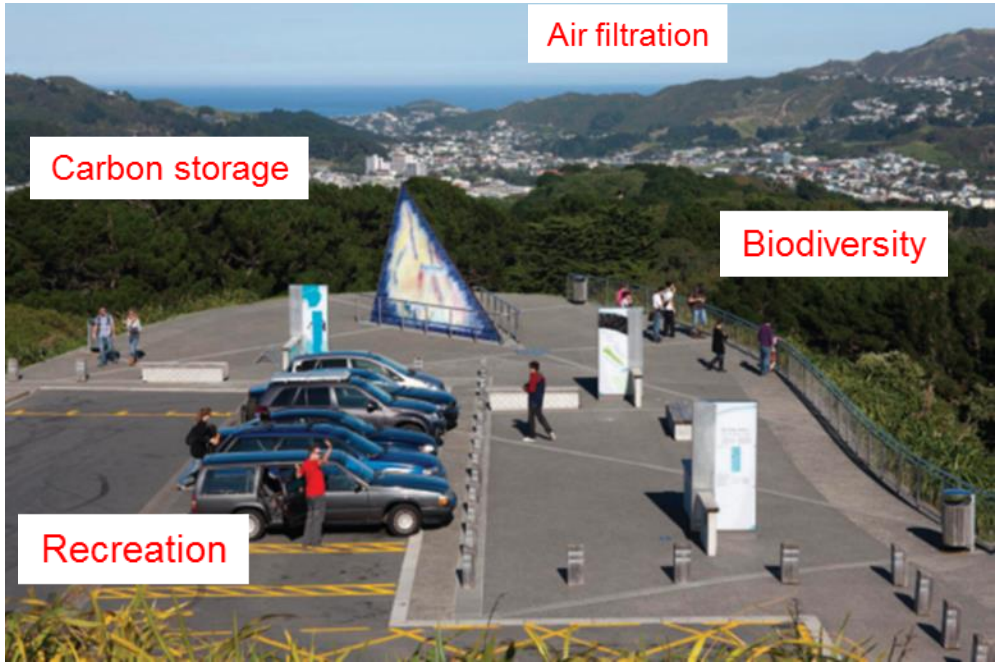
- “An area of trees, grass, or other vegetation providing for environmental, recreational or cultural values”

- Not just WCC Parks and Gardens – also road reserves, other land tenures
- Different types of vegetation cover
  - Trees, horticulture, grass areas

- Green spaces and blue spaces
- Public spaces and private spaces

# Why should the council worry about urban green spaces?

- Contact with nature is very important for people's health & wellbeing
- Mostly this contact is provided by urban green and blue spaces
- Urban green spaces provide many other values
- A critical part of the city's infrastructure
- In the central city, most green spaces need to be provided for by council, directly or through policy




## Council wanted us to:

- Assess the current provision **(supply)** of public green space within the Wellington central city area.
- Assess current and potential need **(demand)** for public green space

# Categories and types of public green space

| Parks and reserves | Road reserves | Other zoned areas |
|---|---|---|
| Continuous trees and forest | Treeland (discontinuous trees) | Waterfront<br>Central Government grounds<br>Schools<br>NZTA<br>etc<br><br>Classification<br>As for parks and reserves |
| Treeland | Treeland | |
| Bushes, shrubs, horticulture areas | Individual trees | |
| Grassed areas | Grassed areas | |
| Impervious surfaces | Impervious surfaces | |

# Central Wellington census area units and population


| CAU | Population (2013) | Pop'In (2043) High-growth scenario | Popl' growth (%) High-growth scenario |
|---|---|---|---|
| Thorndon-Tinakori Road | 4,100 | 6,400 | **50** |
| Lambton | 5,600 | 11,150 | **92** |
| Willis St - Cambridge Tce | 7,300 | 15,900 | **110** |
| Total Central City | **17,400** | **31,080** | **90** |

2018 population approx. 24,000

Plus 76,300 commuters coming into central Wellington (2013)

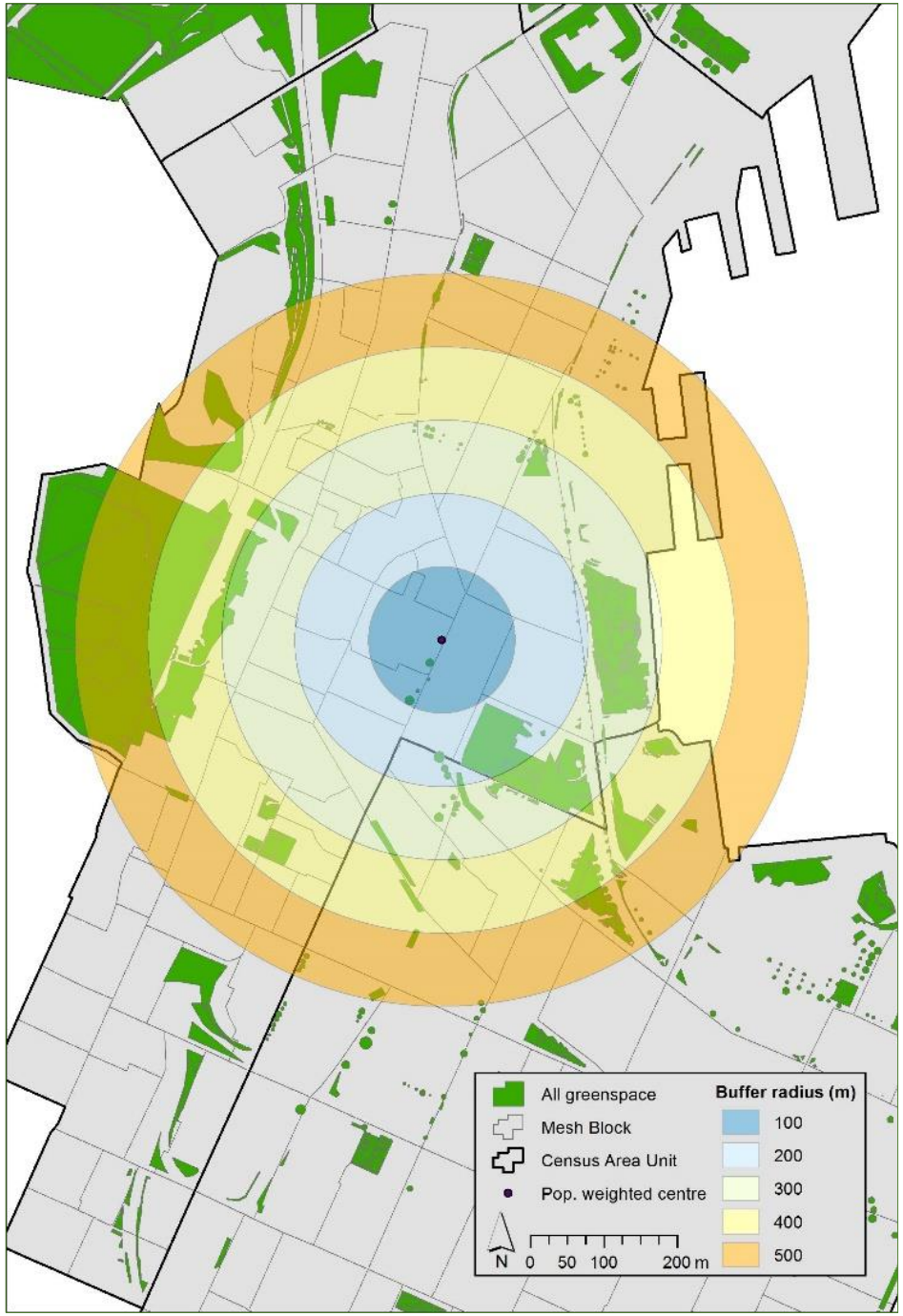
# Amounts of green space

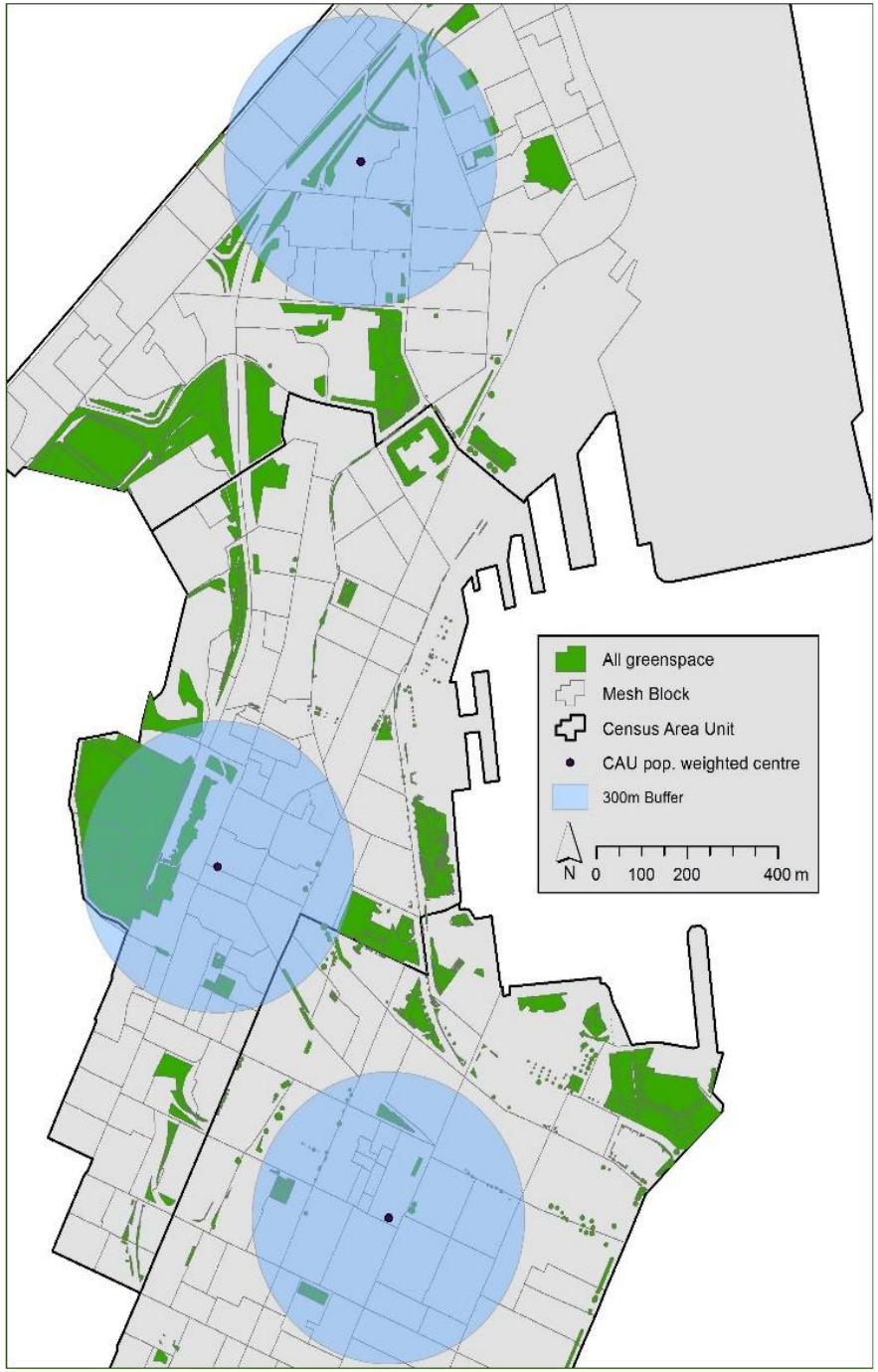
| Land cover | Area (ha) | | | |
|---|---|---|---|---|
| | Thorndon-Tinakori | Lambton | Willis St-Cambridge Tce | **Central City (total)** |
| **Discontinuous trees** | 9.2 | 1.8 | 1.3 | 12.3 |
| **Continuous trees** | 3.2 | 6.8 | 0.5 | **10.5** |
| **Hard surfaces** | 1.4 | 2.9 | 2.3 | **6.6** |
| **Grassed areas** | 4.2 | 4.5 | 1.9 | **10.6** |
| **Bushes & horticulture areas** | 0.5 | 0.3 | 1.1 | **1.9** |
| **Total (ha)** | **18.5** | **16.3** | **7.1** | **41.9** |

# Per capita green space availability

| CAU | Population (2013) | Total green space* (ha) | Green space per capita 2013 ($m^2$/person) | Green space per capita 2043 ($m^2$/person) |
|---|---|---|---|---|
| Thorndon-Tinakori Road | 4,100 | 17.3 | 41 | 26 |
| Lambton | 5,600 | 12.5 | 22 | 11 |
| Willis St-Cambridge Tce | 7,300 | 6.1 | 8 | 3 |
| **Central City** | **17,400** | **34.6** | **20** | **10** |

* Excluding hard surfaces


All greenspace
Mesh Block
Census Area Unit
Pop. weighted centre
Buffer radius (m)
100
200
300
400
500
N 0 50 100 200 m


All greenspace
Mesh Block
Census Area Unit
CAU pop. weighted centre
300m Buffer
N 0 100 200 400 m

# Supply and demand conclusions

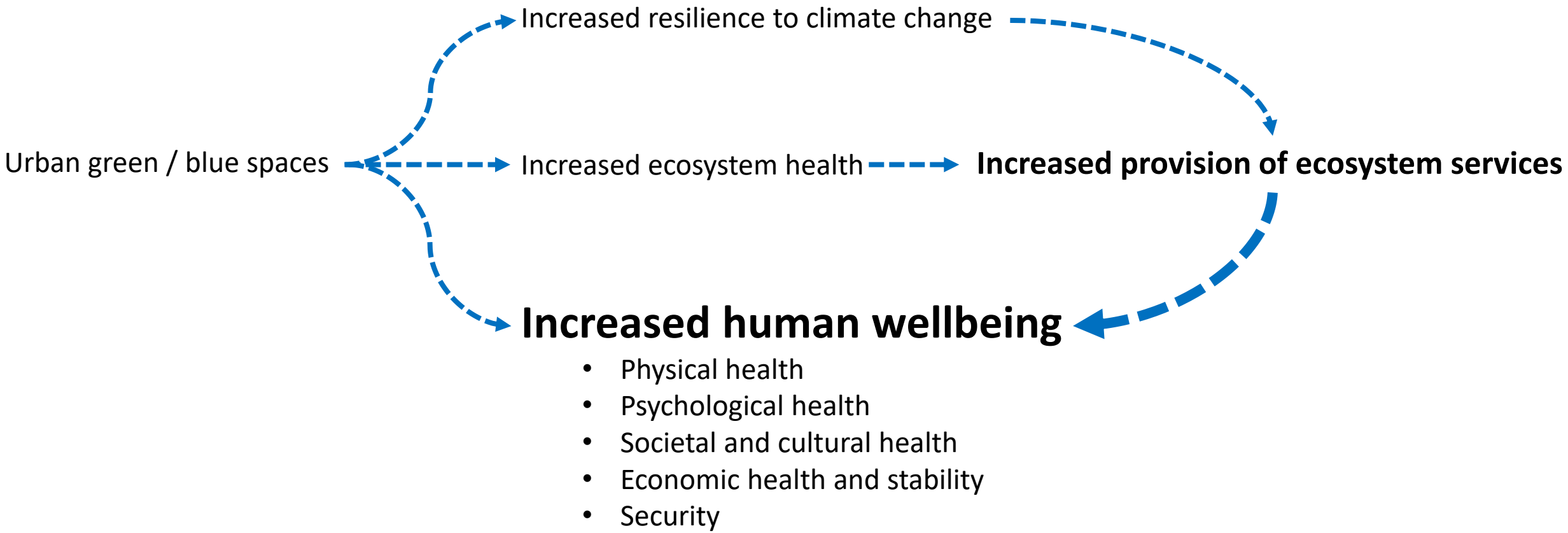
- The supply of accessible GS to the current population is unequally distributed between the three census area units (CAUs) comprising the central city
- These inequalities will increase as the CAU populations grow at different rates
- As population and housing density increases, the case for improving green space supply increases
- Accessibility issues for young, old & people with disabilities – quality considerations

# Recommendations: Improving quantity and quality

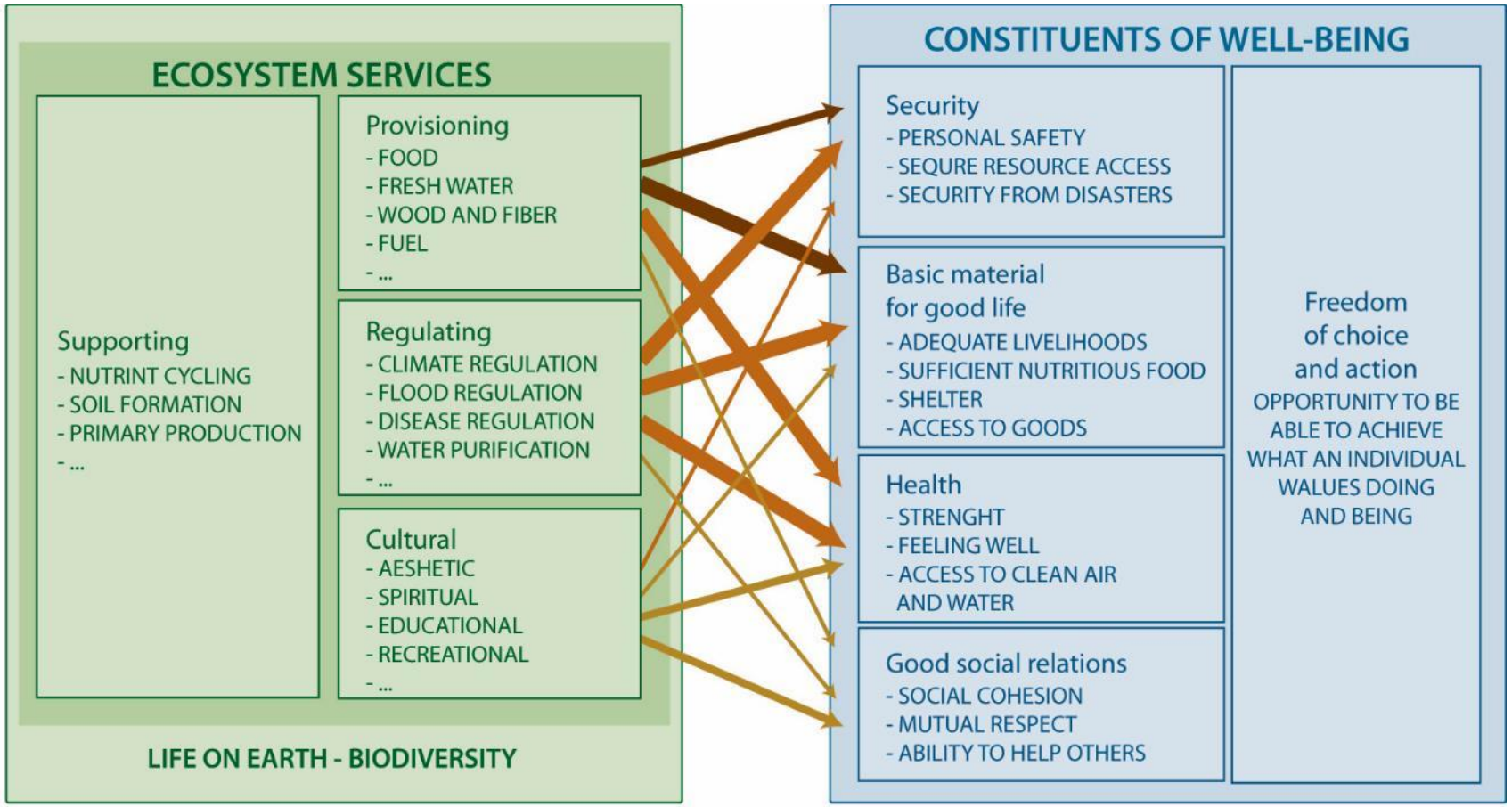
- **Plan for increased availability, accessibility & quality of green space in the central city…**
  - …in order to provide for the health & wellbeing and amenity benefits of the significantly larger future population of the central city
- Green spaces should be seen as vital "green infrastructure" and an integral part of functioning urban (eco)systems
- Resources needed for maintenance and replacement
- "Central city green spaces that enhance ecosystem and community health"

- 11 more specific recommendations

# Benefits of urban green / blue space



# Ecosystem services and human wellbeing




Arrow's color
potential for mediation by socioeconomic factors

High
Medium
Low

Arrow's width
intensity of linkages between ecosystem services and human well-being

Strong
Medium
Weak

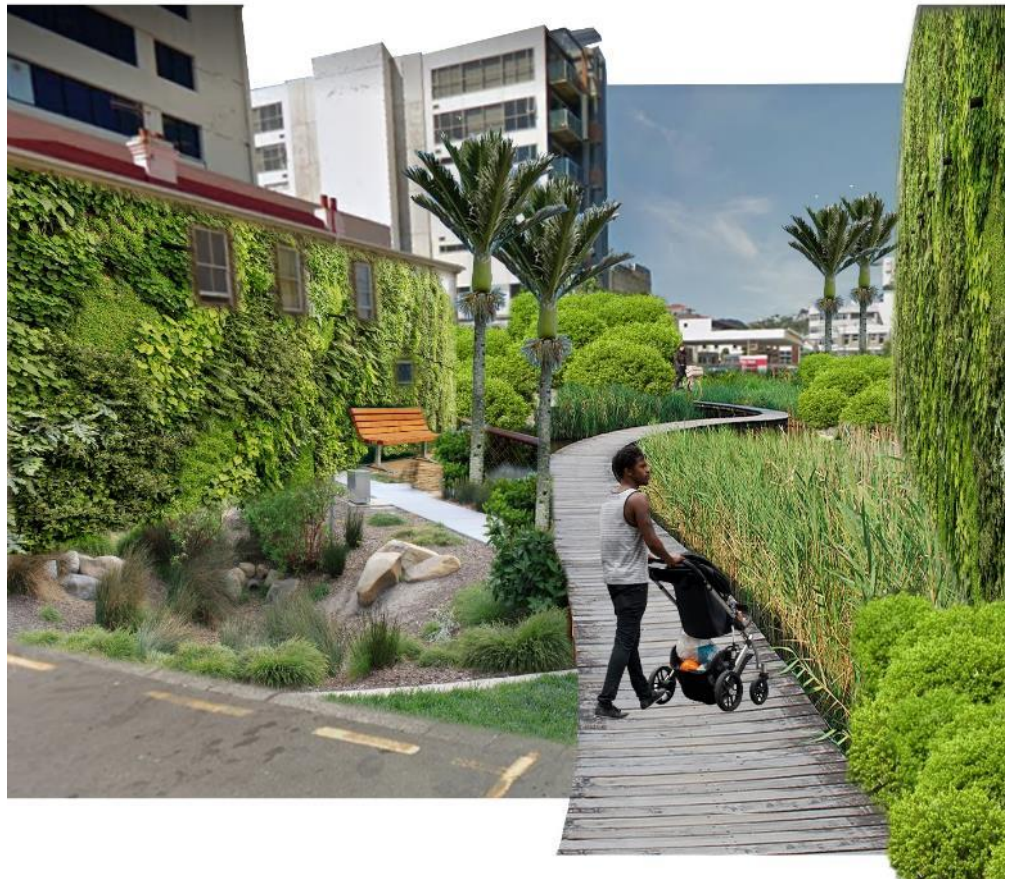
# Ecosystem services in a Wellington City context

| Ecosystem Service | | |
|---|---|---|
| Supporting Services |  | Habitat provision |
| |  | Nutrient cycling |
| Regulation Services |  | Purification |
| |  | Climate regulation |
| |  | Disturbance prevention and resilience |
| Provisioning Services |  | Provision of energy |
| |  | Provision of fresh water |
| |  | Provision of food |

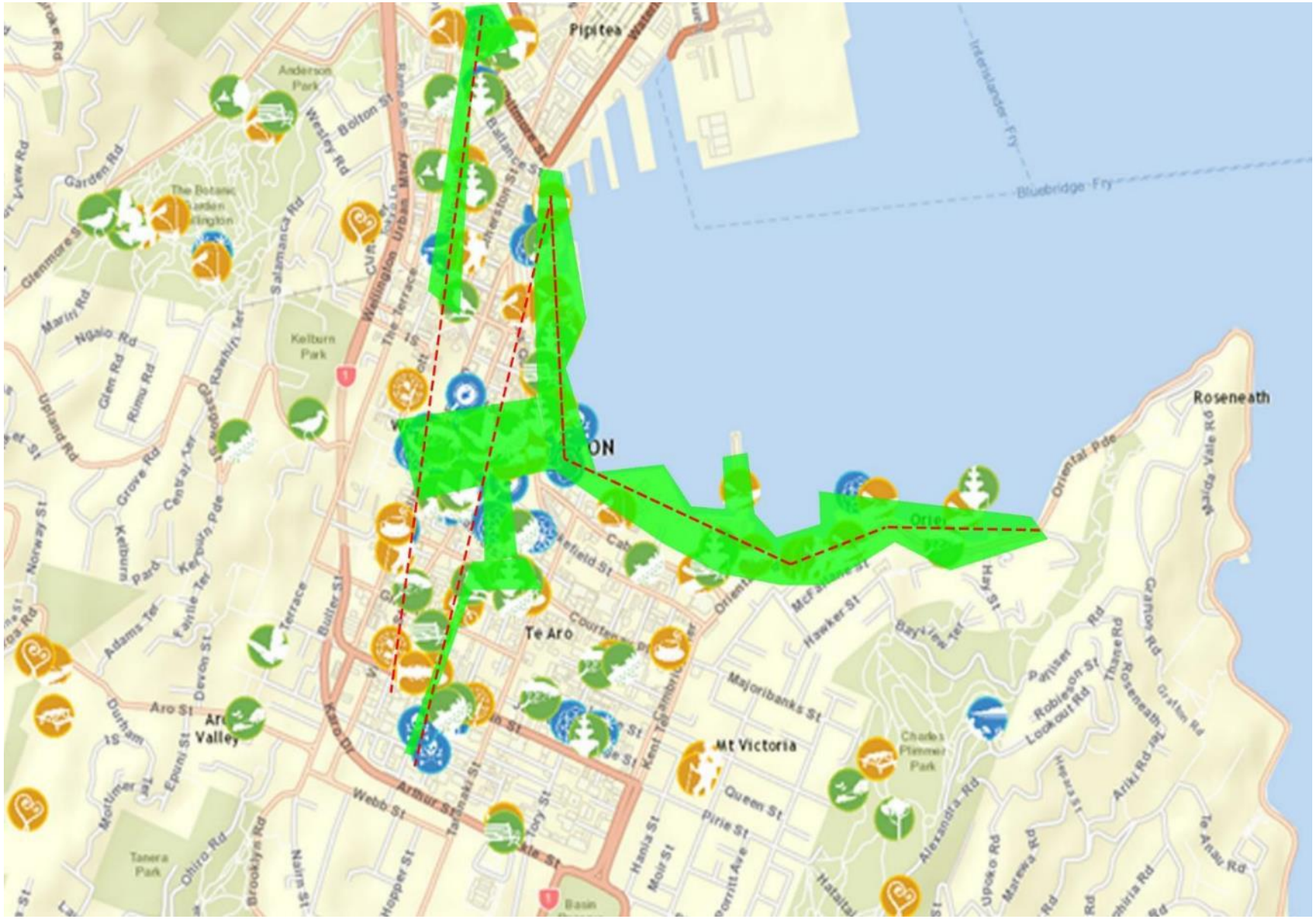
| Ecosystem Service | | |
|---|---|---|
| Cultural services |  | Beauty |
| |  | Recreation |
| |  | Culture |
| |  | Health and wellbeing |
| |  | Knowledge |

# Cuba Quarter Green Nexus

| Ecosystem Service | | |
|---|---|---|
| Supporting Services | | Habitat provision |
| Regulation Services | | Purification |
| | | Disturbance prevention and resilience |
| Cultural services | | Beauty |
| | | Culture |



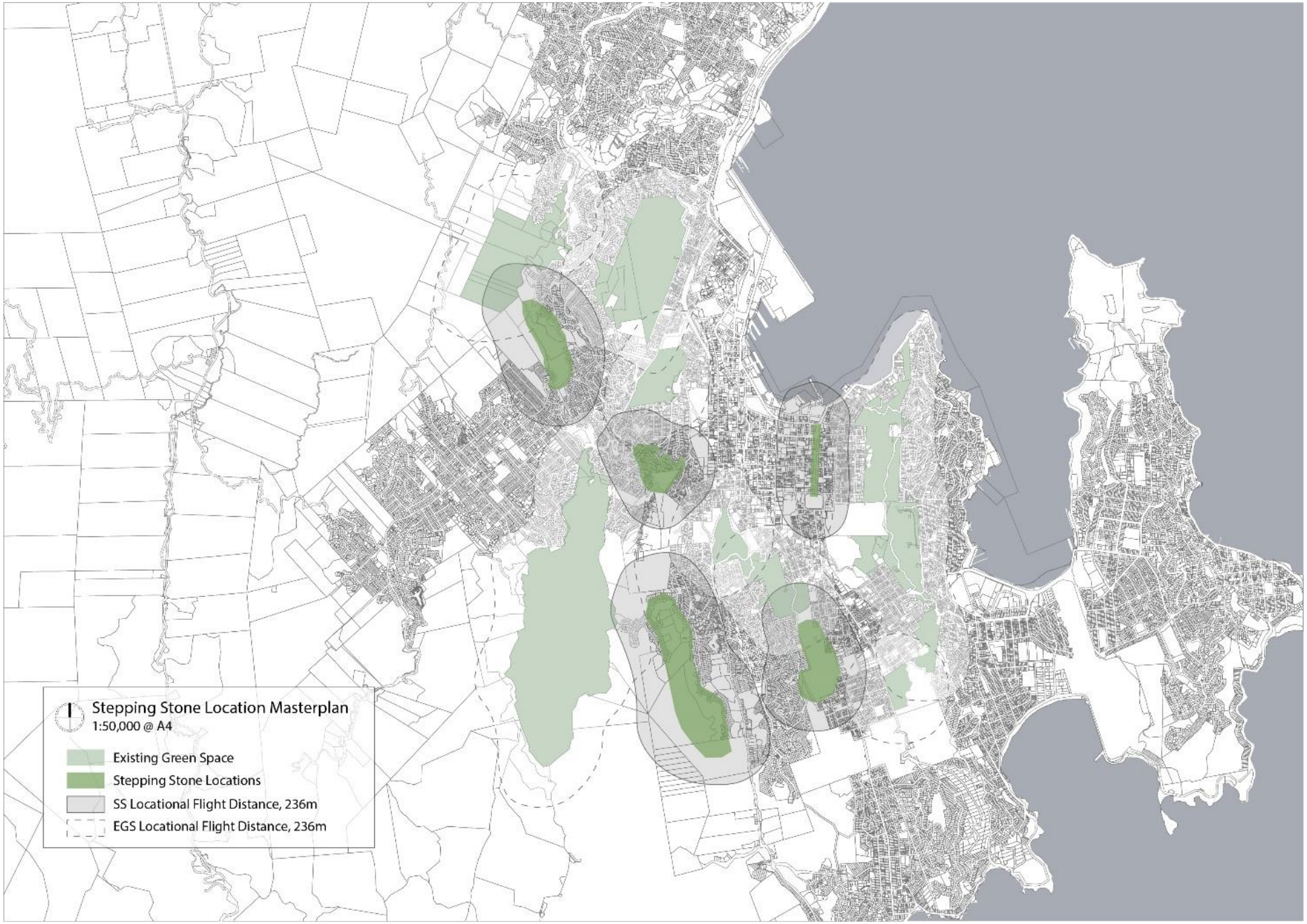
# The importance of connected green spaces




**The Wellington Nature Map (Biophilic Wellington)**

*Zones (green) and corridors (red lines) of inner city biophilic intensity in Wellington*

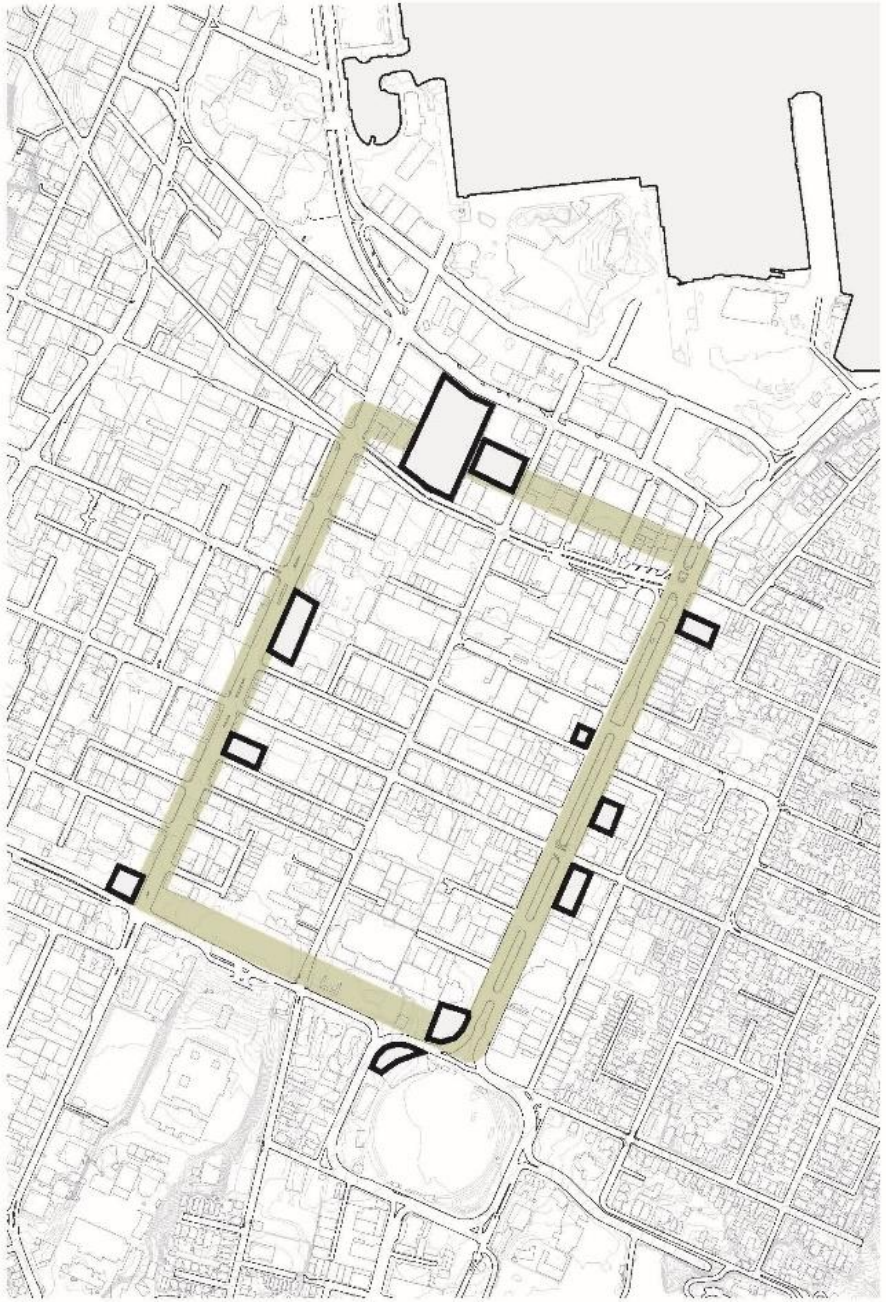
http://wellington.govt.nz/recreation/enjoy-the-outdoors/wellington-nature-map




**Michaela Thomson, VUW**
Master of Landscape Architecture 2019

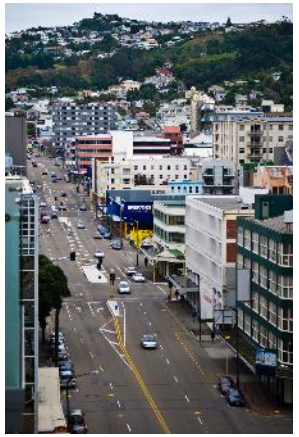

**Wellington Inner City Green Belt: Architecture as green space and stepping stone habitat**

4th Year Architecture Biophilic Design Studio, VUW, 2019

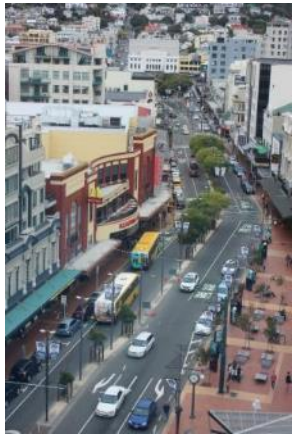


**Wellington Inner City Green Belt:**
**Architecture as green space and stepping stone habitat**

Taranaki Street,



Courtenay Place,



Kent / Cambridge Terraces,


Pukeahu National War Memorial

# Accessibility, quality, and universal design

Children and adult visitors at the Botanic Gardens, Wellington (photographer: ‘Wanderer’)

# Green space provision as Wellington densifies

- GS “interacts” with other urban infrastructure
  - Other public or accessible private space (waterfront, central govt, churches, private residential) helps augment council GS

- $ into GS justified as city intensifies: need to maintain QOL & other co-benefits (e.g. resilience; climate change); benefits to property owners & users
  - e.g. small “pocket parks”; street corner parks
  - Do we need so much car parking as city densifies?

- Council can lead way with policies to encourage & where necessary require GS provision
  - Take advantage of opportunities for (small) property acquisition


- More green space needed in inner city
- Green space has many uses
- People like it, want it, use it, when it’s close to where they live
- The quality & amount of space varies by census area

Unexpected green in city creates delight

All children need access to green space to be active, healthy and well

Green space becomes more important in a compact city

Council vision and leadership essential drivers

Academic partners
Centre for Urban Research Excellence