The Parade	*Bus Stop At All Times*	*East side, commencing 28 metres from its intersection with Trent Street and extending in a southerly direction following the kerbline for 12 metres*
The Parade	*Bus Stop At All Times*	*East side, commencing 34.5 metres south of its intersection with Mersey Street (Grid Coordinates x= 1748324.4 m, y= 5422280.8 m), and extending in a southerly direction following the eastern kerbline for 16 metres*
The Parade	*Bus Stop At All Times*	*East side, commencing 6 metres east of its intersection with Dee Street and extending in a southerly direction following the eastern kerbline for 21.5 metres.*
The Parade	*Bus Stop At All Times*	*East side, commencing 9.5 metres south of its intersection with Humber Street and extending in a southerly direction following the eastern kerbline for 16 metres.*
The Parade	*Bus Stop At All Times*	*West side, commencing 192.5 metres from its intersection with Medway Street and extending in a northerly direction following the western kerbline for 12 metres.*
The Parade	*Bus Stop At All Times*	*West side, commencing 249.5 metres south of its intersection with Humber Street and extending in a southerly direction following the western kerbline for 12.5 metres.*
The Parade	*Bus Stop At All Times*	*West side, commencing 6 metres north of its intersection with Dee Street and extending in a northerly direction following the western kerbline for 19 metres*
The Parade	*Bus Stop At All Times*	*West side, commencing 6 metres north of its intersection with Tamar Street and extending in a northerly direction following the western kerbline for 18.5 metres.*
The Parade	*Bus Stop At All Times*	*West side, commencing 7.5 metres south of its intersection with Humber Street and extending in a southerly direction following the western kerbline for 17 metres.*

Delete from Schedule D (No stopping) of the Traffic Restrictions Schedule

The Parade	*No Stopping At All Times*	*East side, commencing 166 metres south of its intersection with Avon Street and extending in a southerly direction following the eastern kerbline for 8.5 metres.*
The Parade	*No Stopping At All Times*	*East side, commencing 178 metres south of its intersection with Avon Street and extending in a southerly direction following the eastern kerbline for 6 metres.*
The Parade	*No Stopping At All Times*	*East side, commencing 222 metres south of its intersection with Dee Street and extending in a southerly direction following the eastern kerbline for 7 metres to its intersection with Tamar Street.*
The Parade	*No Stopping At All Times*	*East side, commencing 241.5 metres south of its intersection with Avon Street (Grid coordinates x= 1748412.2 m, y= 5422705.2 m), and extending in a southerly direction following the eastern kerbline for 5 metres.*
The Parade	*No Stopping At All Times*	*East side, commencing at its intersection with Reef Street and extending in a northerly direction following the eastern kerbline for 15.5 metres.*
The Parade	*No Stopping At All Times*	*East side, commencing from its intersection with Avon Street (Grid coordinates x= 1748409.1 m, y= 5422715.3 m), and extending in a northerly direction following the eastern kerbline for 15.5 metres.*
The Parade	*No Stopping At All Times*	*East side, commencing from its intersection with Dee Street and extending in a southerly direction following the eastern kerbline for 6 metres.*
The Parade	*No Stopping At All Times*	*East side, commencing from its intersection with Humber Street and extending in a southerly direction following the eastern kerbline for 9.5 metres.*
The Parade	*No Stopping At All Times*	*East side, commencing from its intersection with Reef Street and*

		extending in a northerly direction following the eastern kerbline for 12 metres.
The Parade	*No Stopping At All Times*	*East side, commencing from its intersection with Tamar Street and extending in a southerly direction following the western kerbline for 6 metres.*
The Parade	*No Stopping At All Times*	*West side, commencing 12 metres south of its intersection with Medway Street and extending in a southerly direction following the western kerbline for 14 metres.*
The Parade	*No Stopping At All Times*	*West side, commencing 124.5 metres from its intersection with Medway Street and extending in a northerly direction following the western kerbline for 10.5 metres.*
The Parade	*No Stopping At All Times*	*West side, commencing 230.5 metres south of its intersection with Humber Street and extending in a southerly direction following the western kerbline for 19 metres.*
The Parade	*No Stopping At All Times*	*West side, commencing 395 metres from its intersection with Medway Street and extending in a northerly direction following the western kerbline for 5 metres to its intersection with Tamar Street.*
The Parade	*No Stopping At All Times*	*West side, commencing from its intersection with Humber Street and extending in a southerly direction following the western kerbline for 7.5 metres.*
The Parade	*No Stopping At All Times*	*West side, commencing from its intersection with Medway Street and extending in a northerly direction following the western kerbline for 8 metres.*
The Parade	*No Stopping At All Times*	*West side, commencing from its intersection with Tamar Street and extending in a northerly direction following the western kerbline for 6 metres.*

Delete from Schedule A (Time limited) of the Traffic Restrictions Schedule

Column One	**Column Two**	**Column Three**
The Parade	*P10, At All Times*	*West side, commencing 7*

		metres south of its intersection with Mersey Street and extending in a southerly direction following the western kerbline for 10 metres.
The Parade	*Monday to Saturday, 8:00am - 6:00pm*	*West side, commencing 6 metres north of its intersection with Dee Street and extending in a northerly direction following the western kerbline for 6 metres.*
The Parade	*Monday to Saturday, 8:00am - 6:00pm*	*West side, commencing 6 metres south of its intersection with Dee Street and extending in a southerly direction following the western kerbline for 14 metres*
The Parade	*P10 Monday to Sunday, at all times*	*East side, commencing 9 metres south of its intersection with Mersey Street (Grid coordinates, x= 1748324.4 m, y= 5422280.8 m), and extending in a southerly direction following the eastern kerbline for 10.5 metres.*
The Parade	*P120 Monday to Sunday, 8:00am - 8:00pm*	*East side, commencing 15.5 metres north of its intersection with Reef Street and extending in a northerly direction following the eastern kerbline for 32 metres.*
The Parade	*P20 Monday to Saturday, 8:00am - 6:00pm*	*East side, commencing 7 metres north of its intersection with Tamar Street and extending in a northerly direction following the eastern kerbline for 7 metres*
The Parade	*P60 Monday to Saturday, 8:00am - 6:00pm*	*East side, commencing 184 metres south of its intersection with Avon Street and extending in a southerly direction following the eastern kerbline for 53 metres.*
The Parade	*P60 Monday to Saturday, 8:00am - 6:00pm*	*West side, commencing 1.3 metres north of the northern kerb line of Avon Street (Grid coordinates x= 1748400.2m y= 5422717.7 m) and extending in a northerly direction for 11 metres..*
The Parade	*Vehicles Displaying an Operational Mobility Permit Only*	*East side, commencing 197 metres south of its intersection with Avon Street and extending in a southerly direction following the eastern kerbline for 3.5 metres*

Add to Schedule I (Cycle Lanes) of the Traffic Restrictions Schedule

Column One	Column Two	Column Three
The Parade	*Cycle lane*	*West side, commencing 24.4 metres north of the northern kerb line Reef Street (Grid coordinates x= 1748118.7m y= 5421692.9m) and extending in a northerly direction for 930 metres.*
The Parade	*Cycle lane*	*West side, commencing 12.3 metres north of the northern kerb line of Avon Street (Grid coordinates x= 1748399.0m, y= 5422726.7m) and extending in a northerly direction for 575 metres.*
The Parade	*Cycle lane*	*East side, commencing 19.3m north of the northern kerb line of Dover Street (Grid coordinates x= 1748489.8m y= 5423310.5m) and extending in a southerly direction for 603 metres.*
The Parade	*Cycle lane*	*East side, commencing 7.7 metres south of the northern kerb line Medway Street (Grid coordinates x= 1748394.0m y= 5422553.0m) and extending in a southerly direction for 930 metres.*

Add to Schedule B (Class Restricted Parking) of the Traffic Restrictions Schedule

Column One	Column Two	Column Three
The Parade	*Bus stop*	*West side, commencing 6.5 metres north of the northern kerb line of Reef Street (Grid coordinates x= 1748113.5m y= 5421675.6m) and extending in a northerly direction for 14 metres.*
The Parade	*Bus stop*	*West side, commencing 34.6 metres south of the southern kerb line of Humber Street (Grid coordinates x= 1748187.3m y= 5421890.6m) and extending in a northerly direction for 14 metres.*
The Parade	*Bus stop*	*West side, commencing 19.9 metres north of the northern kerb line of Mersey Street (Grid*

		coordinates x= 1748323.9m y= 5422316.1m) and extending in a northerly direction for 14 metres.
The Parade	*Bus stop*	*West side, commencing 141.7 metres south of the southern kerb line of Tamar Street (Grid coordinates x= 1748409.1 y= 5422801.8m) and extending in a northerly direction for 14 metres.*
The Parade	*Bus stop*	*West side, commencing 17.2 metres north of the northern kerb line of Dee Street (Grid coordinates x= 1748447.0m y= 5423205.0m) and extending in a northerly direction for 14 metres.*
The Parade	*Bus stop*	*East side, commencing 21.7 metres south of the southern kerb line of Dee Street (Grid coordinates x= 1748456.1m y= 5423157.5m) and extending in a southerly direction for 14 metres.*
The Parade	*Bus stop*	*East side, commencing 53.2 metres north of the northern kerb line of Avon Street (Grid coordinates x= 1748416.2m y= 5422768.5m) and extending in a southerly direction for 14 metres.*
The Parade	*Bus stop*	*East side, commencing 32.7 metres south of the southern kerb line of Mersey Street (Grid coordinates x= 1748314.3m y= 5422247.7m) and extending in a southerly direction for 14 metres.*
The Parade	*Bus stop*	*East side, commencing 11.9 metres south of the southern kerb line of Humber Street (Grid coordinates x= 1748203.4m y= 5421908.3m) and extending in a southerly direction for 14 metres.*
The Parade	*P60 Monday to Saturday 8am to 6pm Vehicles Displaying an Operational Mobility Permit Only*	*East side, commencing 44.8 metres south of the northern kerb line of Medway Street (Grid coordinates x= 1748390.3m y= 5422515.9m) and extending in a southerly direction for 5 metres.*

Add to Schedule H (Pedestrian Crossings) of the Traffic Restrictions Schedule

Column One	**Column Two**	**Column Three**
The Parade	*Pedestrian Crossing*	*Commencing at the northern kerb line of Reef Street (Grid*

		coordinates x= 1748125.5m y= 5421664.6m).
The Parade	*Pedestrian Crossing*	*Commencing 2.2 metres south of the southern kerb line of Humber Street (Grid coordinates x= 1748206.4m y= 5421918.2m).*
The Parade	*Pedestrian Crossing*	*Commencing 15.7 metres north of the northern kerb line of Mersey Street (Grid coordinates x= 1748322.7m y= 5422311.8m).*
The Parade	*Pedestrian Crossing*	*Commencing 16.2 metres south of the northern kerb line of Medway Street (Grid coordinates x= 1748383.5m y= 5422544.7m).*
The Parade	*Pedestrian Crossing*	*Commencing 40.5 metres south of the southern kerb line of Avon Street (Grid coordinates x= 1748403.7m y= 54226654.0m).*
The Parade	*Pedestrian Crossing*	*Commencing 6.2 metres south of the southern kerb line of Tamar Street (Grid coordinates x= 1748434.9m y= 5422934.0m).*
The Parade	*Pedestrian Crossing*	*Commencing 18.7 metres south of the southern kerb line of Dee Street (Grid coordinates x= 1748456.8m y= 5423162.6m).*

Add to Schedule A (Time Limits) of the Traffic Restrictions Schedule

Column One	**Column Two**	**Column Three**
Humber Street	*P10 at all times*	*South side, commencing opposite the western road boundary line of The Parade (Grid coordinates x= 1748188.4m y= 5421926.6m), and extending in a westerly direction for 11 metres.*
Mersey Street	*P10 at all times*	*South side, commencing 6.7 metres west of the western kerb line of The Parade (Grid coordinates x= 1748299.2m y= 5422286.4m), and extending in a westerly direction for 7.2 metres (two angle parks).*
Mersey Street	*P10 at all times*	*South side, commencing 2.1 metres east of the eastern road boundary line of The Parade (Grid coordinates x=*

		1748330.9m y= 5422276.4m), and extending in an easterly direction for 7.2 metres (two angle parks).
Tamar Street	*P20 at all times*	*North side, commencing 6.4 metres east of the eastern kerb line of The Parade (Grid coordinates x= 1748446.0m y= 5422949.9m), and extending in an easterly direction for 5 metres.*
Tamar Street	*P20 at all times*	*North side, commencing 23.2 metres east of the eastern kerb line of The Parade (Grid coordinates x= 1748460.1m y= 5422948.6m), and extending in an easterly direction for 5 metres.*
Dee Street	*P10 at all times*	*South side, commencing 3.3 metres west of the western road boundary line of The Parade (Grid coordinates x= 1748434.6m y= 5423179.2m), and extending in a westerly direction for 11.5 metres.*
The Parade	*P10 at all times*	*East side, commencing 12 metres south the southern kerb line of Mersey Street (Grid coordinates x= 1748320.9m y= 5422266.7m), and extending in a southerly direction for 5 metres.*
The Parade	*P10 at all times*	*West side, commencing 36.7 metres south the southern kerb line of Mersey Street (Grid coordinates x= 1748301.6 y= 5422248.0m), and extending in a southerly direction for 5 metres.*
The Parade	*P10 at all times*	*West side, commencing 35.3 metres south the southern kerb line of Dee Street (Grid coordinates x= 1748440.8m y= 5423144.2m), and extending in a southerly direction for 5 metres.*
The Parade	*P120 Monday to Sunday 8am to 8pm*	*East side, commencing 18.8 metres north the northern kerb line of Reef Street (Grid coordinates x= 1748128.8m y= 5421683.7m), and extending in a northerly direction for 43.2 metres.*

The Parade	*P60 Monday to Saturday 8am to 6pm*	*East side, commencing 33.1 metres south of the northern kerb line of Medway Street (Grid coordinates x= 1748391.4m y= 5422528.0m), and extending in a southerly direction for 12.2 metres.*
The Parade	*P60 Monday to Saturday 8am to 6pm*	*East side, commencing 59.9 metres south of the northern kerb line of Medway Street (Grid coordinates x= 1748388.8m y= 5422501.5 m), and extending in a southerly direction for 19.5 metres.*

Add to Schedule D (No Stopping Restrictions) of the Traffic Restrictions Schedule

Column One	**Column Two**	**Column Three**
The Parade	*No stopping at all times*	*West side, commencing 3.7 metres north of the northern kerb line of Reef Street (Grid coordinates x= 1748110.7m y= 5421673.5m) and extending in a northerly direction for 2.8 metres.*
The Parade	*No stopping at all times*	*West side, commencing 20.5 metres north of the northern kerb line of Reef Street (Grid coordinates x= 1748118.4m y= 5421688.5m), and extending in a northerly direction for 18 metres.*
The Parade	*No stopping at all times*	*West side, commencing 43.5 metres south of the southern kerb line of Humber Street (Grid coordinates x= 1748184.2m y= 5421882.5m), and extending in a northerly direction for 8.9 metres.*
The Parade	*No stopping at all times*	*West side, commencing 20.6 metres south of the southern kerb line of Humber Street (Grid coordinates x= 1748191.0m y= 5421903.6m), and extending in a northerly direction for 20.6 metres.*
The Parade	*No stopping at all times*	*West side, commencing at the northern kerb line of Humber Street (Grid coordinates x= 1748199.0m y= 5421934.3m), and extending in a northerly*

		direction for 15.6 metres.
The Parade	*No stopping at all times*	*West side, commencing at the northern kerb line of Mersey Street (Grid coordinates x= 1748316.6, y= 5422293.8m), and extending in a northerly direction for 19.9 metres.*
The Parade	*No stopping at all times*	*West side, commencing 33.9 metres north of the northern kerb line of Mersey Street (Grid coordinates x= 1748328.1m y= 5422329.2m), and extending in a northerly direction for 13.1 metres.*
The Parade	*No stopping at all times*	*West side, commencing 37 metres south of the southern kerb line of Mersey Street (Grid coordinates x= 1748301.9m y= 5422247.4m), and extending in a northerly direction for 37 metres.*
The Parade	*No stopping at all times*	*West side, commencing 31.8 metres south of the northern kerb line of Medway Street (Grid coordinates x= 1748379.3m y= 5422528.5m), and extending in a northerly direction for 23.3 metres.*
The Parade	*No stopping at all times*	*West side, commencing 1.3 metres north of the northern kerb line of Avon Street (Grid coordinates x= 1748400.2m y= 5422717.7 m) and extending in a northerly direction for 19.5 metres.*
The Parade	*No stopping at all times*	*West side, commencing 75.4 metres north of the northern kerb line of Avon Street (Grid coordinates x= 1748408.2m y= 5422791.8m), and extending in a northerly direction for 10 metres.*
The Parade	*No stopping at all times*	*West side, commencing 101.4 metres north of the northern kerb line of Avon Street (Grid coordinates x= 1748408.8m y= 5422817.5m) and extending in a northerly direction for 25.5 metres.*
The Parade	*No stopping at all times*	*West side, commencing 17.6 metres south of the southern kerb line of Tamar Street (Grid coordinates x= 1748419.7m y=*

		5422924.1m), and extending in a northerly direction for 17.6 metres.
The Parade	*No stopping at all times*	*West side, commencing at the northern kerb line of Tamar Street (Grid coordinates x= 1748420.4m y= 5422952.4m), and extending in a northerly direction for 17.5 metres.*
The Parade	*No stopping at all times*	*West side, commencing 34.7 metres south of the southern kerb line of Dee Street (Grid coordinates x= 1748442.1m y= 5423142.3m), and extending in a northerly direction for 34.7 metres.*
The Parade	*No stopping at all times*	*West side, commencing 17.2 metres north of the northern kerb line of Dee Street (Grid coordinates x= 1748447.0m y= 5423205.0m) and extending in a southerly direction for 17.2 metres.*
The Parade	*No stopping at all times*	*West side, commencing 29.5 metres north of the northern kerb line of Dee Street (Grid coordinates x= 1748448.2m y= 5423218.1m), and extending in a northerly direction for 34.6 metres.*
The Parade	*No stopping at all times*	*East side, commencing at the southern kerb line of Dover Street (Grid coordinates x= 1748482.2m y= 5423286.6 m), and extending in a southerly direction for 30.4 metres.*
The Parade	*No stopping at all times*	*East side, commencing at the northern kerb line of Dee Street (Grid coordinates x= 1748460.6m y= 5423188.8m), and extending in a northerly direction for 19.1 metres.*
The Parade	*No stopping at all times*	*East side, commencing at the southern kerb line of Dee Street (Grid coordinates x= 1748460.6m y= 5423188.7m), and extending in a southerly direction for 20.8 metres.*
The Parade	*No stopping at all times*	*East side, commencing 34.8 metres south of the southern kerb line of Dee Street (Grid coordinates x= 1748454.82m y= 5423144.0m), and extending in*

		a southerly direction for 19.2 metres.
The Parade	*No stopping at all times*	*East side, commencing at the northern kerb line of Tamar Street (Grid coordinates x= 1748435.9m y= 5422950.8m), and extending in a northerly direction for 30 metres.*
The Parade	*No stopping at all times*	*East side, commencing at the southern kerb line of Tamar Street (Grid coordinates x= 1748434.5m y= 5422940.0m), and extending in a southerly direction for 21.9 metres.*
The Parade	*No stopping at all times*	*East side, commencing 39.9 metres north of the northern kerb line of Avon Street (Grid coordinates x= 1748415.0m y=5422755.2m), and extending in a southerly direction for 17.6 metres.*
The Parade	*No stopping at all times*	*East side, commencing 45.8 metres south of the southern kerb line of Mersey Street (Grid coordinates x=1748310.1m y= 5422234.6m), and extending in a southerly direction for 10.4 metres.*
The Parade	*No stopping at all times*	*East side, commencing at the northern kerb line of Mersey Street (Grid coordinates x= 1748329.7m y= 5422291.9m), and extending in a northerly direction for 37.2 metres.*
The Parade	*No stopping at all times*	*East side, commencing 1.6m north of the southern kerb line of Mersey Street (Grid coordinates x= 1748325.9m y= 5422279.6m), and extending in a southerly direction for 13.6 metres.*
The Parade	*No stopping at all times*	*East side, commencing 17.5 metres south of the southern kerb line of Mersey Street (Grid coordinates x= 1748318.9m y= 5422262.0m), and extending in a southerly direction for 15.2 metres.*
The Parade	*No stopping at all times*	*East side, commencing at the northern kerb line of Humber Street (Grid coordinates x= 1748211.3m y= 5421929.1 m), and extending in a northerly*

		direction for 18.4 metres.
The Parade	*No stopping at all times*	*East side, commencing 1.6 metres north of the southern kerb line of Humber Street (Grid coordinates x= 1748210.1m y= 5421920.4m), and extending in a southerly direction for 13.6 metres.*
The Parade	*No stopping at all times*	*East side, commencing 25.6 metres south of the southern kerb line of Humber Street (Grid coordinates x= 1748199.3m y= 5421895.1m), and extending in a southerly direction for 15.5 metres.*
The Parade	*No stopping at all times*	*East side, commencing at the northern kerb line of Trent Street (Grid coordinates x=1748161.8m y= 5421775.9 m), and extending in a northerly direction for 40.2 metres.*
The Parade	*No stopping at all times*	*East side, commencing at the southern kerb line of Trent Street (Grid coordinates x= 1748159.1m y= 5421766.07m), and extending in a southerly direction for 20.5 metres.*
The Parade	*No stopping at all times*	*East side, commencing at the northern kerb line of Reef Street (Grid coordinates x= 1748125.5m y= 5421664.6m), and extending in a northerly direction for 19.2 metres.*

Add to Schedule G (Give Way and Stop) of the Traffic Restrictions Schedule

Column One	**Column Two**	**Column Three**
Trent Street	*Stop*	*At the west bound approach to The Parade.*
Humber Street	*Stop*	*At the west bound approach to The Parade.*
Humber Street	*Stop*	*At the east bound approach to The Parade.*
Avon Street	*Stop*	*At the west bound approach to The Parade.*
Tamar Street	*Stop*	*At the west bound approach to The Parade.*
Tamar Street	*Stop*	*At the east bound approach to The Parade.*
Dee Street	*Stop*	*At the west bound approach to The Parade.*
Dee Street	*Stop*	*At the east bound approach to*

The Parade.

Attachments

Island Bay Cycleway –Working Party Report

Purpose

1. To report on the outcomes of the Island Bay Cycleway community working party.

Summary

2. At its 30 April 2015 meeting, Council agreed that a working party be set up to review the recommendations of the Transport & Urban Development Committee that came from the 5 February 2015 meeting when it considered the traffic resolutions relating to the implementation of the Island Bay Cycleway.

3. A community working party comprising of Councillors and community representatives was established, reviewed the proposals and has made recommendations.

Background

4. On 30 April 2015, Council agreed:

   Agree that in addition to the engagement on the draft Wellington Cycling Framework (in recommendation 4) that, in respect to Stage One of the Southern Route Cycleway:

   a. A Working Party will be established comprising officers, Southern Ward Councillors, the Deputy Mayor and community stakeholders;

   b. The Working Party will consider the traffic resolutions for stage one of the Southern Route by 12 June 2015 for recommendation to Council by 24 June 2015;

   c. The Working Party recommendation will include advice on the final form of the traffic resolutions compared to those notified by the Council on 5 December 2014 (and recommended to Council by the Transport and Urban Development Committee on 5 February 2015 and not yet considered by the Council); and

   d. The Working Party will comprise a maximum of 8 members, with the power to co-opt for specific matters, and will be disestablished on 12 June 2015.

5. The Deputy Mayor established the working party and its terms of reference. In conjunction with the Ward Councillors various members of the community were approached to participate in the working party as well as an officer.

6. Anne Patello was engaged as an independent facilitator.

7. The working party comprised :
   - Councillor Lester
   - Councillor Eagle
   - Councillor Lee
   - Fiona Cockerill-Ghanem
   - Tessa Coppard (Alice Coppard as substitute for 2nd mtg)
   - Regan Dooley
   - Jane Byrne
   - Anna Harley

   The working party was assisted by Paul Barker and Brett McPhedran

8. The working party met on 3 occasions:
   - Wednesday 20 May 2015
   - Friday 22 May 2015
   - Monday 8 June 2015

9. Detailed minutes were kept of each meeting, circulated quickly after the meetings and have been accepted as a true record of the discussions.

10. On 3 June 2015, Fiona Cockerill-Ghanem and Jane Byrne notified their resignation from the working party.

11. The working party asked questions of officers, reviewed plans, requested additional information and explanations as to how the Island Bay scheme became the Council's recommended scheme.

12. On the third occasion the working party walked over various parts of the route to gain a better understanding of what was proposed.

Working Party recommendations

13. The working party has drawn the following conclusions and recommendations:

    1. *Agreed that the Island Bay Cycleway proposal as at December 2014 fits within the principles and thresholds of the Draft Wellington Cycling Framework. The only decisions that need to be made by council are on the traffic resolutions required under the Wellington Consolidated Bylaw 2008.*
    2. *Recommends that the kerbside cycle lane option should be pursued.*
    3. *Noted that the design of the in-lane bus stop at Humber Street is not optimal, however due to opposition to changes from local businesses recommend this be pursued as a compromised solution. This needs to be included within the monitoring and evaluation process.*
    4. *Supports the use of stop sign controls at intersections.*
    5. *Supports the proposed increase in pedestrian crossings.*

6. *Supports the conversion of parallel parking to angle parking in Mersey street as a compromise to increase parking numbers. However, it notes that this is trade off as Mersey Street is the connection to two schools, and that this should be monitored.*
7. *Recommends the use of physical speed reduction elements such as speed cushions in the main centre. These would be located in conjunction with the 30km/hr sign and the pedestrian crossing.*
8. *Notes that a number of alternatives were considered for reducing parking impact on the medical centre.*
9. *Recommends that given the safety concerns in the vicinity of the medical centre that the existing design should be pursued.*
10. *Recommends (following discussion with the medical centre) that the following actions be taken:*
    a. *Addition of a mobility carpark and 1-2 parent/child carparks.*
    a. *Council to provide technical expertise and budget for line marking at the rear of the medical centre to try and enhance the number of available spaces.*
11. *Recommends that there is monitoring related to the safety and use of the parallel versus angle parks.*
12. *Recommends that the 'shared zone' that runs through the town centre is marked using a combination of sharrows and green patches.*
13. *Recommends that additional consideration be given to how cyclists get off the cycle lane at the town centre area. Treatments such as kerb cuts should be considered.*
14. *Agrees that the two bus stops near Avon Street should be removed and parking should be added in this area.*
15. *Recommends that the bus stop located in the vicinity of the church must be an integrated design in collaboration with the church, and that it will not be an adshel.*
16. *Recommends that the Dee Street roundabout is retained, and that a combination of lanes and sharrows will be used to be consistent with the markings in the town centre.*
17. *Recommends that officers outline a proposal for monitoring and evaluation of the Island Bay cycleway, and that a group of similar make-up to the working party to assist in this evaluation.*
18. *Recommends that the monitoring and evaluation occur 12 months after completion or as needed prior to that.*
19. *Recommends that an information/education campaign is developed for all road users in relation to kerbside cycleways.*
20. *Recommends that the Island Bay cycleway uses the proposed safe-it posts as delineation. This can be reviewed following the Victoria Street kerbside trial.*

Discussion

14. Generally officers are comfortable with the conclusions and recommendations of the working party. Guidance on some matters is set out in the following paragraphs.

15. Recommendation 7 can be allowed for in the construction, while we do not expect to undertake any further consultation, there may be opposition to speed control humps once they are installed.

16. Recommendation 10 suggests an additional mobility parking space in the vicinity of the medical centre be provided, This will require the notification of a separate traffic resolution under the traffic bylaw. It is likely that this will be able to be done and in place (if approved) by the time parking is physically altered along this part of The Parade.

17. Recommendation 10 also seeks to restrict space for parents with children. As a road controlling authority we do not have the ability to create such a restriction, however we have offered to assist the medical centre better manage their own off-street parking and this could be incorporated on their property.

18. Officers accept that a method of indicating the shared space through the shopping area is desirable as recommended in 12. The use of sharrows cannot be guaranteed at this time, while we expect that in the fullness of time these will be approved for use at the moment they only have trial status and can't be used elsewhere.

19. Recommendation 16 retains the Dee Street roundabout. This has been one of the most controversial parts of the scheme from the outset. Retaining the roundabout will provide an inconsistent level of service for people on bikes and a possible increase in safety risk primarily due to the need for cyclists to merge with traffic in order to negotiate the intersection. This gap in level of service is likely to hamper uptake by the interested and concerned people who we are designing for.

20. Removing the roundabout provided an opportunity to construct a Zebra crossing immediately south of the intersection, retaining the roundabout as recommended by the working party will not improve pedestrian connections.

21. It is worth noting that the recommendation from Transport and Urban Development Committee in February 2015 was to remove the roundabout.

22. Monitoring of this innovative scheme is vital. A comprehensive monitoring programme will be developed to look at safety performance, its use, community satisfaction and adjacent effects both positive and negative. Recommendations 17 and 18 are therefore appropriate.

23. Delineation of the floating parking bays to provide the protected separation is important, safe hit posts are currently proposed, but Officers may take the opportunity to trial alternative methods to achieve good parking practice.

24. If Council were of a mind to accept the recommendations of the working party some minor changes would need to be made to the traffic resolutions. All of the existing restrictions that apply in the vicinity of the Dee Street intersection would need to remain, some changes to the proposed cycle lane restrictions in the area around Dee Street would have to alter. Some very minor changes to the location of the Bus Stop outside the Presbyterian Church are included to reflect the compromise agreed with the church's trustees.

25. An amended set of traffic resolutions was prepared that reflect the recommendations of the community working party (Attachment 2). Attachment 2 would need to be moved as an amendment to the Transport and Urban Development recommendations of 5 February 2015 if the recommendations of the working party are to be adopted by the Council.

Conclusion

26. As agreed by Council, a working party comprising Councillors and community representatives was established, and through a facilitated process have reviewed the Island Bay cycleway proposals and have provided a number of recommendations on how to proceed.

Prepared by Paul Barker, Safe & Sustainable Transport Manager. June 2015

Amendment to reflect the recommendations of the Island Bay Cycleway community working party

- **Add new recommendations 1 – 3**
- **Replace recommendation 1 from the Transport and Urban Development Committee meeting of 05 February 2015 with 4 below.**

That the Council:

1. Receive the information.
2. Notes the recommendations of the Island Bay working party.
3. Instructs officers to commence a traffic resolution process to provide for a second mobility parking space in the vicinity of the Island Bay Medical Centre
4. Approves the following amendments to the Traffic Restrictions, pursuant to the provisions of the Wellington City Council Consolidated Bylaw 2008.

	Change to shift a new bus stop outside the Island Bay Presbyterian Church slightly south (by 5 metres) as discussed with the church's trustees.
	Changes to leave Dee Street roundabout in place.

a) Bus Stops, Pedestrian Crossings, No Stopping At All Times, P10 At All Times, P20 At All Times, Mobility Parking Only, Stop signs, and Cycle lanes.

The Parade, Trent Street, Humber Street, Mersey Street, Avon Street, Tamar Street and Dee Street – Island Bay (TR62-14)

Delete from Schedule B (Class Restricted Parking) of the Traffic Restrictions Schedule

Column One	Column Two	Column Three
The Parade	*Bus stop*	*West side, commencing 7 metres south of its intersection with Mersey Street and extending in a southerly direction following the western kerbline for 12 metres.*
The Parade	*Bus Stop At All Times*	*East side commencing 68 metres from its intersection with reef street and extending in a northerly direction for 16.5 metres.*
The Parade	*Bus Stop At All Times*	*East side, commencing 15 metres south of its intersection with Tamar Street and extending in a southerly direction following the eastern kerbline for 12 metres.*
The Parade	*Bus Stop At All Times*	*East side, commencing 199.5 metres south of its intersection with Tamar Street and extending in a southerly direction following the eastern kerbline for 14 metres.*
The Parade	*Bus Stop At All Times*	*East side, commencing 28 metres from its intersection with Trent Street and extending in a southerly*

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		direction following the kerbline for 12 metres
The Parade	*Bus Stop At All Times*	*East side, commencing 34.5 metres south of its intersection with Mersey Street (Grid Coordinates x= 1748324.4 m, y= 5422280.8 m), and extending in a southerly direction following the eastern kerbline for 16 metres*
The Parade	*Bus Stop At All Times*	*East side, commencing 6 metres east of its intersection with Dee Street and extending in a southerly direction following the eastern kerbline for 21.5 metres.*
The Parade	*Bus Stop At All Times*	*East side, commencing 9.5 metres south of its intersection with Humber Street and extending in a southerly direction following the eastern kerbline for 16 metres.*
The Parade	*Bus Stop At All Times*	*West side, commencing 192.5 metres from its intersection with Medway Street and extending in a northerly direction following the western kerbline for 12 metres.*
The Parade	*Bus Stop At All Times*	*West side, commencing 249.5 metres south of its intersection with Humber Street and extending in a southerly direction following the western kerbline for 12.5 metres.*
The Parade	*Bus Stop At All Times*	*West side, commencing 6 metres north of its intersection with Dee Street and extending in a northerly direction following the western kerbline for 19 metres.*
The Parade	*Bus Stop At All Times*	*West side, commencing 6 metres north of its intersection with Tamar Street and extending in a northerly direction following the western kerbline for 18.5 metres.*
The Parade	*Bus Stop At All Times*	*West side, commencing 7.5 metres south of its intersection with Humber Street and extending in a southerly direction following the western kerbline for 17 metres.*

Delete from Schedule D (No stopping) of the Traffic Restrictions Schedule

The Parade	*No Stopping At All Times*	*East side, commencing 166 metres south of its intersection with Avon Street and extending in a southerly direction following the eastern kerbline for 8.5 metres.*
The Parade	*No Stopping At All Times*	*East side, commencing 178 metres south of its intersection with Avon Street and extending in a southerly direction following the eastern kerbline for 6 metres.*
The Parade	*No Stopping At All Times*	*East side, commencing 222 metres south of its intersection with Dee Street and extending in a southerly*

		direction following the eastern kerbline for 7 metres to its intersection with Tamar Street.
The Parade	*No Stopping At All Times*	*East side, commencing 241.5 metres south of its intersection with Avon Street (Grid coordinates x= 1748412.2 m, y= 5422705.2 m), and extending in a southerly direction following the eastern kerbline for 5 metres.*
The Parade	*No Stopping At All Times*	*East side, commencing at its intersection with Reef Street and extending in a northerly direction following the eastern kerbline for 15.5 metres.*
The Parade	*No Stopping At All Times*	*East side, commencing from its intersection with Avon Street (Grid coordinates x= 1748409.1 m, y= 5422715.3 m), and extending in a northerly direction following the eastern kerbline for 15.5 metres.*
The Parade	*No Stopping At All Times*	*East side, commencing from its intersection with Dee Street and extending in a southerly direction following the eastern kerbline for 6 metres.*
The Parade	*No Stopping At All Times*	*East side, commencing from its intersection with Humber Street and extending in a southerly direction following the eastern kerbline for 9.5 metres.*
The Parade	*No Stopping At All Times*	*East side, commencing from its intersection with Reef Street and extending in a northerly direction following the eastern kerbline for 12 metres.*
The Parade	*No Stopping At All Times*	*East side, commencing from its intersection with Tamar Street and extending in a southerly direction following the western kerbline for 6 metres.*
The Parade	*No Stopping At All Times*	*West side, commencing 12 metres south of its intersection with Medway Street and extending in a southerly direction following the western kerbline for 14 metres.*
The Parade	*No Stopping At All Times*	*West side, commencing 124.5 metres from its intersection with Medway Street and extending in a northerly direction following the western kerbline for 10.5 metres.*
The Parade	*No Stopping At All Times*	*West side, commencing 230.5 metres south of its intersection with Humber Street and extending in a southerly direction following the western kerbline for 19 metres.*
The Parade	*No Stopping At All Times*	*West side, commencing 395 metres from its intersection with Medway Street and extending in a northerly direction following the western*

		kerbline for 5 metres to its intersection with Tamar Street.
The Parade	*No Stopping At All Times*	*West side, commencing from its intersection with Humber Street and extending in a southerly direction following the western kerbline for 7.5 metres.*
The Parade	*No Stopping At All Times*	*West side, commencing from its intersection with Medway Street and extending in a northerly direction following the western kerbline for 8 metres.*
The Parade	*No Stopping At All Times*	*West side, commencing from its intersection with Tamar Street and extending in a northerly direction following the western kerbline for 6 metres.*

Delete from Schedule A (Time limited) of the Traffic Restrictions Schedule

Column One	**Column Two**	**Column Three**
The Parade	*P10, At All Times*	*West side, commencing 7 metres south of its intersection with Mersey Street and extending in a southerly direction following the western kerbline for 10 metres.*
The Parade	*P10, Monday to Saturday, 8:00am - 6:00pm*	*West side, commencing 6 metres north of its intersection with Dee Street and extending in a northerly direction following the western kerbline for 6 metres.*
~~***The Parade***~~	~~*P10, Monday to Saturday, 8:00am - 6:00pm*~~	~~*West side, commencing 6 metres south of its intersection with Dee Street and extending in a southerly direction following the western kerbline for 14 metres*~~
The Parade	*P10 Monday to Sunday, at all times*	*East side, commencing 9 metres south of its intersection with Mersey Street (Grid coordinates, x= 1748324.4 m, y= 5422280.8 m), and extending in a southerly direction following the eastern kerbline for 10.5 metres.*
The Parade	*P120 Monday to Sunday, 8:00am - 8:00pm*	*East side, commencing 15.5 metres north of its intersection with Reef Street and extending in a northerly direction following the eastern kerbline for 32 metres.*
The Parade	*P20 Monday to Saturday, 8:00am - 6:00pm*	*East side, commencing 7 metres north of its intersection with Tamar Street and extending in a northerly direction following the eastern kerbline for 7 metres.*
The Parade	*P60 Monday to Saturday, 8:00am - 6:00pm*	*East side, commencing 184 metres south of its intersection with Avon Street and extending in a southerly direction following the eastern kerbline for 53 metres.*
The Parade	*P60 Monday to Saturday,*	*West side, commencing 1.3 metres*

	8:00am - 6:00pm	*north of the northern kerb line of Avon Street (Grid coordinates x= 1748400.2m y= 5422717.7 m) and extending in a northerly direction for 11 metres.*
The Parade	*Vehicles Displaying an Operational Mobility Permit Only*	*East side, commencing 197 metres south of its intersection with Avon Street and extending in a southerly direction following the eastern kerbline for 3.5 metres.*

Add to Schedule B (Class Restricted Parking) of the Traffic Restrictions Schedule

Column One	**Column Two**	**Column Three**
The Parade	*Bus stop*	*West side, commencing 6.5 metres north of the northern kerb line of Reef Street (Grid coordinates x= 1748113.5m y= 5421675.6m) and extending in a northerly direction for 14 metres.*
The Parade	*Bus stop*	*West side, commencing 34.6 metres south of the southern kerb line of Humber Street (Grid coordinates x= 1748187.3m y= 5421890.6m) and extending in a northerly direction for 14 metres.*
The Parade	*Bus stop*	*West side, commencing 19.9 metres north of the northern kerb line of Mersey Street (Grid coordinates x= 1748323.9m y= 5422316.1m) and extending in a northerly direction for 14 metres.*
The Parade	*Bus stop*	*West side, commencing 146.7 metres south of the southern kerb line of Tamar Street (Grid coordinates x= 1748408.6m y= 5422798.7m) and extending in a northerly direction for 14 metres.*
The Parade	*Bus stop*	*West side, commencing 17.2 metres north of the northern kerb line of Dee Street (Grid coordinates x= 1748447.0m y= 5423205.0m) and extending in a northerly direction for 14 metres.*
The Parade	*Bus stop*	*East side, commencing 21.7 metres south of the southern kerb line of Dee Street (Grid coordinates x= 1748456.1m y= 5423157.5m) and extending in a southerly direction for 14 metres.*
The Parade	*Bus stop*	*East side, commencing 53.2 metres north of the northern kerb line of Avon Street (Grid coordinates x= 1748416.2m y= 5422768.5m) and extending in a southerly direction for 14 metres.*
The Parade	*Bus stop*	*East side, commencing 32.7 metres south of the southern kerb line of*

		Mersey Street (Grid coordinates x= 1748314.3m y= 5422247.7m) and extending in a southerly direction for 14 metres.
The Parade	*Bus stop*	*East side, commencing 11.9 metres south of the southern kerb line of Humber Street (Grid coordinates x= 1748203.4m y= 5421908.3m) and extending in a southerly direction for 14 metres.*
The Parade	*P60 Monday to Saturday 8am to 6pm Vehicles Displaying an Operational Mobility Permit Only*	*East side, commencing 44.8 metres south of the northern kerb line of Medway Street (Grid coordinates x= 1748390.3m y= 5422515.9m) and extending in a southerly direction for 5 metres.*

Add to Schedule H (Pedestrian Crossings) of the Traffic Restrictions Schedule

Column One	Column Two	Column Three
The Parade	*Pedestrian Crossing*	*Commencing at the northern kerb line of Reef Street (Grid coordinates x= 1748125.5m y= 5421664.6m).*
The Parade	*Pedestrian Crossing*	*Commencing 2.2 metres south of the southern kerb line of Humber Street (Grid coordinates x= 1748206.4m y= 5421918.2m).*
The Parade	*Pedestrian Crossing*	*Commencing 15.7 metres north of the northern kerb line of Mersey Street (Grid coordinates x= 1748322.7m y= 5422311.8m).*
The Parade	*Pedestrian Crossing*	*Commencing 16.2 metres south of the northern kerb line of Medway Street (Grid coordinates x= 1748383.5m y= 5422544.7m).*
The Parade	*Pedestrian Crossing*	*Commencing 40.5 metres south of the southern kerb line of Avon Street (Grid coordinates x= 1748403.7m y= 54226654.0m).*
The Parade	*Pedestrian Crossing*	*Commencing 6.2 metres south of the southern kerb line of Tamar Street (Grid coordinates x= 1748434.9m y= 5422934.0m).*
~~***The Parade***~~	~~*Pedestrian Crossing*~~	~~*Commencing 18.7 metres south of the southern kerb line of Dee Street (Grid coordinates x= 1748456.8m y= 5423162.6m).*~~

Add to Schedule A (Time Limits) of the Traffic Restrictions Schedule

Column One	Column Two	Column Three
Humber Street	*P10 at all times*	*South side, commencing opposite the western road boundary line of The Parade (Grid coordinates x= 1748188.4m y= 5421926.6m), and extending in a westerly direction for 11 metres.*
Mersey Street	*P10 at all times*	*South side, commencing 6.7 metres*

			west of the western kerb line of The Parade (Grid coordinates x= 1748299.2m y= 5422286.4m), and extending in a westerly direction for 7.2 metres (two angle parks).
	Mersey Street	*P10 at all times*	*South side, commencing 2.1 metres east of the eastern road boundary line of The Parade (Grid coordinates x= 1748330.9m y= 5422276.4m), and extending in an easterly direction for 7.2 metres (two angle parks).*
	Tamar Street	*P20 at all times*	*North side, commencing 6.4 metres east of the eastern kerb line of The Parade (Grid coordinates x= 1748446.0m y= 5422949.9m), and extending in an easterly direction for 5 metres.*
	Tamar Street	*P20 at all times*	*North side, commencing 23.2 metres east of the eastern kerb line of The Parade (Grid coordinates x= 1748460.1m y= 5422948.6m), and extending in an easterly direction for 5 metres.*
	Dee Street	*P10 at all times*	*South side, commencing 3.3 metres west of the western road boundary line of The Parade (Grid coordinates x= 1748434.6m y= 5423179.2m), and extending in a westerly direction for 11.5 metres.*
	The Parade	*P10 at all times*	*East side, commencing 12 metres south the southern kerb line of Mersey Street (Grid coordinates x= 1748320.9m y= 5422266.7m), and extending in a southerly direction for 5 metres.*
	The Parade	*P10 at all times*	*West side, commencing 36.7 metres south the southern kerb line of Mersey Street (Grid coordinates x= 1748301.6 y= 5422248.0m), and extending in a southerly direction for 5 metres.*
	~~***The Parade***~~	~~*P10 at all times*~~	~~*West side, commencing 35.3 metres south the southern kerb line of Dee Street (Grid coordinates x= 1748440.8m y= 5423144.2m), and extending in a southerly direction for 5 metres.*~~
	The Parade	*P120 Monday to Sunday 8am to 8pm*	*East side, commencing 18.8 metres north the northern kerb line of Reef Street (Grid coordinates x= 1748128.8m y= 5421683.7m), and extending in a northerly direction for 43.2 metres.*
	The Parade	*P60 Monday to Saturday 8am to 6pm*	*East side, commencing 33.1 metres south of the northern kerb line of Medway Street (Grid coordinates x= 1748391.4m y= 5422528.0m), and extending in a southerly direction for 12.2 metres.*

The Parade	*P60 Monday to Saturday 8am to 6pm*	*East side, commencing 59.9 metres south of the northern kerb line of Medway Street (Grid coordinates x= 1748388.8m y= 5422501.5 m), and extending in a southerly direction for 19.5 metres.*

Add to Schedule D (No Stopping Restrictions) of the Traffic Restrictions Schedule

Column One	Column Two	Column Three
The Parade	*No stopping at all times*	*West side, commencing 3.7 metres north of the northern kerb line of Reef Street (Grid coordinates x= 1748110.7m y= 5421673.5m) and extending in a northerly direction for 2.8 metres.*
The Parade	*No stopping at all times*	*West side, commencing 20.5 metres north of the northern kerb line of Reef Street (Grid coordinates x= 1748118.4m y= 5421688.5m), and extending in a northerly direction for 18 metres.*
The Parade	*No stopping at all times*	*West side, commencing 43.5 metres south of the southern kerb line of Humber Street (Grid coordinates x= 1748184.2m y= 5421882.5m), and extending in a northerly direction for 8.9 metres.*
The Parade	*No stopping at all times*	*West side, commencing 20.6 metres south of the southern kerb line of Humber Street (Grid coordinates x= 1748191.0m y= 5421903.6m), and extending in a northerly direction for 20.6 metres.*
The Parade	*No stopping at all times*	*West side, commencing at the northern kerb line of Humber Street (Grid coordinates x= 1748199.0m y= 5421934.3m), and extending in a northerly direction for 15.6 metres.*
The Parade	*No stopping at all times*	*West side, commencing at the northern kerb line of Mersey Street (Grid coordinates x= 1748316.6, y= 5422293.8m), and extending in a northerly direction for 19.9 metres.*
The Parade	*No stopping at all times*	*West side, commencing 33.9 metres north of the northern kerb line of Mersey Street (Grid coordinates x= 1748328.1m y= 5422329.2m), and extending in a northerly direction for 13.1 metres.*
The Parade	*No stopping at all times*	*West side, commencing 37 metres south of the southern kerb line of Mersey Street (Grid coordinates x= 1748301.9m y= 5422247.4m), and extending in a northerly direction for 37 metres.*
The Parade	*No stopping at all times*	*West side, commencing 31.8 metres south of the northern kerb line of Medway Street (Grid*

			coordinates x= 1748379.3m y= 5422528.5m), and extending in a northerly direction for 23.3 metres.
	The Parade	*No stopping at all times*	*West side, commencing 1.3 metres north of the northern kerb line of Avon Street (Grid coordinates x= 1748400.2m y= 5422717.7 m) and extending in a northerly direction for 19.5 metres.*
	The Parade	*No stopping at all times*	*West side, commencing 70.4 metres north of the northern kerb line of Avon Street (Grid coordinates x= 1748408.2m y= 5422786.8m), and extending in a northerly direction for 10 metres.*
	The Parade	*No stopping at all times*	*West side, commencing 96.4 metres north of the northern kerb line of Avon Street (Grid coordinates x= 1748408.8m y= 5422812.5m) and extending in a northerly direction for 30.5 metres.*
	The Parade	*No stopping at all times*	*West side, commencing 17.6 metres south of the southern kerb line of Tamar Street (Grid coordinates x= 1748419.7m y= 5422924.1m), and extending in a northerly direction for 17.6 metres.*
	The Parade	*No stopping at all times*	*West side, commencing at the northern kerb line of Tamar Street (Grid coordinates x= 1748420.4m y= 5422952.4m), and extending in a northerly direction for 17.5 metres.*
	~~***The Parade***~~	~~*No stopping at all times*~~	~~*West side, commencing 34.7 metres south of the southern kerb line of Dee Street (Grid coordinates x= 1748442.1m y= 5423142.3m), and extending in a northerly direction for 34.7 metres.*~~
	The Parade	*No stopping at all times*	*West side, commencing 17.2 metres north of the northern kerb line of Dee Street (Grid coordinates x= 1748447.0m y= 5423205.0m) and extending in a southerly direction for 17.2 metres.*
	The Parade	*No stopping at all times*	*West side, commencing 29.5 metres north of the northern kerb line of Dee Street (Grid coordinates x= 1748448.2m y= 5423218.1m), and extending in a northerly direction for 34.6 metres.*
	The Parade	*No stopping at all times*	*East side, commencing at the southern kerb line of Dover Street (Grid coordinates x= 1748482.2m y= 5423286.6 m), and extending in a southerly direction for 30.4 metres.*
	The Parade	*No stopping at all times*	*East side, commencing at the northern kerb line of Dee Street (Grid coordinates x= 1748460.6m y= 5423188.8m), and extending in a*

		northerly direction for 19.1 metres.
The Parade	*No stopping at all times*	*East side, commencing at the southern kerb line of Dee Street (Grid coordinates x= 1748460.6m y= 5423188.7m), and extending in a southerly direction for 20.8 metres.*
The Parade	*No stopping at all times*	*East side, commencing 34.8 metres south of the southern kerb line of Dee Street (Grid coordinates x= 1748454.82m y= 5423144.0m), and extending in a southerly direction for 19.2 metres.*
The Parade	*No stopping at all times*	*East side, commencing at the northern kerb line of Tamar Street (Grid coordinates x= 1748435.9m y= 5422950.8m), and extending in a northerly direction for 30 metres.*
The Parade	*No stopping at all times*	*East side, commencing at the southern kerb line of Tamar Street (Grid coordinates x= 1748434.5m y= 5422940.0m), and extending in a southerly direction for 21.9 metres.*
The Parade	*No stopping at all times*	*East side, commencing 39.9 metres north of the northern kerb line of Avon Street (Grid coordinates x= 1748415.0m y=5422755.2m), and extending in a southerly direction for 17.6 metres.*
The Parade	*No stopping at all times*	*East side, commencing 45.8 metres south of the southern kerb line of Mersey Street (Grid coordinates x=1748310.1m y= 5422234.6m), and extending in a southerly direction for 10.4 metres.*
The Parade	*No stopping at all times*	*East side, commencing at the northern kerb line of Mersey Street (Grid coordinates x= 1748329.7m y= 5422291.9m), and extending in a northerly direction for 37.2 metres.*
The Parade	*No stopping at all times*	*East side, commencing 1.6m north of the southern kerb line of Mersey Street (Grid coordinates x= 1748325.9m y= 5422279.6m), and extending in a southerly direction for 13.6 metres.*
The Parade	*No stopping at all times*	*East side, commencing 17.5 metres south of the southern kerb line of Mersey Street (Grid coordinates x= 1748318.9m y= 5422262.0m), and extending in a southerly direction for 15.2 metres.*
The Parade	*No stopping at all times*	*East side, commencing at the northern kerb line of Humber Street (Grid coordinates x= 1748211.3m y= 5421929.1 m), and extending in a northerly direction for 18.4 metres.*
The Parade	*No stopping at all times*	*East side, commencing 1.6 metres north of the southern kerb line of Humber Street (Grid coordinates x= 1748210.1m y= 5421920.4m), and*

		extending in a southerly direction for 13.6 metres.
The Parade	*No stopping at all times*	*East side, commencing 25.6 metres south of the southern kerb line of Humber Street (Grid coordinates x= 1748199.3m y= 5421895.1m), and extending in a southerly direction for 15.5 metres.*
The Parade	*No stopping at all times*	*East side, commencing at the northern kerb line of Trent Street (Grid coordinates x=1748161.8m y= 5421775.9 m), and extending in a northerly direction for 40.2 metres.*
The Parade	*No stopping at all times*	*East side, commencing at the southern kerb line of Trent Street (Grid coordinates x= 1748159.1m y= 5421766.07m), and extending in a southerly direction for 20.5 metres.*
The Parade	*No stopping at all times*	*East side, commencing at the northern kerb line of Reef Street (Grid coordinates x= 1748125.5m y= 5421664.6m), and extending in a northerly direction for 19.2 metres.*

Add to Schedule G (Give Way and Stop) of the Traffic Restrictions Schedule

Column One	**Column Two**	**Column Three**
Trent Street	*Stop*	*At the west bound approach to The Parade.*
Humber Street	*Stop*	*At the west bound approach to The Parade.*
Humber Street	*Stop*	*At the east bound approach to The Parade.*
Avon Street	*Stop*	*At the west bound approach to The Parade.*
Tamar Street	*Stop*	*At the west bound approach to The Parade.*
Tamar Street	*Stop*	*At the east bound approach to The Parade.*
~~***Dee Street***~~	~~*Stop*~~	~~*At the west bound approach to The Parade.*~~
~~***Dee Street***~~	~~*Stop*~~	~~*At the east bound approach to The Parade.*~~

Add to Schedule I (Cycle Lanes) of the Traffic Restrictions Schedule

Column One	**Column Two**	**Column Three**
The Parade	*Cycle lane*	*West side, commencing 24.4 metres north of the northern kerb line Reef Street (Grid coordinates x= 1748118.7m y= 5421692.9m) and extending in a northerly direction for 930 metres.*
The Parade	*Cycle lane*	*West side, commencing 12.3 metres north of the northern kerb line of Avon Street (Grid coordinates x= 1748399.0m, y=*

The Parade	Cycle lane	*5422726.7m) and extending in a northerly direction for 413 metres.*
The Parade	Cycle lane	*West side, commencing 3.7 metres north of the northern kerb line of Dee Street (Grid coordinates x= 1748445.9m y= 5423192.2m) and extending in a northerly direction for 110 metres.*
The Parade	Cycle lane	*East side, commencing 19.3m north of the northern kerb line of Dover Street (Grid coordinates x= 1748489.8m y= 5423310.5m) and extending in a southerly direction for 96 metres.*
The Parade	Cycle lane	*East side, commencing at the southern kerb line Dee Street (Grid coordinates x= 1748459.3m y= 5423176.4m) and extending in a southerly direction for 463 metres.*
The Parade	Cycle lane	*East side, commencing 7.7 metres south of the northern kerb line Medway Street (Grid coordinates x= 1748394.0m y= 5422553.0m) and extending in a southerly direction for 930 metres.*

REPORT OF THE ENVIRONMENT COMMITTEE MEETING OF 23 APRIL 2015

Members: Mayor Wade-Brown, Councillor Ahipene-Mercer, Councillor Coughlan, Councillor Eagle, Councillor Foster, Councillor Free, Councillor Lee, Councillor Lester, Councillor Marsh, Councillor Pannett (Chair), Councillor Peck (Chair), Councillor Ritchie, Councillor Sparrow, Councillor Woolf, Councillor Young.

The Committee recommends:

OUTCOME OF PUBLIC NOTIFICATION – PROPOSED RESERVE REVOCATION, 23 BATCHELOR STREET, NEWLANDS

Recommendations

That the Council:

1. Does not uphold any of the objections.
2. Declares the Land surplus to requirements and approves the disposal of the Land.
3. Delegates to the Chief Executive Officer the power to take all actions necessary to dispose of the Land, including all matters relating to the Public Works Act 1981.

Notes:

i) The consent of the Minister of Conservation is to be obtained, in relation to the reserve revocation, in accordance with the RA.

ii) Any future use of the site would be guided by the 'Open Space A' zoning of the Land. If the land is to be disposed then a District Plan zone change will be initiated. The zone change process is fully notifiable providing interest groups a chance to have input.

Attachments

Nil

REPORT OF THE GOVERNANCE, FINANCE AND PLANNING COMMITTEE MEETING OF 26 MAY 2015

Members: Mayor Wade-Brown, Councillor Ahipene-Mercer, Councillor Coughlan, Councillor Eagle, Councillor Foster, Councillor Free, Councillor Lee, Councillor Lester (Chair), Councillor Marsh, Councillor Pannett, Councillor Peck, Councillor Ritchie, Councillor Sparrow, Councillor Woolf, Councillor Young.

The Committee recommends:

WELLINGTON URBAN GROWTH PLAN STRATEGY AND IMPLEMENTATION PLAN

Recommendation

That the Council:

1. Adopt the Wellington Urban Growth Plan – Urban Development and Transport Strategy (the Strategy) attached as Attachment 1 and Implementation Plan attached as Attachment 2.

Attachments

Item 3.3 Attachment 1

Version 5: *Final Draft for adoption.*

Date: *24 June 2015.*

Wellington character:
Housing around Mt Victoria.

CONTENTS

EXECUTIVE SUMMARY

Wellington City is widely recognised for its high quality of life and stunning natural setting. It also has the country's highest proportion of people walking, cycling and using public transport for journeys to and from work. This plan aims to continue improving these features.

Wellington City's population is expected to grow from the current 200,000 to approximately 250,000 over the next 30 years and to become more diverse. Our Wellington Urban Growth Plan ensures that as the city's population increases, new houses, transport networks, infrastructure and services are developed sustainably and in areas that benefit the city the most so that residents continue to enjoy a world-class quality of life.

This is an action-focussed plan, which builds on, updates and replaces our existing urban development and transport strategies. It seeks to:

- maintain the city's liveability - the features that support our high quality of life and the city's character
- keep the city compact, walkable and supported by an efficient transport network
- protect the city's natural setting - nested between our green hills and coastline, contributing to our distinctive character
- make the city more resilient to natural hazards such as earthquakes and the effects of climate change.

The plan is the Council's guide for directing investment and supporting development in growth areas - a blueprint for prioritising and managing future growth. This includes actions to support:

- **Transformational growth areas:** We will support quality urban development in locations suitable for growth including the regeneration of existing urban areas and development in new greenfield areas
- **Liveable and vibrant centres:** We will continue improving the central city and suburban centres
- **Real transport choices:** We will continue improving conditions for walking, cycling and public transport, improving our road network, and managing parking more efficiently
- **Housing choice and supply:** We will support an increase in housing supply, encourage a greater variety of housing types and more affordable options, and facilitate the development of medium-density housing
- **Our natural environment:** We will continue to enhance our natural assets, and reduce the environmental impact of urban development and transport
- **City resilience:** We will ensure the city's buildings, infrastructure and coastline can cope with or adapt to the risks posed by natural hazards and climate change.

The plan will support Council decisions on planning and investment and provide certainty for the city's stakeholders - developers, central government, iwi, ratepayers and residents. The priority projects identified in the plan will inform our Long-term Plan.

To make sure the plan is effective, it will be reviewed and updated every three years, alongside the Long-term Plan, to reflect changing local priorities and development pressures. This will include assessing the progress made in putting the plan into action and reporting back to Councillors and the wider organisation.

In summary, the Wellington Urban Growth Plan provides a framework to manage the city's future growth while protecting our environment and heritage, and building on the things that make the city special.

We think it will be a catalyst for positive change.

Item 3.3 Attachment 1

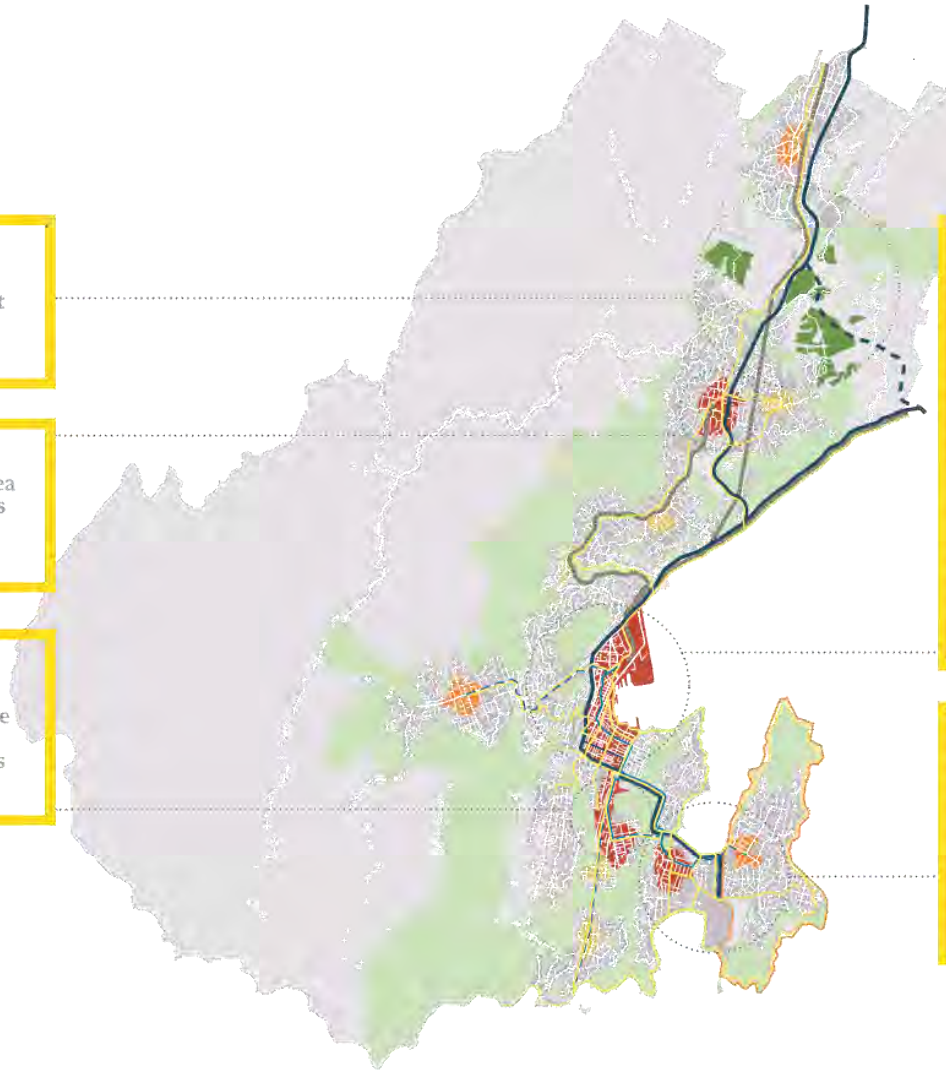
Wellington's skyline: *Our harbour and city skyline.*

Key projects

The Petone to Grenada link road will support residential and employment-related development in the Lincolnshire Farm and Stebbings Valley growth areas.

Johnsonville and its town centre will be a targeted regeneration area with major roading improvements and further medium-density housing.

The delivery of the public transport spine and cycle lanes will encourage development in the Adelaide Road area. Berhampore and Island Bay will be looked at as future growth areas.



A number of projects will happen in the central city. The Victoria Street upgrade will be followed by improvements and regeneration in Te Aro.

Other precincts will also be targeted for investment, including the Civic Centre, our laneways and Kent and Cambridge terraces. A Port Access Plan will look at improving port access.

Transport improvements will include the public transport spine, safe cycle lanes and improvements to the State highway network.

Investments will be made in public transport, cycle facilities and the airport precinct. Support and regeneration of Kilbirnie and Miramar town centres will continue as well as guidance on appropriate development for Shelly Bay and Watts Peninsula.

The plan seeks to deliver the following key outcomes:

A compact city

To keep Wellington compact, walkable and to minimise the need for new infrastructure, this plan directs future development to existing urban areas with good transport links, infrastructure and community facilities, and to a limited number of new urban areas.

- **Development along the growth spine:** More intensive residential and commercial development is planned along the growth spine between Johnsonville and Wellington Airport, supported by investment in transport and infrastructure.
- **Greenfield growth areas:** New greenfield housing development is encouraged in locations adjoining existing urban areas, such as Lincolnshire Farm and Stebbings Valley. This growth will be guided by the existing structure plan and the Northern Growth Management Framework.

A liveable city

The central city and suburban centres provide Wellington with many of the outstanding quality-of-life features we value. This plan ensures the city remains attractive, lively, accessible and safe.

- **Dynamic central city:** The central city is the economic, social and cultural hub for the region. It is a focus for business investment and employment growth, high-density living, high-quality buildings and public areas, events and cultural activities, and investment that will support all modes of transport.
- **Attractive suburban centres:** Suburban centres provide a mix of residential, commercial and social activities. Medium-density housing is encouraged in and around key suburban centres complemented by quality housing infill in residential areas. Growth in suburban centres is supported by improvements to transport infrastructure between these centres and the central city.
- **Transport routes that provide choice:** High levels of walking and cycling are encouraged by investing in safety and quality network improvements. High-quality public transport and improved road links are developed with investment focussed along the growth spine and suburban connections, and support for the New Zealand Transport Agency's (NZTA) proposed Petone to Grenada link road.

A city set in nature

Our natural setting – including our green belts, reserves, streams and coastline – define the layout and character of the city, and good access to them for recreation is one of the things people love about Wellington. This plan ensures urban growth respects and enhances our natural environment.

- **Identity and sense of place:** The city's distinctive character and appeal is enhanced by protecting our natural environment, minimising the impact of urban development on the environment and making sure people can easily get to the waterfront and other open spaces.
- **Coastal environment:** Development and activities along the coastline respect and enhance the harbour and rugged coastal areas.

A resilient city

Our heritage assets, infrastructure networks and neighbourhoods all need to be managed to minimise the risk of damage from natural hazards, such as earthquakes, and the effects of climate change.

- **Preserving our built heritage:** The city's heritage-listed buildings are strengthened to reduce the risk associated with earthquakes and preserve the city's character.
- **Preparing for natural hazards:** We have a comprehensive strategy for improving the resilience of our city's buildings, infrastructure and communities.
- **Responding to climate change:** We continue reducing our greenhouse gas emissions, increasing our energy efficiency and use of renewable energy, and managing the risk of sea-level rise and extreme weather events.

Item 3.3 Attachment 1

Waitangi Park: *Green spaces are important to Wellingtonians.*

1.0 INTRODUCTION

Context

Wellington continues to grow as more people make the city their home, attracted by work opportunities, lifestyle and culture, high-quality services and the proximity to the harbour, hills and our other beautiful natural assets.

Fifteen years ago, only 170,000 people lived in the city. Today our population is just over 200,000. By 2043 the population is expected to have grown to around 250,000.

Wellington is the nation's capital city and the region's centre of productivity and innovation. It is crucial that future growth and investment is concentrated in areas that benefit the city the most.

The Wellington Urban Growth Plan is the Council's tool for managing this growth. It updates, combines and replaces our 2006 Urban Development Strategy and Transport Strategy. This plan is consistent with the philosophies of the 2006 strategies in seeking to encourage growth in areas close to services, employment and good public transport.

Purpose

The purpose of this plan is to guide the Council's decisions that relate to planning, growth, land use, housing, transport and infrastructure. It also helps to achieve the goals identified in our other key strategies, contributing to decision-making on economic development, public spaces, community character, the natural environment and recreation.

The objectives of the plan are to:

- Direct new growth to suitable areas to maintain the city's compactness, liveability and natural setting.
- Ensure development occurs close to employment, services, and public and other transport links. This will continue to encourage active modes and the use of public transport, and reduce pressure on our resources and infrastructure. We expect most new development to occur along the growth spine from Johnsonville through the central city to Adelaide Road and Kilbirnie.
- Improve the resilience of the city against the risk of natural hazards and climate change.
- Ensure urban growth contributes to the city's economic, social and environmental success.
- Help target the Council's investment on priority projects.

Key outcomes

The plan seeks to deliver the following key outcomes:

A compact city

The city's urban areas are surrounded by the Wellington Town Belt and the reserves, rural land and hilltops that form the Outer Green Belt. This has led to the city being compact, which is one of its distinctive features. It also makes our city walkable and helps minimise the need for new infrastructure. To keep Wellington compact, this plan directs future development to locations with quality transport links, infrastructure and community facilities.

A liveable city

The central city is the main economic, social and cultural hub of the region. It is attractive, lively, accessible and safe. At a local level, suburban centres provide a focus for community life and access to shops and services. This plan supports vibrant centres through a range of projects.

A city set in nature

The city's distinctive character is enhanced by protecting our natural environment, minimising the impact of urban development on the environment and making sure people can easily get to the waterfront and other open spaces. To achieve this, the plan emphasises the importance of better green infrastructure such as open spaces, trees and waterways; sustainable transport options; energy-efficient buildings and water-sensitive urban design.

A resilient city

Our heritage assets, coastal areas, infrastructure networks and neighbourhoods all need to be managed to minimise the risk of damage from natural hazards, such as earthquakes, and the effects of climate change. This plan supports our continued leadership in identifying earthquake-prone buildings, planning for emergencies and preparing for climate change.

Liveable city: *Cyclists, pedestrians, cars and buses all use the central city.*

Where do our population projections come from?

Throughout the plan, the Council has used information from a number of sources. A key source is Informed Decisions (ID). ID is a group of professional demographers, spatial analysts, urban planners, forecasters and IT experts who focus on New Zealand and Australian cities and their people. In Wellington's case, ID has provided demographic census analysis and forecasting based on the 2006 and 2013 censuses information.

ID works with the Council to look at the current and evolving policies and strategies affecting development, as well as resource consents. ID also works with local developers, property owners, real estate agents and others who can offer additional information to assist in accurate forecasting. This detailed analysis of development combines with demographic and census studies of Wellington City, Wellington Region and New Zealand.

This model, which combines a "ground-up" and a "top-down" approach, produces a more refined forecast for Wellington's next 30 years than census projections alone. While these are the best demographic forecasts available for the city's next 30 years, it is possible for growth to accelerate depending on the implementation and the success of specific projects outlined in the plan as well as external events.

Where does the Wellington Urban Growth Plan fit?

The plan helps to achieve our long-term vision for the city, Wellington Towards 2040: Smart Capital.

It also contributes to the implementation of a number of existing Council policies and action plans including:

- Accessible Wellington Action Plan
- Adelaide Road Framework
- Biodiversity Action Plan (under review)
- Business Improvement District Policy
- Centres Policy
- Central City Framework
- Climate Change Action Plan
- Community Facilities Policy
- Cycling Policy
- Development Contributions Policy
- District Plan
- Earthquake-prone Buildings Policy
- Economic Development Strategy
- Greening Central Wellington
- Heritage Policy
- Jan Gehl Report: City to Waterfront Public Spaces study
- Johnsonville Town Centre Plan
- Kilbirnie Town Centre Revitalisation Plan
- Newlands Centre Plan
- Ngauranga to Airport Corridor Plan
- Northern Growth Management Framework
- Open Space Access Plan
- Our Capital Spaces
- Parking Policy
- Public Space Design Policy
- Walking Policy
- Waterfront Framework.

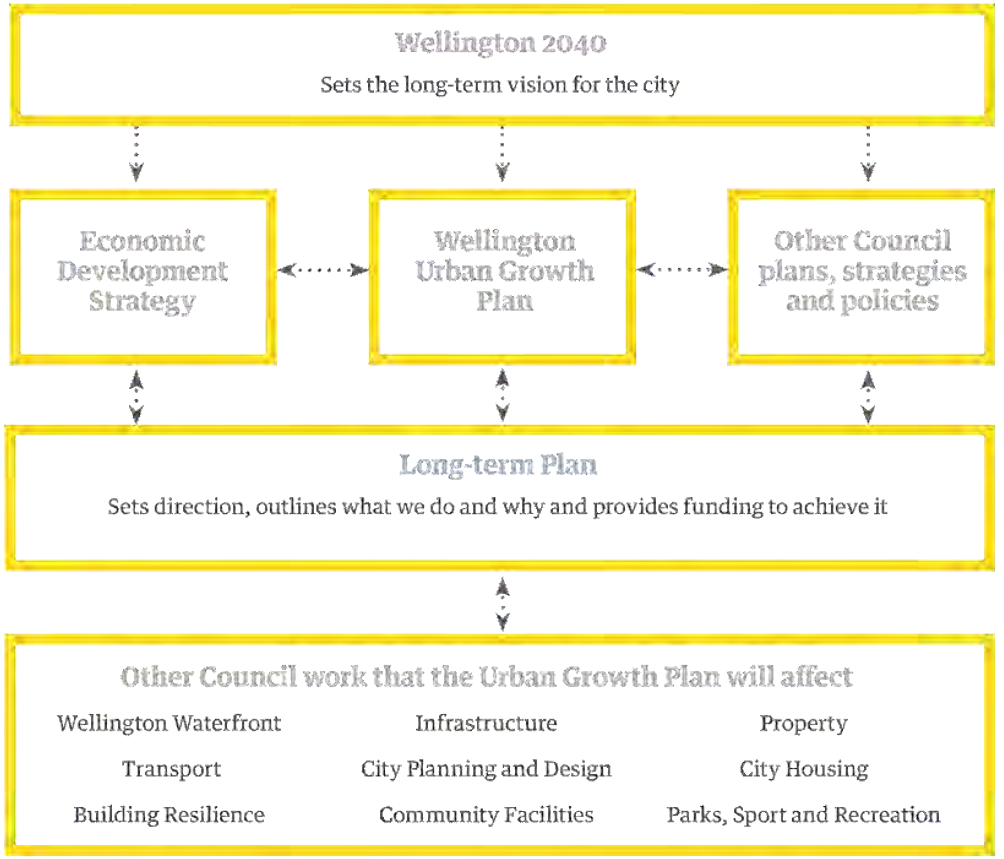
The priorities and projects identified in this plan will help inform our Long-term Plan.

The following diagram shows how this plan fits within the Council's strategic framework.

Review

The Urban Growth Plan and associated Implementation Plan will be reviewed and updated every three years to inform the Long-term Plan process.

This will involve contrasting actual growth, urban development and transport patterns against the plan and adjusting our assumptions and proposed actions where needed.



2.0 THE CITY NOW AND BY 2043

Wellington residents enjoy a high quality of life. The city leads the country on measures of social wellbeing, environment and community strength.

On top of being the political capital, the city is also known as the creative industries and arts capital with museums, theatres, high-tech firms and cafes all within easy reach of natural attractions such as the harbour and native bush walks.

The central city is vibrant, attractive and compact, making it easy to get around without a car.

This plan ensures future urban growth and change reinforce the physical and spatial characteristics that make Wellington special. It also ensures the city will continue to provide a high-quality urban environment that contributes to the stimulating urban experience Wellington offers.

Regional context

Wellington is the largest of a number of closely linked cities and districts that make up the Wellington region. The region overall is home to almost 500,000 people with the city accounting for 41 percent of the total. The region has the highest proportion of working-age population and the highest median income in the country.

The city is the economic, cultural and education epicentre of the Wellington region. Wellington businesses rely on the region for its workforce, with more than 30 percent[1] of city workers living outside of the city. Many businesses also rely on the region for customers. Our universities attract people from the whole region, as do our museums, theatres, arts festivals and sporting events. This close relationship between the city and region influences decisions about public transport and roads, as well as investment decisions by institutions and the private sector. This relationship is set to continue well into the future.

1 Informed Decisions (ID), 2014

Item 3.3 Attachment 1

Population and growth

The city population was 200,400 in 2013, and is forecast to grow by almost 50,000 in the next 30 years[1]. The drivers for growth are Wellington's diverse economy and liveability, which attracts people from other parts of New Zealand and the world. There is expected to be significant ongoing growth in the number of tertiary education students as well as older people.

Population growth and changing demographics will have significant implications for the city's land-use patterns, and transport and infrastructure investment.

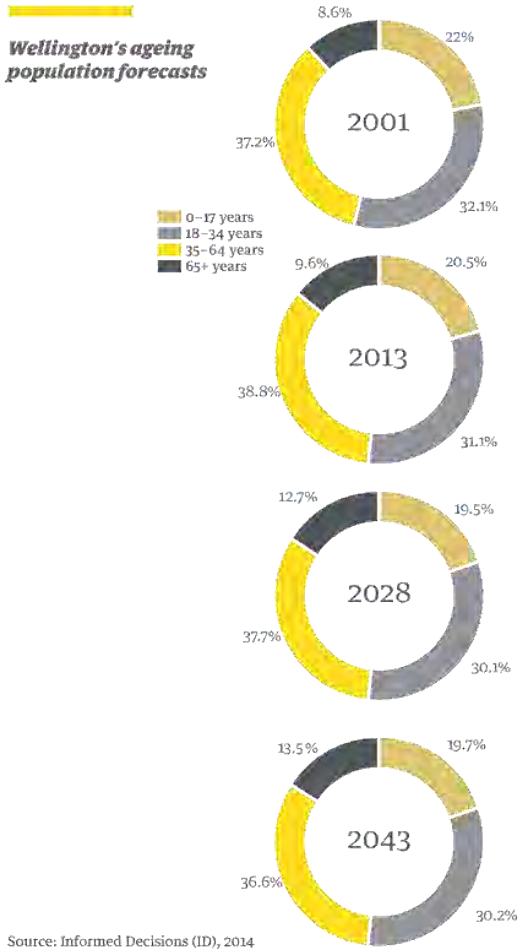
Wellington is an appealing destination for young adults and students, who are attracted to a city with strong educational and employment opportunities and desirable lifestyle and entertainment qualities. This contributes to the city's residents having higher rates of educational achievement compared with regional and national figures.

The city will undergo a shift as our population ages. By 2043, 13.5 percent of city residents will be over 65, compared with 9.6 percent now[1]. This will have an impact on our housing, transport, social service needs, and economy.

The population and growth by 2043:

- The city's population is expected to increase to around 250,000[1], with growth directed to maximise benefits to the city.
- The population in the central city area, which grew by almost 100 percent between 2001 and 2013, is expected to increase further by approximately 84 percent - from 18,019 in 2013 to 33,150 in 2043[1].
- Wellington's population growth and diversity will foster the city's vibrancy, the creation of accessible employment opportunities, and support continued investment in housing, transport and other infrastructure.

Wellington's ageing population forecasts

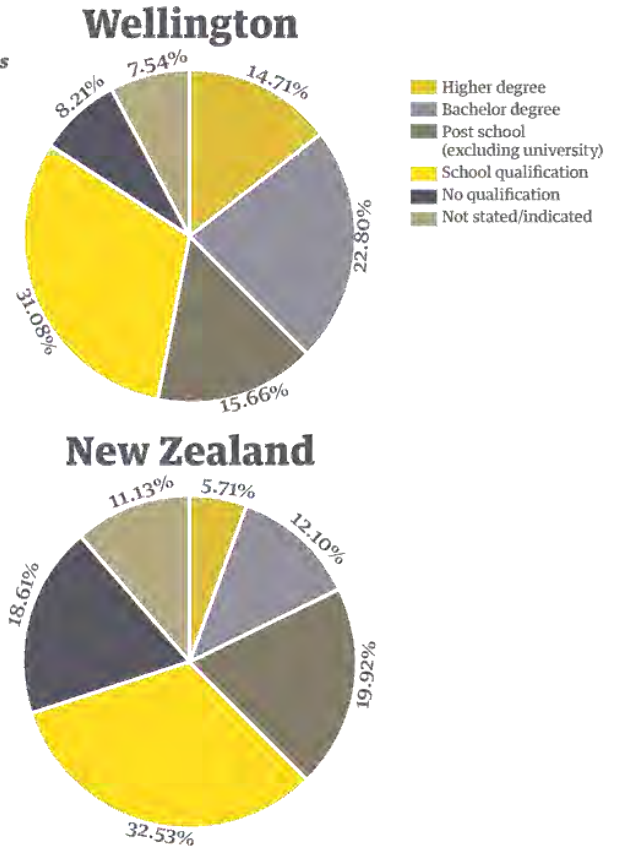


Source: Informed Decisions (ID), 2014

Wellington's population history and forecasts

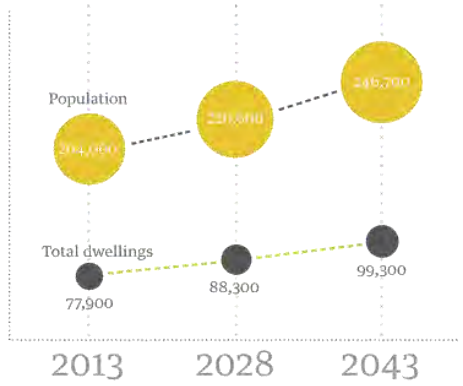
Source: Wellington City Council and ID, 2014

Wellington and New Zealand qualifications



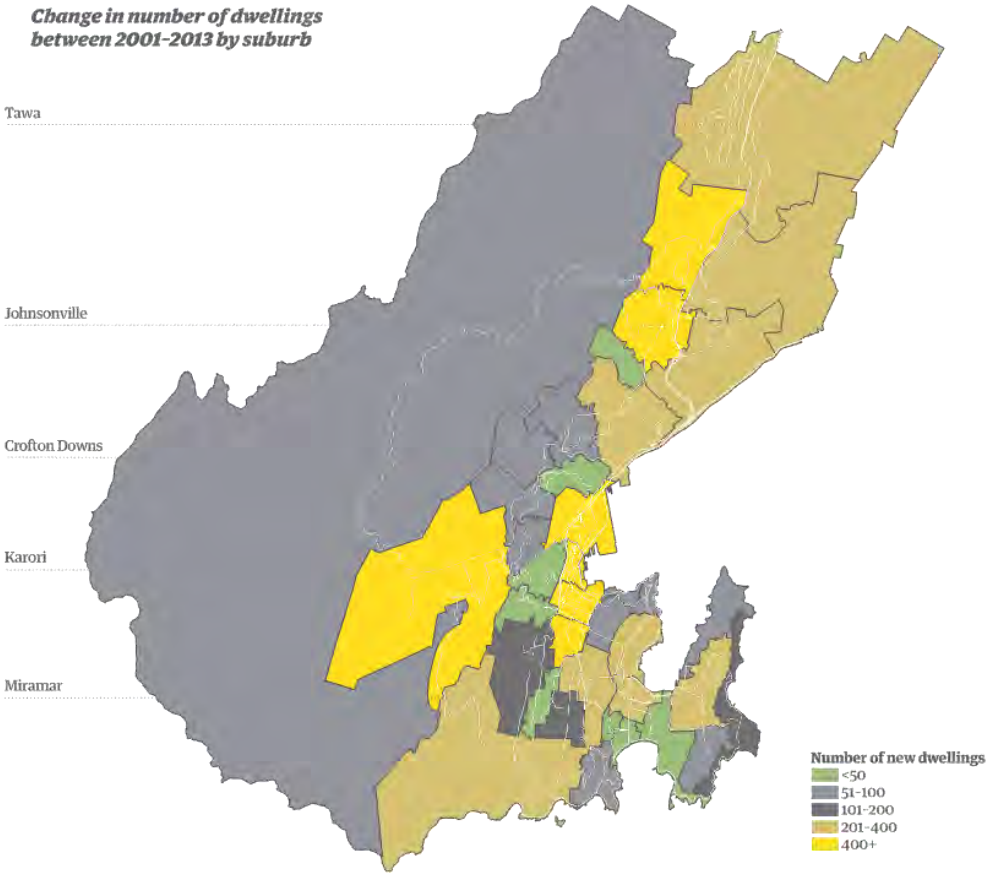
Source: ID, 2014

Increasing number of dwellings and people in Wellington



Source: ID, 2014

Change in number of dwellings between 2001-2013 by suburb



Source: ID, 2014

Housing

The city's projected population growth will result in the need for an additional 21,400 residential dwellings by 2043 (approximately 715 new homes per year)[1]. The inner city and adjoining areas will continue to attract the majority of renters, rental investors and young, non-family households, while the majority of families wanting to buy will seek affordable options in the suburbs. An ageing population will increase demand for age-appropriate housing choices (often smaller, low-maintenance housing that is close to services) within people's local suburbs. This movement could help free up more housing choices for families.

Since 2007, there have been more new central city apartments, medium-density (townhouse and smaller apartment complexes) and infill housing built, than traditional stand-alone (greenfield) housing. This trend is expected to continue and we expect 25 percent of new housing to be low-density, 35 percent medium-density, and 40 percent high-density.

The aim of this plan is to see most of the growth over the next 30 years occurring in the central city and along the growth spine. Greenfield development areas (mainly in the northern suburbs beyond Johnsonville) will provide for the expected demand for new single detached homes.

The city's housing by 2043 - what we plan to happen:

- Residential development forecasts show the number of dwellings in the central area (Wellington Central, Te Aro, Pipitea and Thorndon) will grow approximately 88 percent in the 30 years from 2013 to 2043 - from 8263 dwellings to 15,573 - at an average of 244 dwellings a year.
- The city will stay compact with continued central city apartment development and an increasing stock of quality medium-density housing options in areas near the city centre and in key suburban centres.
- There will be a wide range of quality housing options that meet the needs of the city's diverse population.
- This plan's targets for new housing density types (low: 25 percent; medium: 35 percent; high: 40 percent) are met.

Natural environment

Wellington's unique natural environment is critically important to the city's liveability and attractiveness. Its landscape, ecological and recreational values support both health and wellbeing and well-functioning environmental systems. This plan acknowledges the value of our closeness and connection to nature, how this makes Wellington unique, and aims to maximise the benefits of this setting.

One of the best ways of doing this is to keep the city compact by containing development within the city's existing urban limits. This plan supports the protection of natural features from the impacts of development; enhancement of the city's green infrastructure (eg parks, open spaces, landscaped areas); and ensuring quality open spaces and recreation opportunities in key locations. In doing this, Wellington will enhance its attractive lifestyle and ability to compete globally for visitors, talented workers and events.

Our natural environment by 2043 – what we plan to happen:

- Our investment in the natural environment and parks keeps pace with the city's population growth, intensification in existing urban areas, and new housing development in greenfield locations.
- The Outer Green Belt is completed, the harbour escarpment and most of Watts Peninsula (Miramar) are protected and included in our reserves network, and there are more parks and green areas within the central city.
- Our network of open spaces, parks and reserves, the waterfront, harbour and coastline continue to be highly valued by residents and are easily accessible.
- Nature and natural systems are a fundamental part of the city. Indigenous biodiversity and streams will be protected and restored where possible, as outlined in Our Natural Capital. There are more green buildings and an established green infrastructure network across the city.
- The natural environment is an integral part of the city's sense of place, and provides a range of economic, social and health benefits.
- The environmental impacts of urban development and transport are minimised and new buildings and subdivisions embody sustainable, low-impact urban development principles.

Climate change

Significant and sustained changes to the global climate are being caused by emissions of greenhouse gases from human activity. The impacts of climate change on Wellington over time could include more frequent extreme storms causing flooding, slips and wind damage; changing rainfall patterns and increased temperatures leading to pressures on water supplies and public health; and sea-level rise leading to increased coastal erosion and effects on coastal infrastructure. In response to these risks, the Council developed its first Climate Change Action Plan in 2007 and has been keeping this document up to date since.

Wellington has a head start on the rest of New Zealand in responding to climate change, with a lower carbon footprint due to its compact urban form, higher public transport usage, higher rates of walking and cycling, access to significant renewable energy resources, and a growing creative and knowledge-based, "weightless" economy.

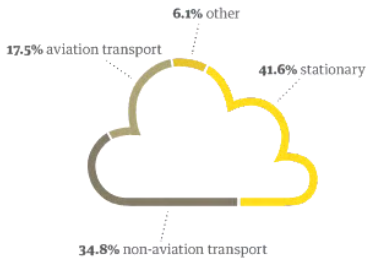
To continue reducing our greenhouse gas emissions and responding to climate change, we will maintain the compactness of our city as our population grows; and invest in our public transport network, footpaths and cycleways to reduce car use and improve travel efficiency. We will continue to encourage low-emission economic development, building efficiency, water conservation and waste reduction.

Climate change by 2043 – what we plan:

- We will maintain and enhance Wellington's compact urban form. This has significant benefits for our transport network and reducing emissions.
- We achieve the targets set in our 2013 Climate Change Action Plan for the city to decrease greenhouse gas emissions by 30 percent by 2020 and by 80 percent by 2050, while the Council decreases emissions 40 percent by 2020 and 80 percent by 2050.
- Our transport infrastructure is less reliant on fossil fuels with continued increases in public transport availability and quality, alongside walking and cycling alternatives.
- Our building stock is more energy efficient due to improvements such as better insulation in homes, and more efficient lighting, cooling and heating systems.
- An increasing proportion of the energy we use to power the city's homes, buildings and transport comes from local renewable sources – wind, solar, tidal and wave energy, as well as biomass energy from waste.
- The city has a comprehensive network of natural assets – parks, gardens, coastline, Town Belt and reserves. These help to support biodiversity and absorb carbon emissions, and form part of Wellington's green infrastructure.
- We use water more efficiently and minimise waste production.
- We manage the risk of sea-level rise and extreme weather events through mitigation and adaptation, including ensuring infrastructure can cope with these effects.
- Our planning documents reflect the risks associated with climate change, for example, controlling housing and infrastructure development in places susceptible to flooding, and areas prone to slips or coastal erosion.

Low carbon footprint

5.8 tonnes
of greenhouse gas emissions in Wellington per person.
The city's emissions are:



*Stationary uses are home and business uses not associated with transport

Source: Climate Change Action Plan, 2013, Wellington City Council

Open space network

4200
hectares of open space

250
parks

43
sporting parks

330
kilometres of tracks

Source: Our Capital Spaces, 2013, Wellington City Council

Zealandia:
Wellington has strong environmental and conservation links.

Tonnes of CO2 emissions

Wellington region

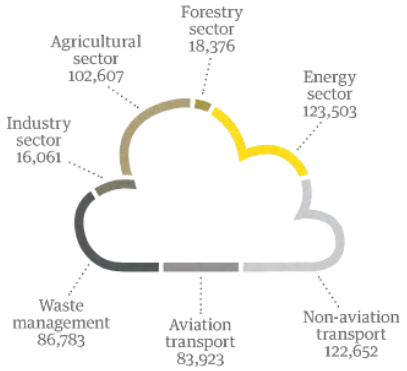
2013/2014
- Expected: 1,708,456

2019/2020
- Projected: 1,739,825
- "High ambition" aim* 1,185,920

The reduction between the emissions expected and aim is 553,905 tonnes of CO2 emissions.

* The "High ambition" aim is not a Council policy, but a possible projection for the region. The Council can look to this as an example of how it could achieve its own, and the city's, emissions-reduction targets.

Projected CO2 emission reduction by sector



Source: Wellington Region Greenhouse Gas Emissions Projections, URS, 2014 for Wellington City Council

City resilience

Earthquakes are the biggest natural hazard risk and pose significant resilience challenges for Wellington with the city straddling several active fault lines. Wellington is also vulnerable to a range of other natural hazards and climate change related risks. These include severe storms, flooding, landslides, tsunami and sea-level rise. Some hazards are immediate, while others (like sea-level rise) require long-range planning.

In recognition of this, the Council has for the last 20 years invested significantly in strengthening infrastructure and leads the country in ensuring we have a resilient building stock. We have undertaken earthquake resilience assessments for all pre-1976 buildings and continue to work actively with building owners to ensure that buildings are strengthened. We have also pioneered work with key lifeline organisations and with communities to build disaster preparedness.

The need to increase our resilience will be a key influence on the planning and infrastructure investment decisions the Council makes over the next 30 years. Climate change impacts and the predictions of more severe weather events and sea-level rise will have ramifications, particularly for low-lying coastal urban areas.

We will spend a considerable amount on making the city more resilient to earthquakes. This includes strengthening our earthquake-prone buildings in the central city and suburban centres. Our physical infrastructure lifelines (transport, water, wastewater, power supply) will be particularly important, as well as ensuring our social infrastructure is protected.

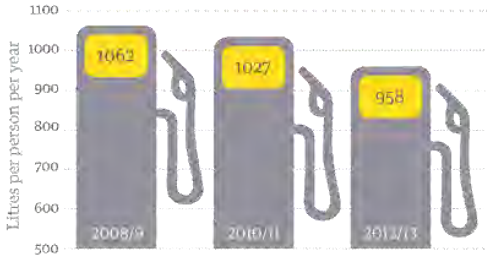
The city's resilience by 2043 – what we plan to happen:

- Ongoing investment in buildings and key infrastructure, and the adoption of new urban development approaches and technologies mean the city's buildings and transport network is increasingly resilient to natural hazards and the impacts of climate change.
- Land use and development in areas most at risk from the impacts of natural hazards and climate change is managed to minimise the risks to people and property.
- The completed Roads of National Significance projects improve access to and from the city in case of emergency.

Item 3.3 Attachment 1

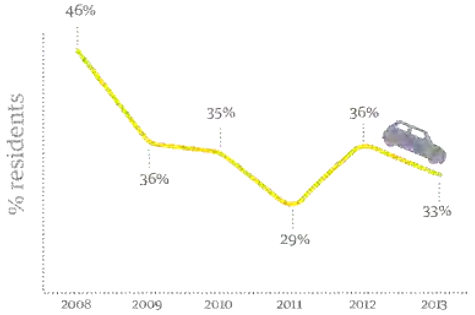
Earthquake strengthened:
Ombra on Cuba Street.

Decreasing fuel usage in Wellington



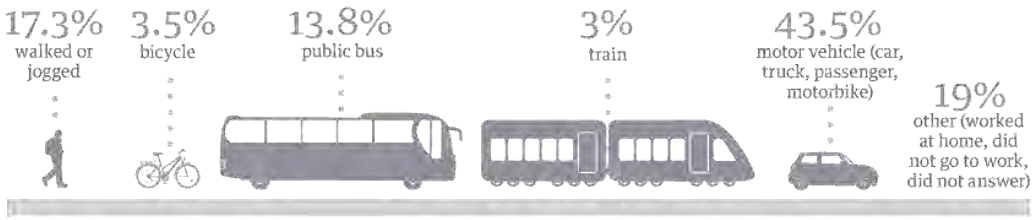
Source: Sales data submitted to Wellington City Council, 2014

Wellington City residents who take a car into the central city



Source: Wellington City Council Residents Monitoring Survey, 2013

Wellington City residents commuting to the central city per week (2013)



Source: ID, 2014

Transport and movement

Having a high-quality transport system is key to Wellington's economic, environmental and social success and must be considered in an integrated way.

Wellington is relatively well-placed to face the transport challenges of the next 50 years. The city is compact, many people work in the central city, and we have a comparatively young, educated population who have demonstrated they are open to change. We have a good public transport system, and car ownership is relatively low by national standards. Walking as a transport mode is very high (17 percent of journeys to work)[1] by national and international standards. There has also been a large recent rise in the number of people cycling despite a lack of supporting infrastructure, with a 73 percent increase in residents cycling to work[1].

Wellington continues to move towards being a more sustainable city, supported by our changing transport choices. This plan recognises the important role our public transport system plays in moving people to (from the wider region) and around the city. It also recognises the planned transport improvements that are being made across the city, and the opportunities for emerging technologies such as electric vehicles. Capitalising on these investments, as well as fostering the development of active modes – walking and cycling – will be key to the city's future success.

Our transport network by 2043 – what we plan to happen:

- The bus priority network is implemented.
- The proportion of people walking and cycling continues to increase supported by a comprehensive cycling network and ongoing improvements to pedestrian access.
- There is an ongoing reduction in the number of pedestrian and cycle injuries.
- The Great Harbour Way provides cyclists with a continuous cycle route from Lower Hutt to the city.
- Our network of parks and open spaces is an integral part of the commuters' network for walking and cycling.
- The Wellington Roads of National Significance projects are completed in a way that maximises benefits to the city by freeing up local road space for public transport, cycling, walking and local vehicles. Projects within the city include Transmission Gully, Ngauranga to Aotea Quay traffic management improvements, Terrace Tunnel duplication, Tunnel to Tunnel improvements, and Airport to Mt Victoria Tunnel (including Mt Victoria Tunnel duplication).
- The road network provides good access to the port, the airport and for freight.
- The public transport system uses low-carbon technologies and there is a significant number of private electric vehicles on the roads.

Infrastructure

Infrastructure underpins everything the city does. Having high-quality, reliable infrastructure is critical to our economic, social, environmental and cultural wellbeing and is fundamental to Wellington being a successful city. It is also the biggest area of Council spending. It is therefore important for this investment to provide value to ratepayers and maximise benefits to the city.

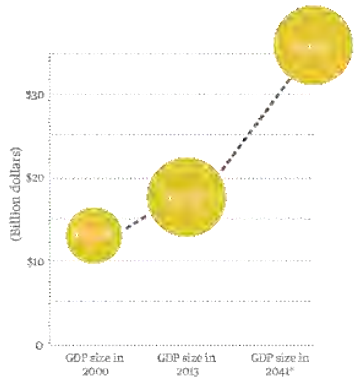
The city's projected population growth, and new housing and commercial development over the next 30 years, will require new and upgraded infrastructure. A significant advantage of being a compact city is that infrastructure is cheaper to provide and operate than in more spread out cities. In the northern greenfield areas where there is little or no existing infrastructure, developers will fund the necessary works. Existing infrastructure in urban areas also requires continual upgrade and renewal, particularly in areas where development is planned and more people will be living or working.

The growing frequency of natural hazards will also place increasing pressure on infrastructure, both to withstand the actual event (for example, earthquakes and storms), as well as being able to return to operation quickly after an event. Targeting investment to ensure resilience of critical infrastructure will be a key focus.

The infrastructure by 2043 - what we plan to happen:

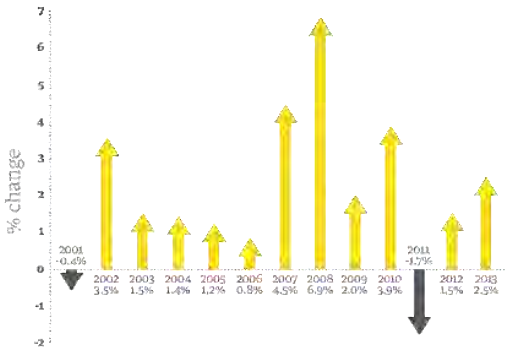
- The resilience of the city's infrastructure increases through targeted investment in strategic locations and critical networks.
- Our investment in public infrastructure keeps pace with the city's population growth and new housing development (especially along the growth spine, other suburban growth areas and in greenfield growth areas).
- We work collaboratively with utilities providers to coordinate growth and its impact on effective service supply.

Wellington City GDP size



Source: Infometrics, 2013 and BERL Economics, 2014

Wellington City GDP growth rate per year



Source: Infometrics, 2013

Economy and employment

How the city develops – its urban form – is a critical factor in maximising economic potential. Our compact layout, central city density and close proximity to major commercial centres – coupled with high-quality transport links (including sea and air connections) – provide a distinct competitive advantage for Wellington.

How we plan for and manage growth through this plan will help maximise economic benefits, whilst also ensuring environmental and social benefits. Ensuring the efficient use of land and providing development capacity in the right locations are central to this goal.

Wellington is the economic heart of the region, generating around two-thirds of the region's gross domestic product (GDP), much of it in the geographically small central city. As such, much of the city's employment is clustered in this area.

The city's projected population growth will help support economic development and the creation of employment opportunities. This plan identifies investment priorities in key locations to stimulate growth.

Our economy and employment by 2043 – what we plan to happen:

- The Council's approach to managing growth and development ensures the immediate and long-term economic vitality of the city.
- The central city continues to be the economic, social and cultural hub of the city and wider region.
- The city's suburban centres and other business areas help support economic growth.

Māori heritage and partnership

Māori whānau, hāpu and iwi are an important part of the city's history and unique identity. They are also important partners in delivering on the long-term cultural, social, economic, and environmental wellbeing of the city.

It is important that the heritage of tangata whenua, Māori culture and traditions are protected and incorporated into the development of the city through the actions identified in this plan.

Māori heritage and partnership by 2043 - what we plan to happen:

- Iwi are involved in the development of the city and work in partnerships with the Council and others to help deliver on actions and projects.
- Sites of historical importance to Māori are identified and acknowledged.
- Public spaces, buildings, artworks and events provide opportunities to reflect the city's relationship with Māori.
- The provisions of plans and policies such as the District Plan support the protection of Māori historic heritage, culture and traditions, and reflect the principles of Te Tiriti o Waitangi.

Historic heritage and character

Wellingtonians value highly the city's unique heritage and character. The city's rich and diverse historic heritage includes buildings and structures, sites, townscapes, streetscapes, landscapes and other historical places. We value them as features in the city's landscape and appreciate both their natural and human-made elements.

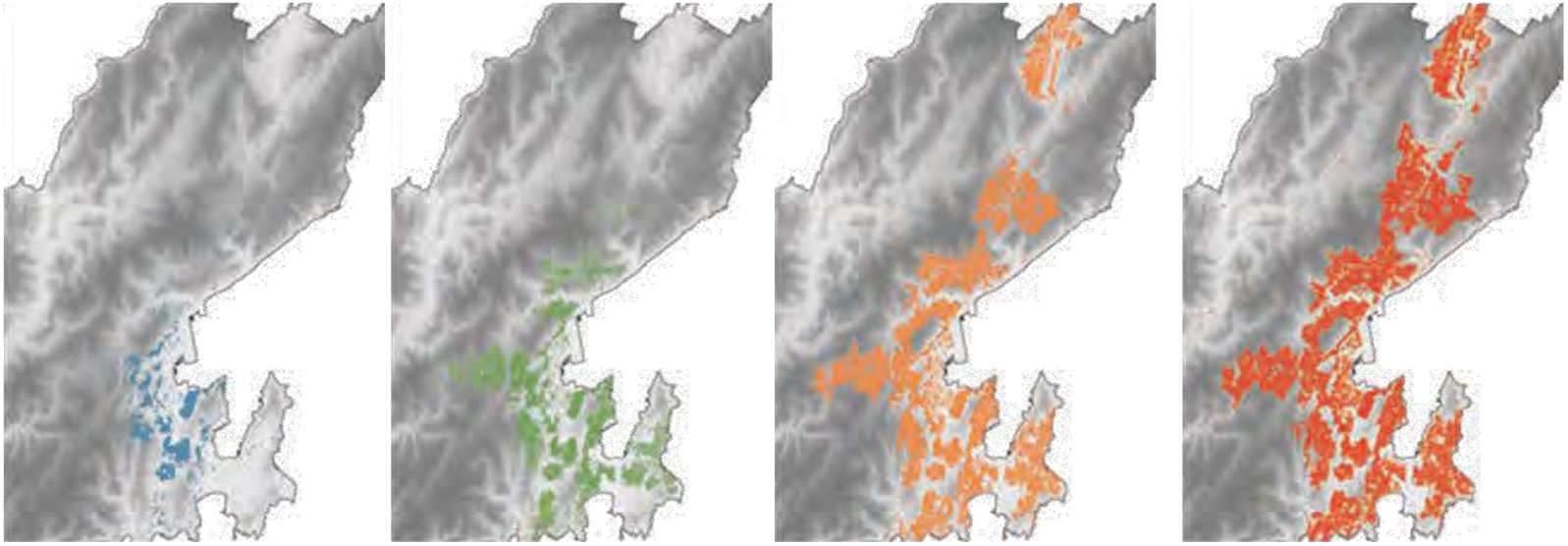
Wellington's built heritage is a precious and finite resource and is important in shaping the character of the central city and suburbs. It is part of what makes Wellington unique and attractive. Built heritage also plays a significant role within our economy: through direct employment, providing retail and commercial spaces, and as a focus for advertising and tourism.

The plan recognises the importance of protecting and enhancing elements that help give Wellington its sense of place - the compact, walkable nature of the city, its suburban villages, its heritage buildings and objects, character areas, and Māori heritage values and sites.

Our historic heritage and character by 2043 - what we plan to happen:

- Growth and development of the city values and enhances the key elements that form part of Wellington's unique identity and character.
- The legacy of the past is recognised through the appropriate identification, protection, conservation and use of the city's significant cultural and historic heritage.
- All current earthquake-prone heritage buildings have had their earthquake-prone status resolved through investment in strengthening and sensitive redevelopment.
- We continue to protect and enhance the special character of our suburbs, particularly the highly valued existing character of our inner city suburbs such as Thorndon, Mt Victoria, Aro Valley, Newtown, Mt Cook and Berhampore.
- We support initiatives to build even greater 'sense of place' in Wellington's diverse communities.

Wellington's urban growth over time



Development to 1900

Development to 1930

Development to 1970

Development to 2010

3.0 OUR ACTION PLAN

Our focus areas

This section sets out the Council's actions for specific components of the city - urban development, transport, infrastructure, and open spaces. The actions are grouped under the following six focus areas:

- transformational growth areas
- liveable and vibrant centres
- real transport choices
- housing supply and choice
- natural environment
- city resilience.

Each focus area outlines a series of opportunities, projects and actions seen as important in shaping the future growth and development of the city with particular emphasis on the next 10 years. These may apply citywide, or may be location specific, depending on the situation.

While some opportunities may relate to only one issue, often they will have multiple benefits. For example, areas such as investment in Victoria Street provide major opportunities for regeneration and residential growth, but are also beneficial in delivering improved public transport, cycling and walking.

A detailed implementation plan for these actions will be developed for consideration as part of our 2015-25 Long-term Plan.

Key actions

The following map describes the key components of the plan's overall approach. It builds on the concept of the growth spine as the city's key development, transport and investment corridor. It also underlines the central city's role as the main economic, social and cultural hub of the region, and emphasises its capacity for further high-density apartment development and commercial growth.

The growth spine is anchored by Johnsonville and Kilbirnie town centres. These are Wellington's largest centres outside the central city, and have the ability to support more intensive residential and mixed-use development. The city's other suburban centres provide for a mix of residential, commercial, social and cultural activities, with more intensive types of housing encouraged in suburban locations with good supporting transport and other infrastructure. New greenfield residential growth is provided for in the city's northern growth areas.

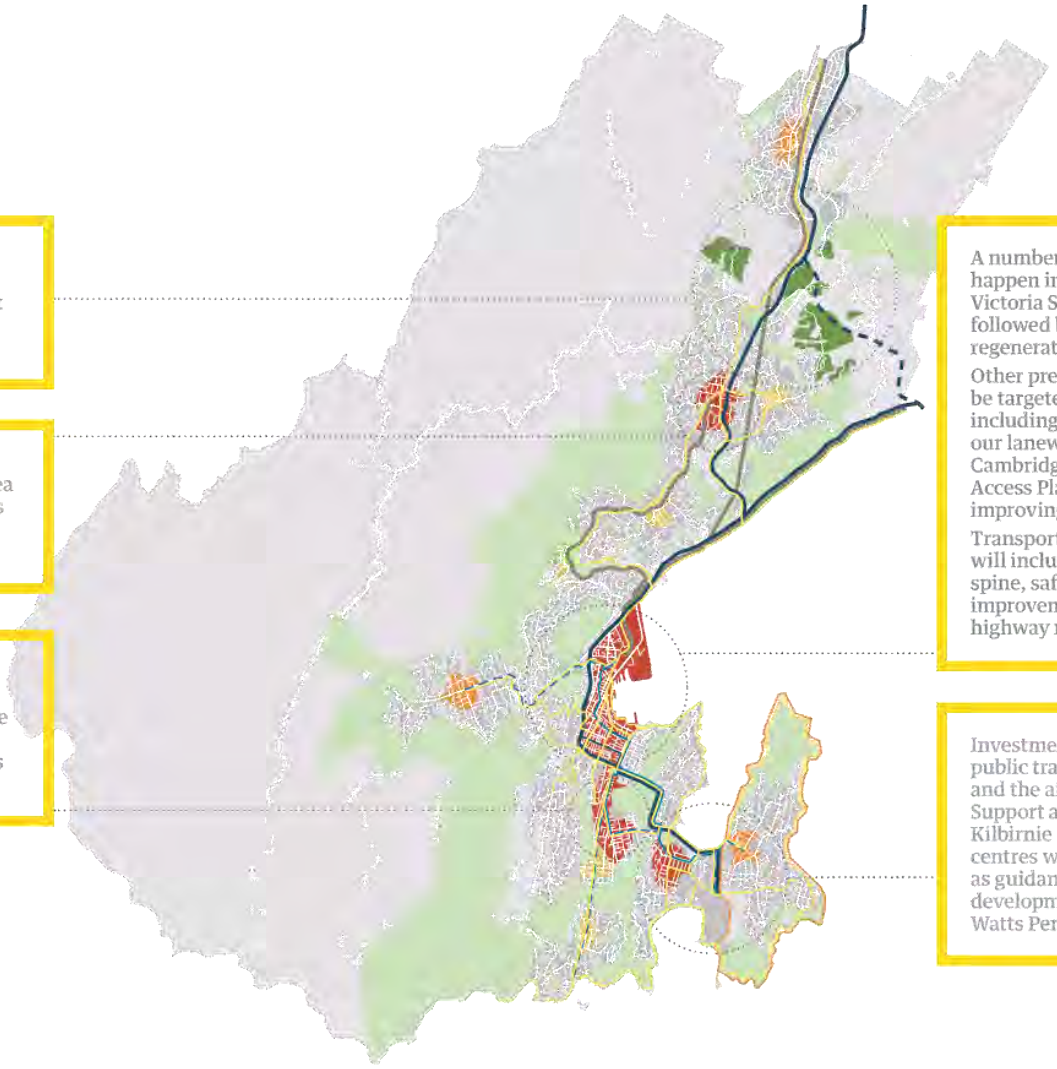
Item 3.3 Attachment 1

Key projects

The Petone to Grenada link road will support residential and employment-related development in the Lincolnshire Farm and Stebbings Valley growth areas.

Johnsonville and its town centre will be a targeted regeneration area with major roading improvements and further medium-density housing.

The delivery of the public transport spine and cycle lanes will encourage development in the Adelaide Road area. Berhampore and Island Bay will be looked at as future growth areas.



A number of projects will happen in the central city. The Victoria Street upgrade will be followed by improvements and regeneration in Te Aro.

Other precincts will also be targeted for investment, including the Civic Centre, our laneways and Kent and Cambridge terraces. A Port Access Plan will look at improving port access.

Transport improvements will include the public transport spine, safe cycle lanes and improvements to the State highway network.

Investments will be made in public transport, cycle facilities and the airport precinct. Support and regeneration of Kilbirnie and Miramar town centres will continue as well as guidance on appropriate development for Shelly Bay and Watts Peninsula.

TRANSFORMATIONAL GROWTH AREAS

This focus area brings together the actions required to deliver quality urban development in locations suitable for growth. In identifying such locations, we take a number of factors into consideration, including:

- key transport infrastructure
- existing amenities and services
- existing community and educational facilities
- existing open space and recreational facilities
- the capacity of the existing utilities
- if change in the area will enhance the mix of home types and business uses available to the community.

Our approach builds on the previously identified growth spine, directing development towards the central city, Adelaide Road, Johnsonville and Kilbirnie. The benefits of the growth spine approach include:

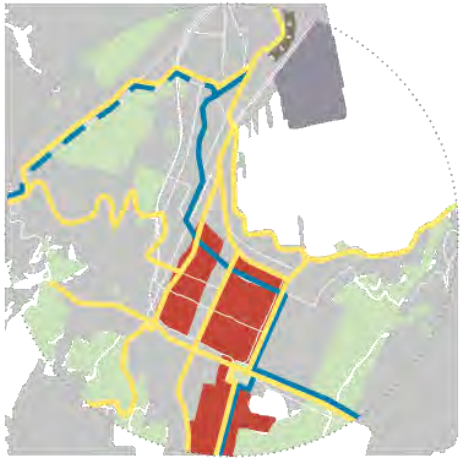
- improving the efficiency of infrastructure by locating more people in areas with existing high capacity
- retaining the character of residential areas that many people enjoy by directing increased density to selected locations
- providing opportunities for people to live closer to where they work, shop and access high-quality transport options
- concentrating investment into a smaller number of centres.

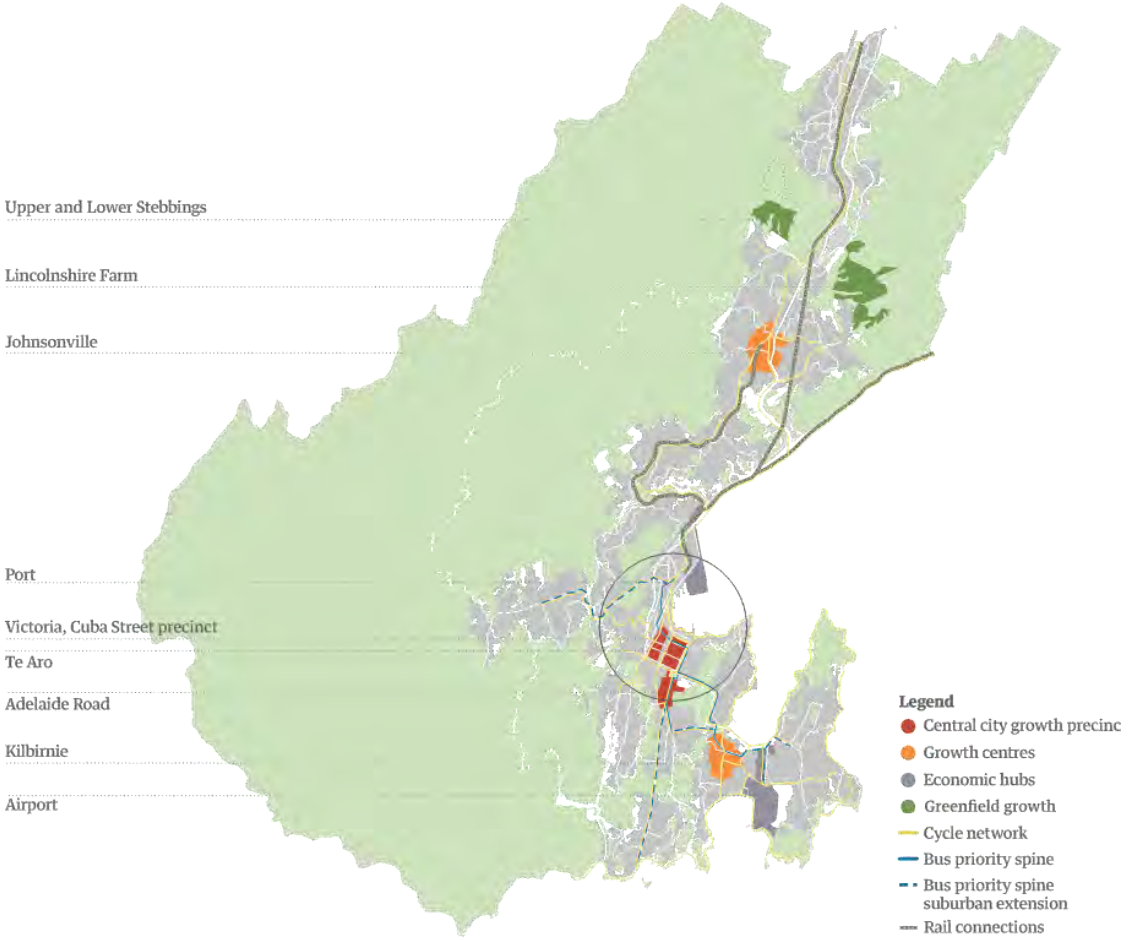
In addition to the growth spine, the plan provides for development in greenfield areas north of the city. It also includes supporting the important economic hubs around the port and the airport.

To transform some of the areas, we will need to work with external partners to co-invest and maximise the benefits to the city. We will also need to coordinate land use, transport improvements and investment in infrastructure to create the right conditions to generate economic and urban growth.

Item 3.3 Attachment 1

Transformational growth areas





1. Activate the development of identified growth areas

To stimulate growth in the locations we have identified, the Council needs to target action and investment. To encourage development, we need to provide incentives, ensure supporting District Plan provisions, partner with others, and take a more active role in the development market.

Project	Actions
The Council will **facilitate new development** in identified growth areas.	• **Deliver the Convention Centre** – in partnership with others, to support our economic growth, increase vitality and improve the amenity and connectivity in this part of the central city. • **Review our venues** and identify opportunities for new facilities, such as whether a concert venue would benefit the city. • Identify opportunities for the **Council Urban Regeneration Unit** to deliver regeneration projects in growth areas. • **Work in partnership with external parties** to develop feasible proposals for specific sites that could act as catalysts for further change in growth areas. • Assess the provision of **community, recreation and open space facilities** in identified growth areas and address gaps as and when required. • **Coordinate with other service providers** (eg Ministry of Education) to ensure additional population is appropriately catered for. • **Align investment in infrastructure with growth projections** – we will develop and use modelling tools to understand current Council infrastructure (water, sewerage, drainage) condition and capacity, and future demand. These tools (eg economic yield analysis, infrastructure affordability index, hydraulic models) will help inform our investment and growth decisions. • **Coordinate with utilities providers** (eg Wellington Electricity Lines Ltd) to ensure sufficient capacity is provided to support growth. • Develop a **strategic land acquisition plan** to facilitate revitalisation priorities and to support the development of the city's transport network (particularly for public transport and cycling goals) and other facilities required to support population growth.
Adopt incentives to stimulate development – there are locations and types of development that we want to encourage more than others. We need to send the right signals to the development community to give them confidence.	• **Review and update the Council's development contributions requirements** to support the delivery of new development in key locations. • **Continue and enhance funding assistance for earthquake-strengthening of buildings** – this includes the existing Built Heritage Incentive Fund and rates remission for qualifying developments. We will also consider increased investment in priority heritage buildings and areas, as well as other measures. • **Implement an "open for business" approach** when assessing development proposals (eg user-friendly and efficient processes). • **Investigate alternative tools and mechanisms** (eg planning and financial) that could help support implementation of this plan and its priorities.

Item 3.3 Attachment 1

An artist's impression showing improvements on Victoria Street

Deliver central city regeneration projects – the central city will be the main focus area for more intensive residential and commercial developments.	• **Facilitate development in the Victoria Street/Cuba Street area** – this includes public space and cycling improvements in Victoria Street, improved connections to Cuba Street, coordination with developers to implement new buildings in this precinct and supporting the earthquake strengthening of buildings in the Cuba Street heritage area. • **Plan for regeneration in Te Aro** – the area located between and including Taranaki Street and Kent and Cambridge terraces is gradually transitioning from its industrial past to a mix of uses including high density apartments, hospitality and services. The construction of Memorial Park and the Arras Tunnel open up opportunities for further change in the area. The presence of many earthquake-prone buildings will also require investment or redevelopment. • **Kent and Cambridge regeneration** – this will include improving the corridor for all modes of transport and create a desireable location for more intensive development. This work will be aligned with construction/mitigation works at the Basin Reserve and on the public transport spine. • **Develop a programme to regenerate the Civic Centre** – this will include Mercer Street, Ilott Green and specific development opportunities in relation to the Michael Fowler Centre car park, the James Smith parking building, former GWRC building and other sites that have structural issues. • **Work with others**, such as utilities providers, and coordinate investment in regeneration areas.
Deliver the vision for Adelaide Road	• **Deliver the Adelaide Road Framework** – this area supports the Wellington Regional Hospital, is an important retail and commercial centre, and can accommodate more residential development to make Newtown and Mt Cook more vibrant and economically successful. It is also a major transport route and as the southern suburbs grow, we need to provide better facilities for walking, cycling and public transport. We will ensure new development and street improvements are integrated with roading, public transport and cycle route improvements. • **Align the timing of Council investment in this area** under the Long-term Plan with construction/mitigation works at the Basin Reserve and on the public transport spine. • **Work with partners to secure the transport corridor** (includes land purchase and corridor designation), and help to facilitate the development of key sites.
Stimulate development in sub-regional centres (Johnsonville and Kilbirnie) – these have an important role to play in providing communities with the goods and services they need close to where they live. They also offer opportunities for wider housing options in close proximity to public transport hubs.	• **Enable regeneration of Johnsonville town centre** – this includes completion of transport and community facility improvements; bus and rail interchange improvements to facilitate mass movement of people; improved cycling infrastructure to support sustainable transport choices; public space development to support intensification; encouraging town centre densification and the mall redevelopment. Work with private partners to determine the development potential of these sites. • **Enable regeneration of Kilbirnie town centre** – this includes development of public transport facilities/hub; street improvements; development of the community walkway/cycleway and improved cycling infrastructure; and opportunities such as the Bus Barns redevelopment, and a mid-block link from Bay Road to Onepu Road. Work with private partners to determine the development potential of these sites. Council acknowledges the earthquake and climate change hazards in this area and these will be addressed in our future planning and investment in Kilbirnie.

Support the development of greenfield areas in the northern suburbs that have already been identified for growth.	• **Northern Wellington Growth Plan** - support the implementation of the structure plan for Lincolnshire Farm. Work with other infrastructure asset owners such as NZTA and with landowners to integrate the proposed Petone to Grenada link road with the future neighbourhood centre, business area and residential development. Explore opportunities for the area that offer more sustainable housing and job opportunities. The initial study will test the feasibility of attracting green industry to locate in Wellington as part of our long-term, sustainable economic diversification agenda. An outcome from this study might be further work to develop an "eco-town". • **Plan for the development of lower and upper Stebbings Valley** - develop a structure plan for inclusion in the District Plan to guide development and infrastructure requirements. The plan will include the location of main road corridors, including a potential road connection to Tawa, main areas of open space, and a connection to the Te Araroa walkway. It will also complete the Outer Green Belt and protect waterways, significant indigenous vegetation and Marshall Ridge. • **Review design guides and District Plan provisions** as necessary to ensure high-quality development occurs in the greenfield areas.

2. Support the development of the port and the airport as economic hubs

This action area is about recognising the port and airport as critical city infrastructure and supporting their development as key economic hubs for the city.

Project	Actions
Airport precinct - the combination of predicted ongoing airport growth and the proposed runway extension presents opportunities for business and employment in and around the airport. There is also the opportunity to improve transport connections to and from the airport.	• **Improve transport connections to the airport** - work with the airport, NZTA, GWRC and other partners to ensure efficient transport connections to the airport. This includes investigation of an extension of the rapid transit network spine to the airport, and improvements for private vehicles, freight, pedestrian and cycle movements. • **Plan for future growth** - work with the airport and key partners on measures to improve the city's international air connections, contribute to the master-planning revision, and identify opportunities for the Council to assist development.
Port precinct - this large area includes major city infrastructure - the port, the Westpac Stadium and the railway station. The port is expected to continue to grow, which will require upgrades to access and rail/road freight distribution systems.	• **Contribute to the Port Access Plan** - work with Centreport, Kiwi Rail, NZTA, GWRC and freight operators to improve state highway connections and port access points and facilitate high-quality walking and cycling access from the existing passenger terminal to the Hutt Road/Ferry Terminal/Great Harbour Way. • **Develop a Port Precinct Plan** that focusses on improving connections between the precinct and the central city; maintaining the integrity of port functions (eg moving freight, an industrial and freight logistics hub, a gateway for the city and visitors on ferries and cruise liners, and access to the stadium); and resilience. • **Understand the movement of urban freight** - work with NZTA and stakeholders to study the value of freight movement through the city and its impact. This will identify the freight levels in the city and how efficiencies could be maximised.

LIVEABLE AND VIBRANT CENTRES

We want to make sure that we are creating a good platform for communities to develop on, especially in areas where growth is planned. This means ensuring that our centres are attractive, accessible and convenient, leading to more people spending time in them, which in turn makes them more economically and socially successful.

Centres such as Johnsonville, Kilbirnie, Newtown, Miramar, Tawa and Karori provide a place for local communities to shop, access services and socialise. We need to ensure the areas already earmarked for medium-density housing and the main streets in and around these centres are attractive and ready to support that growth.

With more people expected to live in the central city, we need to improve the quality of the streets and places where residential growth is going to occur. For example, the city boulevards such as Victoria Street, Taranaki Street and Kent and Cambridge terraces have the capacity to take most of the central city's growth but require improvement to make them places where people would want to live and work.

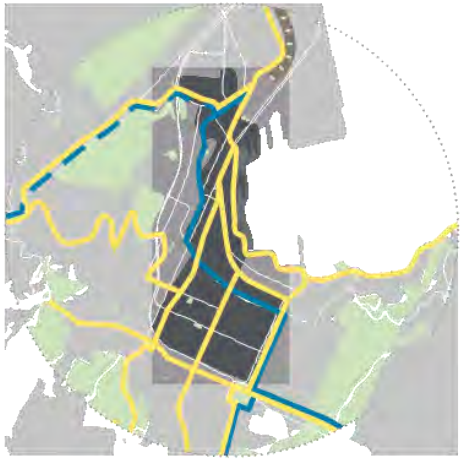
Culture in the capital:
Roxy Cinema in Miramar.

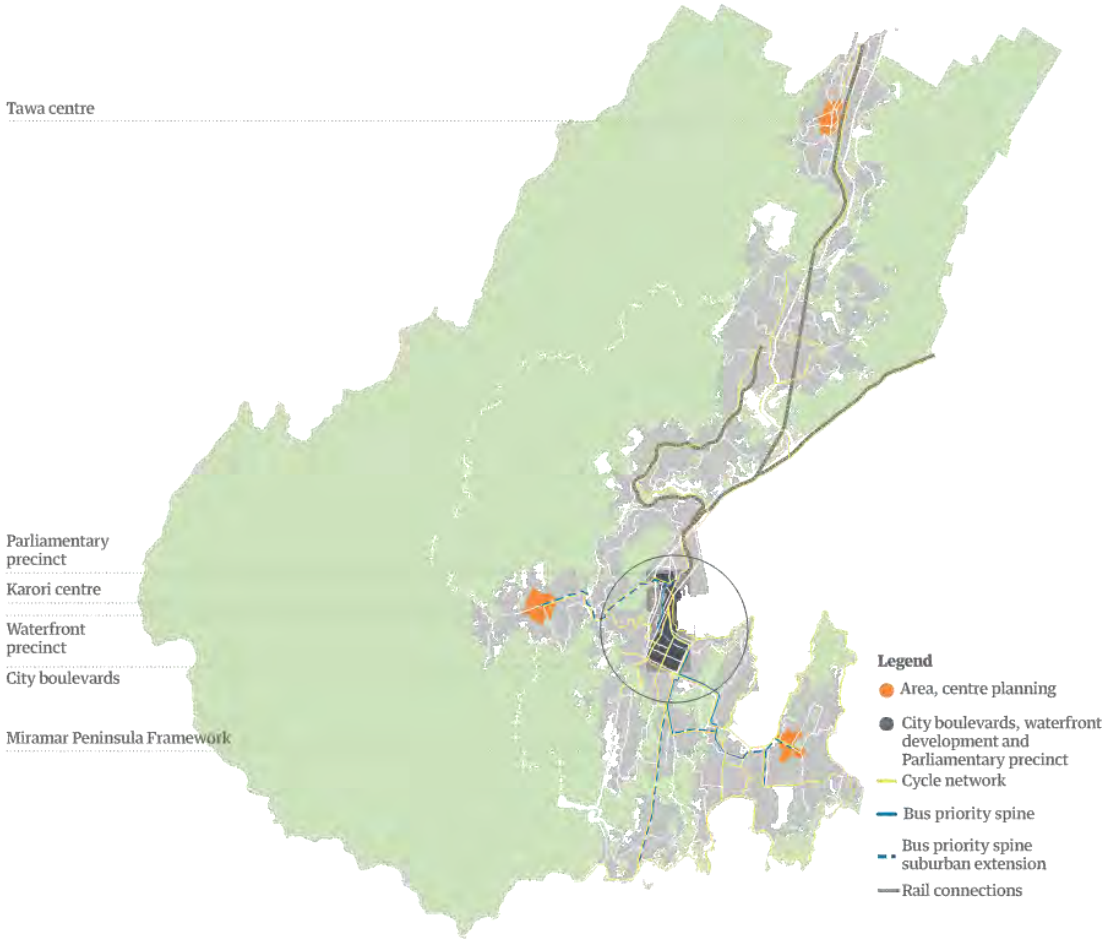
1. Deliver improvements in the central city and key centres

We will make improvements in areas planned for growth to ensure their success and their ability to act as a catalyst for other revitalisation opportunities. As well as Council-led improvements, this action area includes taking opportunities to work alongside and/or co-invest with partners to maximise the benefits for the city.

Project	Actions
Continue to deliver on planned central city improvement programmes – this will support the regeneration areas identified (see Transformational Growth Areas) and reinforce the value of the central city as a place for events, celebrations and recreation, but most of all to live and work. Delivering these improvements will encourage other development and bring private sector investment to the city.	• **Complete the development of the waterfront** – this includes completing the development of North Kumutoto and adjoining open spaces, the completion of Frank Kitts Park and Queens Wharf areas, and continuing to improve pedestrian and cycle connections between the city and the waterfront. We think the waterfront should be a premier recreation area for the city, particularly for children. • **Continue the laneways improvement programme** – investment will be targeted at areas where pedestrian potential is the highest and where the lanes provide for small businesses at ground level. Use improvements to central city laneways to encourage private investment. • **Parliamentary precinct/North Lambton Quay** – work with partners to enhance the important economic and social role Parliament Buildings and the government sector play in Wellington. Work with central government on its office review programme and identify enhancement opportunities. This will also include facilitating private sector development in the precinct to encourage greater variety in the mix of uses, and improving pedestrian facilities between the precinct and the bus terminus, railway station and the central city.
Deliver street improvements to city boulevards – the boulevards each form part of a Transformational Growth Area and are projects that will encourage development. Where possible, these will be delivered through a partnership approach to maximise benefits to regeneration areas.	• **Deliver key inner city boulevards** – Victoria Street – Kent and Cambridge terraces – Adelaide Road • **Taranaki Street improvement plans** – to increase the flood resistance and improve the amenity of the area through tree planting. Taranaki Street has more complexities than other streets because a major stormwater upgrade is required. This will influence the staging of the project.
Plan for future improvements in the central city	• **Review the implementation of the Central City Framework** – this is the Council's key document for guiding urban development and public space improvements in the central city area. Work will continue on prioritising and seeking funding for those initiatives not yet implemented. • **Te Aro Park** – investigate opportunities to improve Te Aro Park and surroundings. • Ensure future improvements give effect to our **Accessibility Action Plan**.

Centres for growth





2. Plan for future investment in suburban centres

Continue a programme of active planning for key suburban centres that identifies catalyst projects, opportunities for mixed-use development and residential intensification, and investment requirements.

Project	Actions
Complete town centre action plans - these will identify priorities and funding required for the next 10 years.	• **Update the Centres Policy Implementation Programme** - this document sets out the priorities for centres planning and improvements. • **Update existing centres implementation plans** - this will involve monitoring the implementation of our existing plans for the central city, Adelaide Road, Johnsonville town centre, Kilbirnie town centre and Newlands centre. • **Develop new action plans for other centres** - the focus will initially be on Tawa and Karori town centres with other centres to follow, as per the priorities identified in the Centres Policy. Work will include the prioritisation of District Plan changes to provide for key land use changes identified through the action plan process. • **Investigate options for community hubs** - as our communities grow and change, the type of services and facilities provided must also adapt. Investigate multi-purpose spaces able to be used for a wide range of activities, and to change as the needs of the community do. Community facilities such as community centres, halls, libraries and recreation centres can also be integrated into ground floor retail space. This means the Council does not need to acquire assets to deliver services. It also provides more flexibility as the needs of the community change.
Suburban main streets - these are the places where local shopping happens and where communities come together. They have high pedestrian use but are also often busy transport corridors. This is about improving the way these main streets function so businesses can get goods in as required, people can get around safely and easily, and they become places where people want to spend more time and money.	• **Identify investment priority for main streets** and add to the town centre action plans outlined above. Give clear indication of timeframes for delivery and investment to coordinate with private investment.
Support local business and community-led revitalisation initiatives - this is about exploring ways for the Council to support locally-led projects that help deliver benefits for local areas.	• **Establish Business Improvement Districts** in key centres and business areas. • **Investigate other mechanisms to enable community-led initiatives** - this will support locally-driven actions aimed at revitalising local centres.

REAL TRANSPORT CHOICES

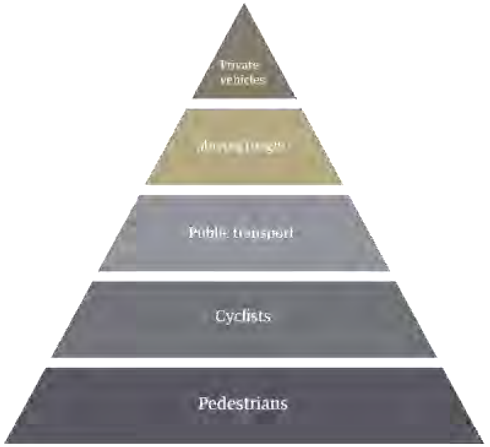
Transport enables people to get where they need to go - home, work, education, business opportunities, and recreation areas, and to the services they need. Like other well-connected cities, we plan to support our sustainable transport hierarchy by encouraging walking, cycling and public transport over other modes of transport. However, cars will continue to be a necessary option for many people in a balanced transport system. The car can provide flexibility for many journeys but can also be inefficient, requiring parking space and creating congestion, especially at peak times. Our role is to make sure these transport choices are balanced and integrated to support the way we want the city to grow. This includes encouraging developments that will see more people living and working near major public transport routes and centres.

Cycling has become increasingly attractive as a recreational and commuting activity in Wellington. By encouraging cycling we will increase the carrying capacity of our roads while improving our health and environment. Safety, however, is a significant barrier to many more people cycling. To further increase this mode of transport, we need to provide a safe cycle network both on and off road that will encourage people of all ages - including students, workers and retirees - to cycle. Wellington is also a highly walkable city. Improving pedestrian safety and experience will encourage more people to walk and keep our city centre, suburban centres, and our streets vibrant, safe and attractive.

Continuing to invest in and improve our public transport system will make Wellington easier to get around, an even better place to live and reduce our car dependency. Regional plans include more efficient and comfortable bus and train services. In conjunction with this, we will work with GWRC and NZTA to deliver enhanced public transport services through the city. This includes bus priority measures in the short-term and consideration of a bus rapid transit network in the longer term.

Delivery and efficient distribution of goods is essential to the functioning of the city. The port of Wellington, CentrePort, plays a central role in facilitating trade throughout the lower North Island and between the North and South islands. Wellington Airport also plays an important role for high-value, low-weight freight.

Sustainable transport hierarchy



Key transport improvements

Transmission Gully

Petone to Grenada link road

Karori cycleway and bus improvements

Bus priority spine

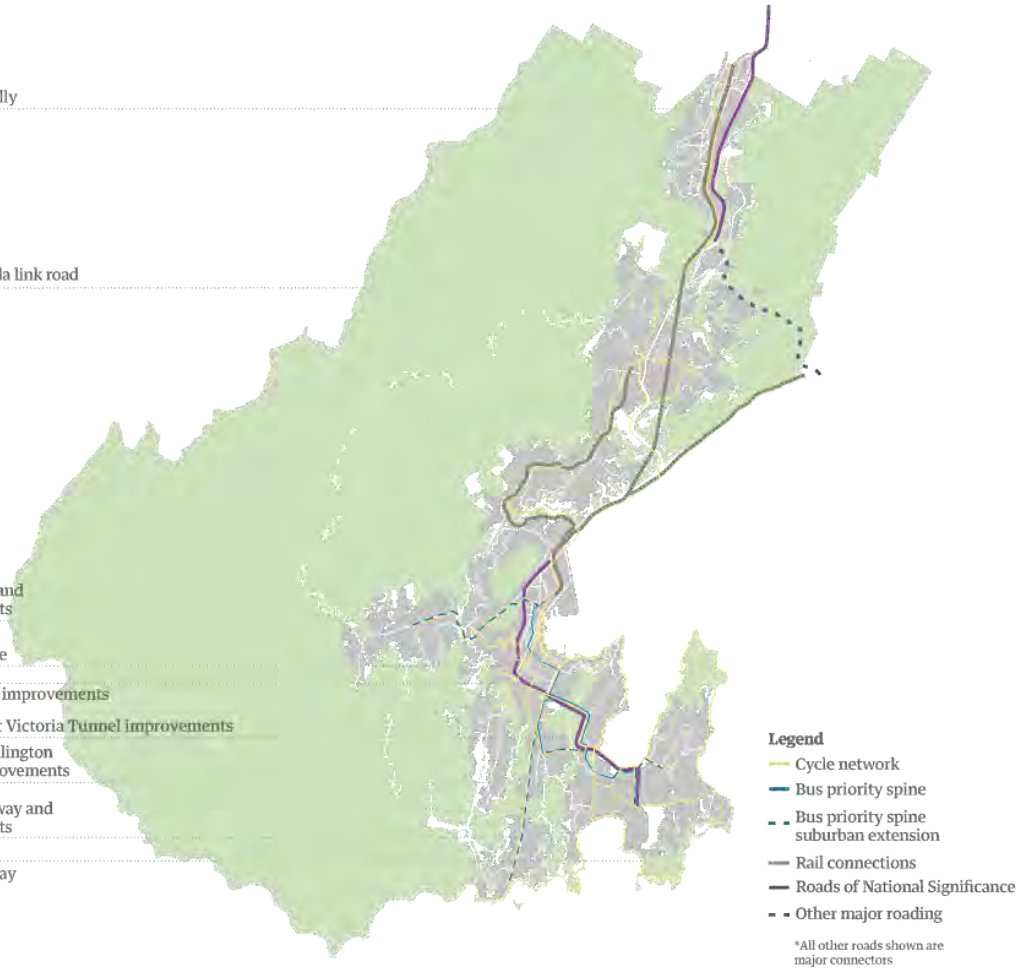
Tunnel to tunnel improvements

Airport to Mount Victoria Tunnel improvements

Miramar and Wellington Airport bus improvements

Island Bay cycleway and bus improvements

Great Harbour Way



1. Improve pedestrian accessibility and safety

Walking has major economic, environmental, health and wellbeing benefits. Statistics clearly show more Wellingtonians choose to walk than anywhere else in New Zealand. This is the result of a compact city and good walking opportunities. Walking is the primary mode of transport for short trips up to 1 kilometre, and also the way people start and finish trips made by other modes. Walking is important for the economy as it is the primary mode for shoppers, tourists and visitors to the city. It's important to support walking by making our streets safer and more accessible.

Project	Actions
Accessibility improvement plan - building on the Jan Gehl report, Central City Framework and other documents, this plan will identify areas that are not pedestrian friendly and a programme of work to improve them.	• **Develop the plan** - this will include work to identify the improvements that will have the greatest benefits for pedestrians, such as improving key routes people use to access public transport. • **Develop the work programme** - this will prioritise improvements and align the plan with the Council's maintenance and renewals programme. It will focus on locations such as transport hubs, schools and the central city, and include work to reduce pedestrian wait times at traffic signals and the provision of shelter.
Road Safety Policy - a policy that sets the direction for road safety to make the city safer for all modes and reduce the number and severity of accidents involving pedestrians and vehicles.	• **Develop the policy** - this will include a pedestrian safety and network legibility review that will look at a range of factors including one-way streets, differential vehicle flows and speeds. It will also analyse best-practice examples including shared spaces, speed reductions and street layouts. • **Develop the work programme** - identify key changes that should be made, secure funding for key projects, and align others with the Council's maintenance and renewals budgets.
Walking Policy - continue to implement the Council's Walking Policy and ensure it has a funded implementation programme.	• **Monitor and review** - report on progress made to date implementing this policy. Review and update the implementation programme to ensure ongoing investment in improvements that will make the city even more pedestrian friendly.
Track network - continue to implement Our Capital Spaces and its priorities related to accessible walking and cycling tracks.	• **Complete the track network** - with a priority on connecting communities and open spaces, and providing short walking loops and transport connections. • **Walking through open spaces** - identify opportunities for active transport through the open space network and support these routes.

Item 3.3 Attachment 1

Cycling is on the rise in Wellington: *Investments are being made to increase cyclist numbers and their safety.*

2. Make Wellington a better city for cycling

Cycling is a low-cost, low-carbon, healthy and sustainable mode of transport. It is the most efficient form of human-powered transport and allows excellent access during congested periods. It is ideal for short to medium-distance trips, and is an effective alternative to driving, bus or train. With the relatively short distances between the city centre and suburbs, there is good potential to achieve a step change in the number of journeys by bicycle and enhance our transport network.

Project	Actions
Increase uptake of cycling - despite significant growth in cycling in recent years, there are some barriers, such as safety and topography, that currently limit the number of people cycling. We need to continue improving key cycling routes around the city, and supporting a range of initiatives that make cycling safer. Our typically narrow roads mean that some road space must be reallocated to provide for cycling. This may ultimately mean prioritising cycle lanes or cycle parking over on-street car parking in some areas.	• **Deliver a safe and connected cycling network** – provide the best possible standard of cycling service we can, given local conditions, consistent with the Cycling Framework. The most important issue is separation from faster moving vehicles. This will include providing cycle routes to connect key destinations including the central city. Part of these routes may involve off-road cycling through open spaces. We will also work to make it easier for people to use bikes in conjunction with public transport by providing connections to suburban bus and train stations and increasing the amount of secure bicycle parking in these locations. Where facilities are shared by pedestrians and cyclists, we will aim to provide a safe alternative route for faster cyclists. • **Priority improvements** – the Cycle Network Plan will identify priority routes for improvements. We will coordinate cycling improvements with bus priority plans and town centre plans. • **Provide cycle parking** – in the central city and suburban centres at key locations, including reallocating car parking spaces where necessary (every car park can accommodate six or more cycle parks). • **Provide safer speed environments in key areas** - where separated cycle facilities are not possible, reduced speeds will be considered to improve cycling safety. • **Provide cycle training** – for new and less confident cyclists and support bicycles in schools and safe routes to schools. • **Review the 2008 Cycling Policy** – keep to document up to date, as may be needed.
Increase mountain biking and recreational cycling opportunities - Wellington already has some of the best mountain biking areas in the world, uniquely close to the central city. There is great potential for cycle tourism in Wellington, and recreational cycling contributes significantly to our quality of life.	• **Mountain biking** – develop Wellington into one of New Zealand's premier mountain bike destinations by working with biking groups to extend the network. • **Deliver the Great Harbour Way** – work with NZTA, GWRC, Hutt City Council and other stakeholders to deliver the Great Harbour Way. • **Integrate cycling into the Miramar Peninsula** – work with the community and interest groups to identify additional routes through the peninsula and improve the coastal recreational route. • **Improve safety on other recreational routes** – including routes through Makara and Ohariu Valley.

3. Encourage more public transport use

The public transport network includes rail, buses, trolley buses, taxis and ferries, mostly operated by regional and national government. Wellington City Council, as the manager of land use and the street network, has a key role in integrating public transport with residential and commercial activities, and ensuring the routes people use to get to and from public transport are attractive. Public transport is a considerably more efficient mode for moving people than the private car. It has a much smaller environmental cost, reduces congestion by lowering the number of cars on the road and minimises the need to provide car parking.

Project	Actions
Bus priority - Wellington already has a number of bus lanes and other bus priority measures in place that are working well, but we will need more. Such measures future-proof bus movements from the effects of growing traffic congestion.	• **Deliver bus priority measures** - continue delivering measures, such as bus lanes and bus priority at traffic signals giving buses right of way, along key routes and in conjunction with cycling improvements and regeneration projects. • **Integrate transport and land uses** - when designing the public transport priority spine, key considerations will be ensuring integration with the wider public transport network and other transport modes, including pedestrians and cyclists, and identifying any opportunities for transit oriented development along the spine.
Bus Rapid Transit (BRT) - BRT will be the next step from better Bus Priority. BRT will provide a high-quality public transport spine through central Wellington along a dedicated corridor and using improved vehicles and interchanges.	• **Facilitate the delivery of the BRT spine** - work in partnership with GWRC and NZTA to implement the BRT network. The spine will run along the "Golden Mile", Kent and Cambridge Terraces, then around the Basin Reserve, along Adelaide Road to Wellington Hospital. Another branch will run through the future duplicated Mount Victoria Tunnel, along Ruahine Street and Wellington Road to Kilbirnie town centre. An extension of the spine to the airport will be future proofed. Improvements along the routes to Island Bay, Johnsonville, Seatoun and Karori will also be identified.
Advocate for improved comfort, reliability and affordability of public transport services - while the City Council provides the road network on which buses operate, the train and bus services are managed by the Regional Council (GWRC) who sets the fares and timetables.	• **Work with GWRC to improve the quality of the public transport experience** - this will include working together to help deliver the new route network set out in the Regional Passenger Transport Plan and looking at installing more bus shelters and other amenities to improve passenger comfort. • **Advocate to improve the overall energy efficiency of the bus network** - in particular, increase the use of low-carbon and clean-source energy. Investigate the development potential of the bus terminus - in conjunction with GWRC, consider whether the arrangement of the city's main bus terminus area and railway station could be improved. Improve pedestrian connections from the station and bus terminus into the central city.
Taxis and alternatives - it is not possible to provide parking spaces for all taxis so our focus has long been to provide sufficient adequately located taxi ranks in high-demand areas. We will monitor the emergence of new delivery mechanism.	• **Ensure taxi and similar service type users** are catered for in areas of high demand. • Continue to work with the taxi industry to find innovative ways to **manage taxi ranks more efficiently**.
Ferries	• **Consider more efficient access to inter-island ferries**, including walking and cycling, as part of the port access plan. See Transformational Growth Areas.

Item 3.3 Attachment 1

People movers:
Public transport is key to the successful growth of Wellington.

4. Improve the road network

Our sustainable transport hierarchy recognises in priority order: pedestrians, cyclists, public transport, moving freight and private vehicles. It is imperative that cars and freight vehicles are accommodated on our road network, but are managed in a way that allows the city to continue to grow as a liveable and vibrant place.

Project	Actions
State highway network - to reduce the intrusion of regional and through-traffic on our city streets, we need to support a state highway network that better facilitates the movement of vehicles from the north of the city to the port and through to the end of the state highway at Wellington Airport.	• Help implement state highway improvements as part of the **Roads of National Significance (RoNS) programme** - this NZTA-led programme is focussed on moving people and freight safely and efficiently and include the Ngauranga to Aotea Quay traffic management improvements, Terrace Tunnel duplication, Tunnel to Tunnel improvements, and airport to Mount Victoria Tunnel improvements (this includes the Mount Victoria Tunnel duplication). We will work in partnership with NZTA to leverage maximum benefits for the city from the RoNS projects. This includes integrating the Adelaide Road, the Kent and Cambridge terraces enhancements and Bus Rapid Transit with NZTA's Basin Reserve project. • **Work with NZTA to implement the Petone to Grenada road link** - this proposed road link would improve connections in the region and access to our Northern Growth Area. We will look to maximise the benefits and minimise any adverse environmental and community impacts of this project. • **Support NZTA in delivering the Transmission Gully motorway** - this road will improve access to and from the north into the city and improve the resilience of the transport network. The Council will continue working with NZTA to minimise any adverse impact from the construction and operation of this project.
Improve the local road network	• **Capacity improvements** - improve the capacity of the road network in Johnsonville town centre, Adelaide Road and the complex intersections of Webb Street/Willis Street and Aro Street/Willis Street. • **New roads** - extend the local road network to serve greenfield growth areas north of the city. • **Port and ferry access** - improve access to the port and Interislander ferry terminal from the city.
Review road space allocation - different modes of transport and activities (parking, street trees, tables and chairs) compete for the limited space in our road corridors. The road hierarchy defines the priorities along each type of road.	• **Network operating framework** - develop priorities and principles to be applied when allocating road space across the network. This will vary for different streets depending on their function and the surrounding uses. The provision of bus lanes, cycle lanes, bus stops, loading zones, disabled parking, cycle parking and car parking also need to inform road space allocation. • **Review the road hierarchy map** - to reflect mode share and road space allocation priorities.
Make streets easier to navigate	• **Research network legibility.** • **Review the one-way system** - the one-way system aims to improve the capacity of the network for vehicles. However, there are effects on other road users that need to be reviewed.
Car share scheme(s)	• **Facilitate the provision of a car share scheme(s)** - many residents, particularly in the central city, do not own a car. A car sharing scheme would reduce the need for high cost car ownership and parking.
Best-practice transport modelling	• **Work with NZTA**, industry leaders and other agencies to gather real-time transport information to inform our transport and urban growth decisions.

5. Manage parking more efficiently

The effective movement of people and freight is critical to economic development in Wellington. People use their vehicles in the city for different purposes and we need to cater for these different needs in the most effective way possible. One means of addressing the efficiency of the existing network is through the use of "travel demand management" measures. Travel demand is influenced by the provision of car parking and we will be reviewing the supply and demand for parking as part of comprehensive approach to travel demand management.

Project	Actions
Review and update the Council's parking policy – streets are a significant city asset. We need to be smarter about how we provide parking so people can access the services they need, and so we can also efficiently re-allocate some of the space for other modes.	• **Review and update the Council's on-street parking strategy** – this will include assessing the impact of parking time limits and locations. • **Make parking information accessible** – publishing parking data including occupancy rates, prices and availability so people can find parks more quickly and efficiently. • **Feed into a review of road space allocation** – the provision of on-street car parking needs to be balanced against other needs, eg cycle lanes and bus priority lanes, where the road corridor is constrained. • **Parking enforcement servicing and pricing** – to encourage safe parking and efficient rotation of spaces to support retail and business activity. We will explore new technologies to improve customer experience and efficiency.
Examine levers for private parking	• **Discourage the provision of commuter parking particularly in the central city** – short-stay parking has greater economic benefit than long-stay as it supports retail and business activity. We will encourage the conversion of long-term parking into affordable short-stay parking or other uses. • **Undertake further parking studies** – in collaboration with GWRC, investigate commuter/long stay parking as a demand management measure, taking into consideration both the city and the region's modal share. • **Support "park and ride"** – work with GWRC to provide solutions for locations where people are parking to support their use of public transport (park and ride). This is particularly important in suburban locations where the distance between people's homes and public transport are greater. Locations such as Johnsonville train station are important "park and ride" provisions. • **Parking pricing options** – periodically review pricing options to manage demand. • **Review District Plan provisions** – regarding the supply of parking in residential areas.


High density:
Apartments are an increasingly popular housing choice.

HOUSING CHOICE AND SUPPLY

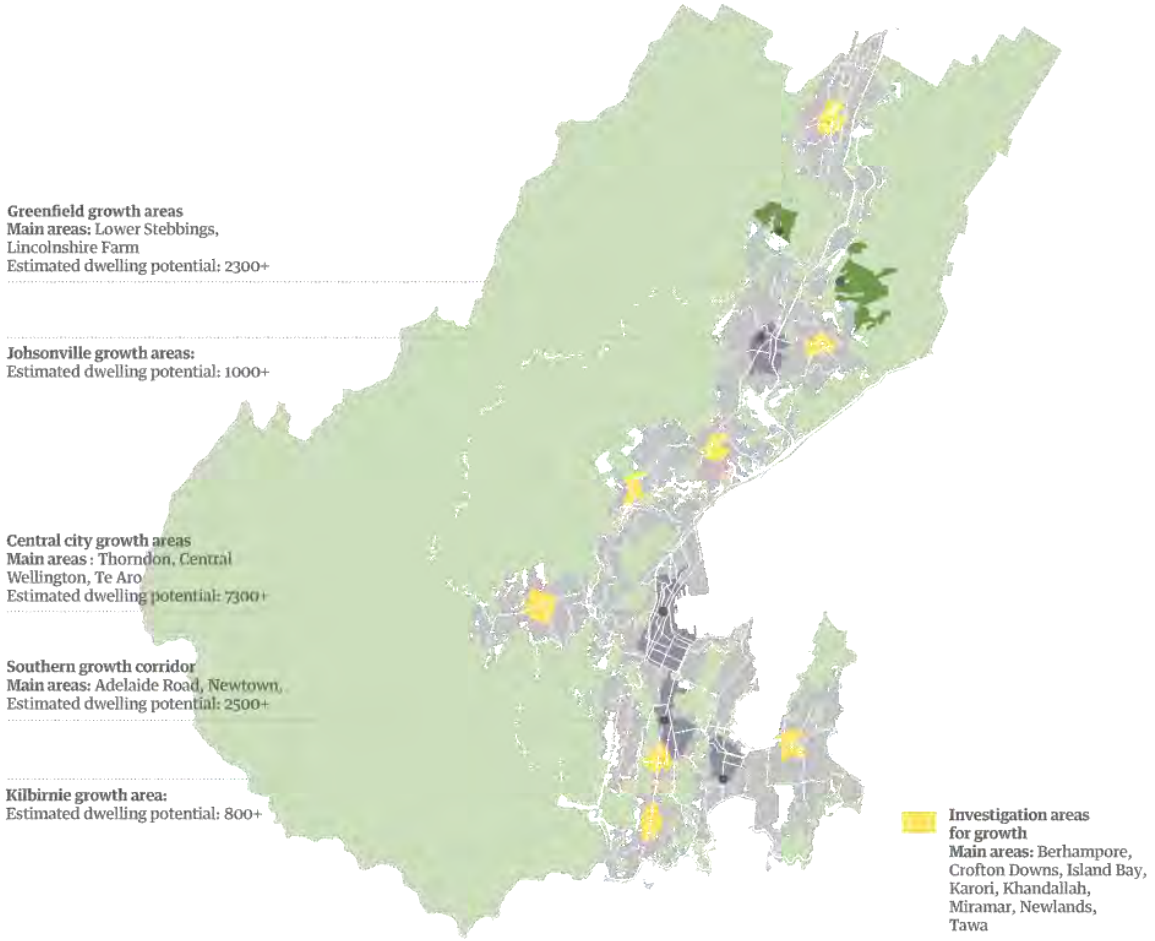
Good quality, affordable housing is essential for the wellbeing of our families, communities and a successful city. The challenge for Wellington as a city is one of choice – continuing to offer a variety of housing options, suitable for residents and families of all types, ages and means, within the bounds of our compact city.

Wellington offers a number of housing types, including cottages and townhouses in the inner suburbs and apartments in the central area. Our suburban housing stock is, however, dominated by a single type: the detached family house. As our population ages and smaller households become more prevalent, we need to facilitate the development of a wider range of housing options to respond to different household needs. Medium-density housing presents an opportunity for providing some of the additional homes we need.

We also need to ensure there is enough housing supply for the growth we expect (approximately 21,400 additional dwellings by 2043), that it is of good quality, affordable, and within easy access to public transport and services. This plan directs most of the residential growth over the next 30 years towards the growth spine, the central city and around key suburban centres, with greenfield areas north of the city also contributing to the supply. The Wellington Housing Accord provides an opportunity to accelerate housing development in suitable areas.

To meet the housing needs of all our residents, we will continue improving our social housing stock and working with Housing New Zealand on enhancing their housing provision. We will also support actions to improve the building performance of existing homes.

Defined growth areas



1. Facilitate medium-density housing

Medium-density housing ranges from stand-alone dwellings that are built on smaller lots through to terraced housing and apartments that are usually three storeys or less. It is a way of increasing density but still providing many of the elements that people like about housing in suburban areas.

Project	Actions
Increase medium-density housing development – encourage high-quality, residential intensification in suitable locations and particularly in our existing Medium-Density Residential Areas (Johnsonville and Kilbirnie).	• **Take an active development role** – partner with external parties to deliver medium-density housing development in existing growth areas to assist or act as a catalyst. • **Remove barriers** – assist external partners to deliver housing that aligns with our vision. Facilitating amalgamation of lots and the like to remove barriers for good quality development. • **Demonstration project** – explore partnerships with housing providers and others to build housing demonstration projects on strategic sites.
Plan for future medium-density areas around key centres in locations that are well-served by public transport, infrastructure, community/recreation facilities and open spaces. The identification of potential medium-density areas will also consider heritage values and existing neighbourhood character.	• **Undertake investigations for suitable areas** including Berhampore, Crofton Downs, Island Bay, Karori, Khandallah, Miramar, Newlands and Tawa. This work will include consultation with the local communities. Work has already begun for Karori and Tawa with an early phase of consultation completed. • **Investigate future opportunities** including public transport corridors, such as future bus rapid transit corridor extension, and other suburban centres.
Improve the quality of medium-density housing – increase the quality of new buildings, private and public amenities, and encourage more efficient use of land.	• **Review multi-unit design guide** – work with architects, developers and other development professionals to improve best-practice apartment and multi-unit development. • **District Plan provisions** – devise planning controls and assessment criteria for new medium-density residential areas that promote good quality developments.

2. Encourage a mix of housing types and more affordable options

This action area recognises that the city's housing goals will not be achieved through the delivery of medium-density housing alone. The Council needs to continue to provide for a range of quality and affordable housing choices to meet the needs of the city's residents.

Project	Actions
Increase housing supply through the Wellington Housing Accord – work with central government on the implementation of a housing accord that assists delivery of housing across a range of locations identified as Special Housing Areas. This includes provision for a mix of housing types: • low-density (stand-alone) • medium-density (townhouses and terraces) • high-density (apartments).	• **Align Special Housing Areas with growth areas** identified for residential development and intensification: – Central city – Adelaide Road – Johnsonville Medium-Density Residential Area – Kilbirnie Medium-Density Residential Area – Lincolnshire Farm residential area – Lower Stebbings Valley. • **Investigate the potential for other Special Housing Areas.**
Increase housing choice through our planning framework – including opportunities for infill and intensification.	• **Consider changes to the District Plan** – this includes reviewing provisions that control infill housing and residential intensification to increase the opportunities for quality compact housing forms in existing suburban areas and areas adjacent to the central city. • **Promote more efficient land use in greenfield areas** – this includes exploring opportunities for denser development and subdivision in parts of identified greenfield areas (eg around local centres and public transport stops), and completing a stocktake of other greenfield expansion opportunities. • **Support tertiary education institutions** – in their provision of student accommodation, especially in the central areas or in close proximity to universities.
Social housing – continue providing an adequate supply of social housing that is well configured and aligned with this Growth Plan.	• **Complete the Housing Upgrade project** – a joint 20-year project with the Crown to upgrade the social housing units owned by the Council. The project's goal is to provide better housing through better insulation, double glazing, ventilation and heating. The project also includes major landscaping improvements to the grounds and better recreation facilities, where tenants can socialise or work on projects. • **Work with Housing New Zealand** – as a major landowner and social housing provider to help it achieve its asset management plans within Wellington and to ensure that these align with our Growth Plan.
Improve housing quality – we want existing and new houses to be warm and dry, energy and water efficient, resilient to earthquakes and, where possible, to use renewable energy.	• **Building performance** – support actions that improve basic housing quality standards such as insulation. • **Warrant of Fitness for rentals** – develop a voluntary rental housing Warrant of Fitness (WOF) programme. • **Universal design** – encourage designers to consider accessibility and safety in new and retrofitted housing.

Item 3.3 Attachment 1

Affordable housing:
Award-winning Council housing in Newtown.

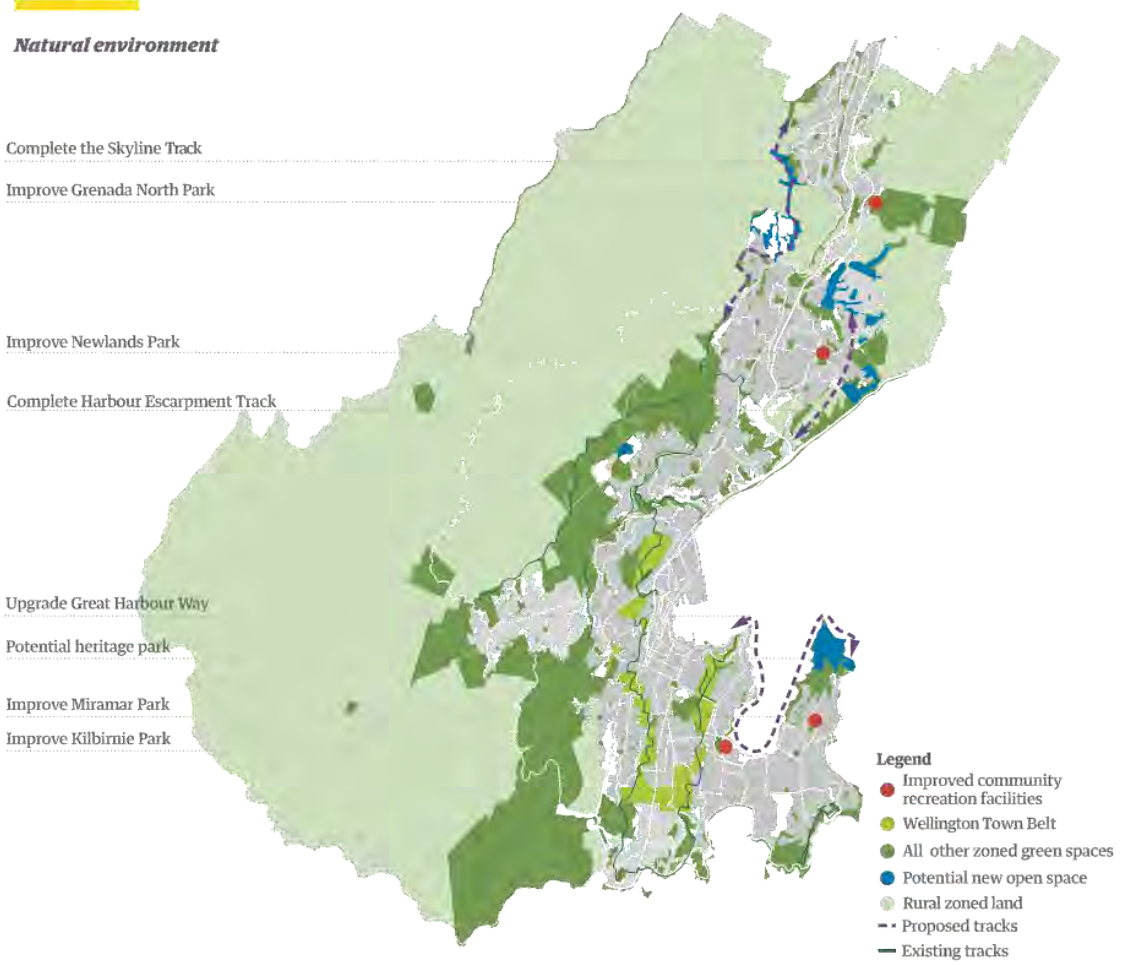
NATURAL ENVIRONMENT

Our natural assets - including our green belts, reserves, streams and coastline - define the layout of the city, and good access to them is one of the things people love about Wellington. They are also home to the species and ecosystems that support us - our natural capital. These in turn provide ecosystem services, such as water management, carbon sequestration and storage, moderation of extreme weather events, prevention of erosion, as well as other services such as tourism, recreation, health and wellbeing.

We need to recognise the ecological, recreational and other benefits of our natural assets and align our investment accordingly.

New subdivisions, buildings and transport can have a significant impact on the natural environment. As we grow, we need to minimise such impact through encouraging the uptake of green-rated buildings, water-sensitive urban design, low-carbon transport solutions, and integrated water catchment plans.

Natural environment



1. Enhance our natural assets

We need to ensure the natural environment is woven through the fabric of the city and that people continue to have good access to nature. We also need to support the development of sufficient open spaces, track connections and recreational facilities in locations identified for growth.

Project	Actions
Implement Our Natural Capital - Wellington's Biodiversity Strategy and Action Plan.	• **Protect** - priority sites and species are protected and the impact of urban growth and human activity is managed. • **Restore** - ecological networks are developed across the city to support movement of key indigenous species and ecosystem function is restored. • **Connect** - all Wellingtonians encounter nature on a daily basis in the city. • **Research** - we have a better understanding of how indigenous species interact with the urban environment in Wellington.
Implement Our Capital Spaces - the open space and recreation framework for Wellington.	• **Provide recreation and sports facilities** - to meet the needs of communities. • **Review the provision of open spaces** - in existing suburban areas to accommodate population growth. • **Open space network in greenfield subdivisions** - design the network to ensure new residents have good access to neighbourhood parks and other outdoor recreation opportunities. • **Central city and waterfront** - deliver new and improved parks in the inner city to support new residents, including an extension of the waterfront promenade to Shed 21 and the train station.
Align investment in the natural environment with the plans for growth - ensure Council investment in open spaces supports planned population growth.	• **Greening Central Wellington** - continue implementing the "Greening Central Wellington" vision. • **Tracks** - complete the Skyline and Harbour Escarpment tracks and links to adjacent suburban communities. • **Explore policy and planning amendments** - review the District Plan provisions to protect and enhance the city's natural environment (including natural landscapes and open spaces, indigenous biodiversity and ecological areas). • **Watts Peninsula Reserve** - develop the northern part of Miramar Peninsula into a heritage reserve in partnership with the Crown and Port Nicholson Block Settlement Trust.

Tūi:
Wellington is home to an increasing amount of biodiversity.

2. Reduce the environmental impacts of urban development and transport

This action area is about supporting projects to reduce the negative impacts of the city's growth on the environment, including greenhouse gas emissions.

Project	Actions
Plan for water catchments as we grow – we need to consider the impact our city's growth may have on water systems. This includes the harbour and coast, the streams that run under the city, and waterways that run through our gullies. These systems should be a celebrated part of both the natural and urban environments.	• **Integrated catchment management plan** – maximise our natural water assets by implementing the integrated catchment management plan for the city; work with developers and other partners to protect, enhance and improve access to the city's natural "blue" environment; and take opportunities to increase the city's green infrastructure. • **Minimise the harm of development on our water systems** – work with partners to continue reducing sediment and sewage contaminants in the city's water systems. • **Support water-sensitive design** – make water-sensitive design common practice for all public works, where appropriate. This will include major roading, drainage, streetscape, park and reserves projects, with initial projects proposed for key central city streets. Support the use of green walls and roofs. Add a water-sensitive urban design chapter to the Council's Code of Practice for Land Development and incorporate principles into the Regional Standard for Water Services. Provide education and awareness opportunities throughout the city, especially to private developers.
Support greenhouse gas reductions – most of Wellington's greenhouse gas emissions come from energy to power homes, commercial buildings and transport. We need to encourage the development of more energy efficient, low-carbon buildings, public transport and private vehicles.	• **Support electric vehicles** – support and plan for the increasing uptake of electric vehicles by residents and businesses by working with government, industry partners and businesses. • **Support smart technologies** – facilitate the development of a smart grid system. • **Adopt business management practices** (eg internal operations, service provision, asset and property maintenance) that ensure the Council becomes a leader in clean business.
Encourage sustainable buildings – sustainable buildings can help reduce energy bills for occupants, lower maintenance costs for owners, and reduce the city's greenhouse gas emissions.	• **Encourage green standards for new builds** – investigate mechanisms for achieving higher levels of sustainability for new residential and commercial buildings, including incentives and regulation. • **Encourage green standards and adaptive reuse of existing buildings** – to meet the changing needs of tenants and users, existing buildings should gradually be brought up to current building standards and include sustainable features. We will investigate mechanisms to facilitate this. • **Low-impact design** – encourage low-impact design in new subdivisions, new buildings and retrofits.
Support small-scale renewable energy generation – such as solar systems and small-scale wind turbines.	• **Remove regulatory barriers** – provide an encouraging planning environment for renewable energy generation.

CITY RESILIENCE

This action area is about ensuring the city is resilient and able to positively respond and adapt to the risks posed by natural hazards, such as earthquakes, and the effects of climate change, such as rising sea-level and more extreme weather events.

We lead the country in terms of resilience management through identifying earthquake-prone buildings and planning for emergencies. We are committed to maintaining this leadership role and want to support the continued improvement of the city's buildings stock and infrastructure to make them more resilient.

1. Continue to provide leadership in resilience

We need to continue the earthquake strengthening of key public buildings and infrastructure; explore other mechanisms and incentives for the strengthening of private buildings (especially heritage buildings); and support further planning, adaptation and mitigation to respond to the threats from climate change.

Project	Actions
Implement our Climate Change Action Plan to adapt to a changing climate including sea-level rise, storm surges, rising water tables, coastal erosion and effects on coastal infrastructure.	• **Coastal resilience** - continue planning around the risk of more severe storms and sea-level rise. Implement the NZ Coastal Policy Statement through the District Plan. • **Explore policy changes** - take into consideration the risk of sea-level rise, severe storms and natural hazards when considering land use intensification such as new Special Housing Areas and Medium-Density Residential Areas. Direct major growth to areas where the risks from natural hazards and climate change can be avoided or mitigated. • **Analysis of the potential impacts** of storm surges, floods, landslides, slope failure, liquefaction, ground shaking and fault lines on the city's buildings and structures will continue as the background for our investment decisions as well as the Regional Hazards Management Strategy.
Resilience strategy	• **Develop a comprehensive resilience strategy** - to inform the Council's policy, regulatory and investment decisions to make Wellington a more resilient city.

Encourage the earthquake strengthening of buildings by working with partners, developing a range of incentives, and by the Council leading by example with its public building upgrades.	• **Help preserve Wellington's heritage buildings** - support the earthquake strengthening of key heritage buildings. • **Help preserve Wellington's heritage areas** - by continuing to work with building owners and other key stakeholders in Cuba Street, Courtenay Place and the Newtown heritage areas, considering financial incentives, and providing information and design guidance. • **Complete the upgrade of Council-owned public buildings** that will be critical facilities in the event of an earthquake. • **Work with partners** (including central government, private sector and the banking and insurance sectors) to develop stronger incentives for owners upgrading earthquake-prone buildings (eg add to the Council's Built Heritage Incentive Fund and earthquake-strengthening incentives package).
Increase the resilience of the city's buildings, structures and infrastructure through research, planning and investment.	• **Undertake the assessment of post-1976 buildings** for earthquake risk. • **Work with central government** to develop new legislation for building strengthening. • **Prioritise vulnerable essential infrastructure for upgrade** - complete a study of the capacity, age and state of existing infrastructure and use this to inform the Council's infrastructure upgrade priorities and investment programme. • **Continue work on It's Our Fault** - seismic risk assessment and mitigation, with GNS Science. • **Work with partners and the community to roll out best-practice responses** - such as our Quake Check for existing houses and infrastructure, and for new buildings in hazard areas.
Secure and protect key resilience infrastructure	• **Secure access routes** - address hazards along key access routes: earthquake-prone retaining walls, building facades and verandahs. • **Secure critical public infrastructure and emergency lifelines** - continue to make critical public infrastructure more resilient. Develop a strategy for ensuring access and protection of buildings and essential services. • **Help secure other networks and facilities** – work with NZTA, Wellington Electricity Lines Ltd, Wellington Water and others to increase the resilience of state highway; power, water and telecommunication networks; and port, airport, education, health and other key facilities.

4.0 DELIVERING THE PLAN

Delivering the Urban Growth Plan will involve a number of parties including:

- the Council - with its direct investment in infrastructure and facilities in the Long-term Plan, its regulatory role (eg administering the District Plan), and policy role (eg Climate Change Action Plan)
- central government - with its funding of transport projects and social housing upgrades, and legislation (eg changes to the Resource Management Act)
- other infrastructure and service providers
- developers and investors
- community and non-government organisations.

A separate implementation plan details the Council's actions and investments to deliver the Urban Growth Plan. It identifies high priority investments over the next one to three and four to 10 years, which are the terms of the Long-term Plan. It also identifies, in less detail, investment beyond the 10-year horizon of the Long-term Plan.

Under construction:
Building is happening throughout Wellington.

To achieve some of the projects and outcomes identified in the plan, the Council may need to be more proactive in the development sector. For example, the Council could invest in identified growth areas (eg in the central city, around suburban centres and along key transport corridors) to help attract private investment and development. In such places, we will explore more active approaches, which could include purchasing and assembling land parcels, partnerships with public or private sector parties, and the development of demonstration projects.

Investment requirements

Realising the plan's vision and providing for the city's future growth and development will require significant ongoing investment, particularly in infrastructure.

One of the most significant investment mechanisms we have is to manage demand rather than simply assume the need for new investment across the board. Compact cities are inherently more efficient than sprawling ones, and intensification in existing urban areas further reduces the need for additional infrastructure.

The plan therefore seeks to build on our investment to date by directing new residential and employment development towards parts of the city where there is sufficient infrastructure already in place, or where we are planning infrastructure renewal or upgrades.

Details of the Council's investment to support the Urban Growth Plan are contained in the Implementation Plan, and will be consulted on and adopted through the Long-term Plan process.

Implementation approach

The following outlines our approach for delivering the outcomes and actions of the plan.

1. Aligning the Council's internal operations

Wellington City Council is a significant organisation that owns and maintains assets worth more than $6 billion. Achieving the outcomes of this plan will require alignment of our assets planning, maintenance and renewals; management of our land uses, open space, recreation and community facilities; policy-making; and regulatory activities.

2. Securing central government investment

Central government is a key partner in the delivery of the plan. The plan identifies priority projects and infrastructure investment that involve joint funding by central government and the Council. This will help us and central government maximise the outcomes of our investment in the city.

3. Developing a sustainable financial strategy

We will use this plan to help prioritise our investment in line with our projected growth. The plan will be critical in the development of our financial and investment strategies – for example, the Strategic Asset Management Framework, Long-term Plan and Financial Strategy. These strategies will detail our activities and investment to support growth and development, and will also identify partner contributions.

4. Building long-term partnerships

The Council will not be able to deliver this plan on its own. We'll need to work with others to encourage and guide investment, and to remove barriers to the delivery of projects. This includes partnering with the private sector, government agencies, tertiary education institutions, Māori stakeholders and investors, other Wellington councils and the wider community, to deliver projects.

We will also need to communicate and advocate for the plan's vision so others have clarity about Council investment and phasing, and have confidence to invest in the plan's vision and city development projects.

5. Matching implementation tools with the outcomes sought

Achieving the plan's goals and outcomes will require the use of a range of different implementation tools and funding mechanisms. Some actions will be led by the private sector, while others will require Council leadership and/or joint action and investment. Some projects may require the formation of multi-stakeholder project groups; planning or financial incentives; design guidance or infrastructure upgrades. We will select the tools appropriate to each situation.

5.0 REVIEWING THE PLAN

Effective monitoring and review processes are critical to the successful implementation of this plan. They will ensure that the steps we are taking are setting us in the right direction to achieving our long-term objectives.

Monitoring the plan's implementation will be integrated with the monitoring and evaluation the Council already carries out to evaluate the effectiveness and efficiency of its activities and programmes. Key progress indicators may include:

- Council delivery of transport and infrastructure improvements
- changes in journey patterns and mode share
- the location and type of new housing development
- the number and location of new greenfield residential subdivisions
- intensification activities (eg resource consents numbers) in identified growth areas
- improvement projects in public spaces and centres implemented
- investment in parks and green infrastructure
- earthquake strengthening of buildings (eg building consent numbers) and infrastructure
- steps taken to protect our infrastructure and urban areas from the impacts of climate change.

The Urban Growth Plan and associated implementation plan will be reviewed and updated every three years to inform the Long-term Plan process.

Item 3.3 Attachment 1

APPENDIX A

Key relevant policies and plans

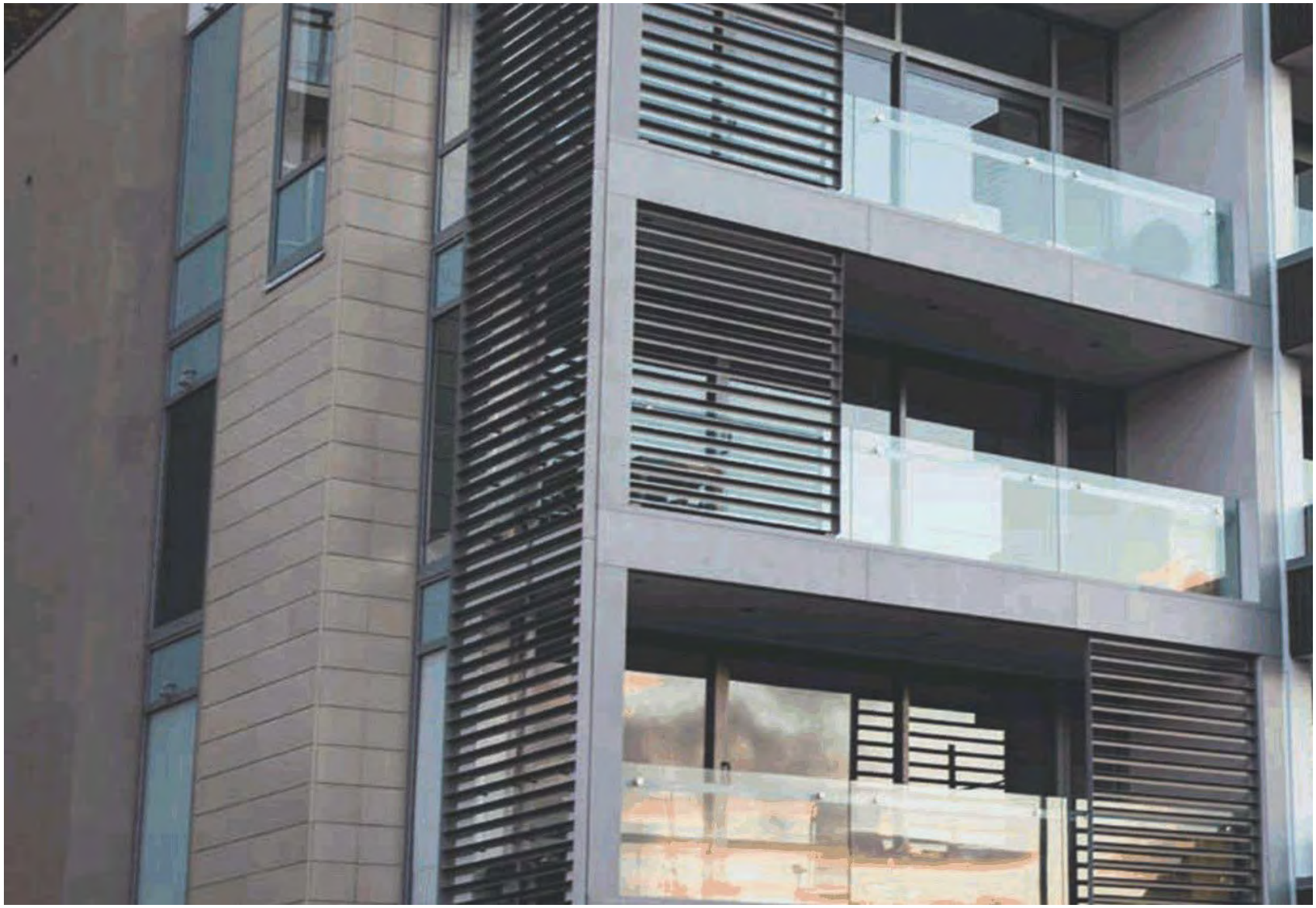
- Accessible Wellington Action Plan 2012 / 2015 (2012)
- Biodiversity Action Plan (2007)
- Business Improvement District Policy (2013)
- Centres Policy (2008)
- Climate Change Action Plan (2013)
- Community Facilities Policy (2010)
- Cycling Policy (2008)
- Development Contributions Policy (2014)
- Earthquake-prone Buildings Policy (2009)
- Heritage Policy (2010)
- Our Capital Spaces (2013)
- Parking Policy (2007)
- Public Space Design Policy (2010)
- Walking Policy (2008)

Source documents

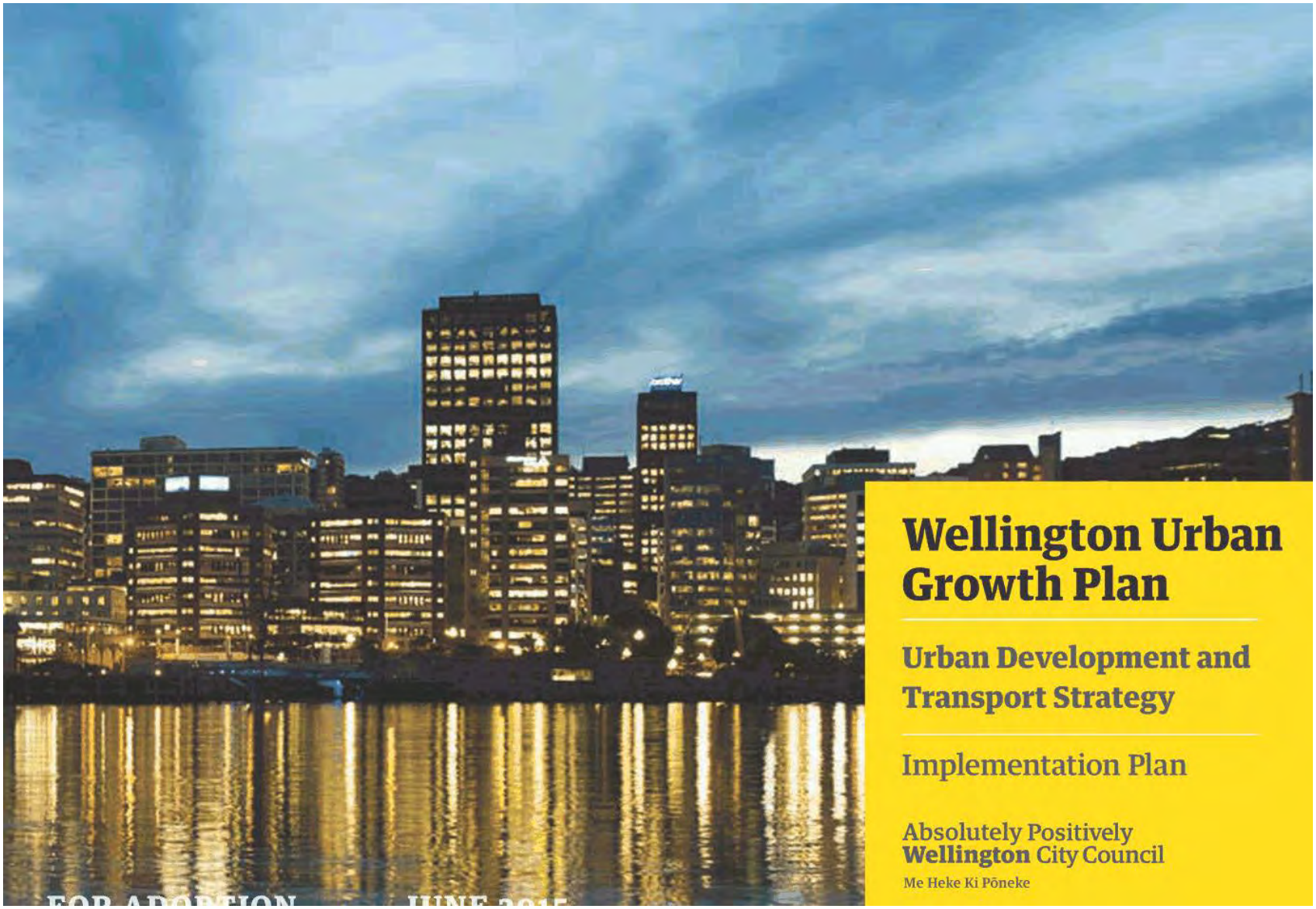
- Central City Framework (2011)
- Central City Framework: Approach to Implementation (2013)
- Space Syntax: City Centre Movement Infrastructure Analysis (2011)
- Adelaide Road Framework (2008)
- Kilbirnie Town Centre Revitalisation Plan (2010)
- Newlands Centre Plan (2010)
- Northern Growth Management Framework (2003)
- Transport Strategy (2006)
- Urban Development Strategy (2006)
- Waterfront Framework (2001)
- Wellington Towards 2040: Smart Capital (2011)
- City to Waterfront: Public Spaces and Public Life Study, Jan Gehl (2004)
- 8 Big Ideas (2014)
- Greening Central Wellington (2002)

Item 3.3 Attachment 1

Neighbourhood character: *Early Wellington housing gives the city character.*



Item 3.3 Attachment 2



CONTENTS

EXECUTIVE SUMMARY

This document presents priorities for action and investment for the urban development and transport projects identified in the Wellington Urban Growth Plan 2014-43.

The recommended top priority or "flagship" projects for the next 10 years include:

- **Quick wins** that are ready for implementation – Victoria Street precinct, Lombard Lane and North Lambton Quay.
- **On-going programmes** spanning the whole 10 years of the Long-term Plan - cycle network improvements, bus priority measures, support for the earthquake strengthening of heritage buildings and activation of our laneways.
- **Short-term projects** that can be delivered or should be started in the first three years of the Long-term Plan - North Kumutoto sites 8 and 10, Shelly Bay redevelopment, Watts Peninsula reserve, Te Aro regeneration, Special Housing Areas, new medium-density residential areas and town centre plans for Tawa and Karori.
- **Medium-term projects** that require further planning or development and are recommended for the later years of the Long-term Plan - Adelaide Road, Cambridge and Kent terraces, Petone to Grenada link road, Northern Growth Area link roads, inner city RoNS and Aro Street improvements.

In addition to the flagship projects, the document provides a timeline for the funding and implementation of all other projects identified in the Urban Growth Plan.

Item 3.3 Attachment 2

Earthquake strengthened:
Ombra on Cuba Street.

1.0 INTRODUCTION

This document accompanies the Wellington Urban Growth Plan 2014-2043. It recommends a timeline to implement the projects and actions contained in the Urban Growth Plan, and highlights priorities for Council investment.

The Implementation Plan is intended to inform the funding decisions to be made in the 2015-25 Long-term Plan process.

Once funding has been allocated for specific projects in the adopted Long-term Plan, the Implementation Plan will be finalised with detail added around how we will measure success for various projects and how we will monitor our progress.

Setting priorities

In assessing the order of priority of projects, we have first considered their strategic fit against the two key documents guiding the city's urban and economic growth. These are the Wellington Urban Growth Plan and 8 Big Ideas: An Economic Growth Agenda for the City.

The Urban Growth Plan seeks to manage our projected population and urban growth whilst ensuring the city remains compact, liveable, set in nature and resilient. This translates into projects to deliver urban regeneration, vibrant centres and improved transport; increase our housing supply and choice; protect the city's natural environment; and improve our resilience.

The 8 Big Ideas document sets out a priority agenda for economic growth in the short term. It seeks to deliver sustainable economic growth that in turn supports high standards of living and improved public services for our communities. It contains proposals to deliver a film museum, international air connections, a tech precinct, conference and concert facilities, a Miramar Framework and better land transport options. It includes an "open for business" approach to Council activities. It also aims to maintain and enhance the city's liveability.

In addition to the strategic fit of projects, we have also considered the following criteria when identifying priorities:

- **Reach** - whether the project will positively impact the city beyond its immediate context.
- **Multiple benefits** - whether the project will generate benefits on a number of fronts, eg a regeneration project may incorporate public transport priority measures, cycle and pedestrian improvements, increased amenity, and help trigger private investment in the area.
- **Readiness to proceed** - whether a project has reached an advanced stage of planning and design thus removing the uncertainties around delivery and costs.

- **Enabling works** - where Council action or investment is necessary to allow private investment to occur, eg building roads to service new residential areas or upgrading a lane to facilitate the redevelopment of adjoining buildings.
- **Market failure** - where development is constrained due to fragmented land ownership, the environment is degraded or property owners cannot afford redevelopment or earthquake strengthening. In these situations, Council intervention may be needed to change the negative perception of an area and give the private sector confidence to invest.
- **Leveraging funding** - where Council funding means that significant additional funding is brought to the city, eg our investment in the cycle network is matched by funds from the NZ Transport Agency (NZTA).
- **Regulatory framework** - where changes to the District Plan or Council policies are the first step needed in accommodating growth, eg identifying Special Housing Area and Medium-Density Residential Areas.

We have identified three levels of priority:

- **Priority 1** - projects ranking highest against the above criteria. These are classed as "flagship projects" and are considered essential to delivering the outcomes of the plan.
- **Priority 2** - second highest ranking projects. These make an important contribution towards achieving the outcomes of the plan.
- **Priority 3** - these projects rank lower against the criteria but provide valuable opportunity to support growth as funding becomes available.

All projects featured in the Urban Growth Plan are listed and prioritised in the following sections of the document. We have separated out the flagship projects, ie the Priority 1 projects that should be given highest funding and implementation support as they have the greatest potential to deliver on the outcomes of the plan and 8 Big Ideas. The flagship projects are presented first followed by all other projects.

Time horizon

The projects are divided between short-term (years 1 to 3 of the LTP), medium-term (years 4 to 10 of the LTP) and long-term (beyond 10 years) projects.

Those projects that fall within the short-term category need firm funding and implementation commitments so as to form an immediate plan of action for Council teams.

The projects that fall under the medium- and long-term categories require further investigations, planning or design. They are generally less well defined than short-term projects and, as growth pressures change over time, are also more likely to require refinement or reconsideration.

Both the Urban Growth Plan and the Implementation Plan will be updated every three years. This provides an opportunity to refine or reprioritise the projects that fall under the medium- and long-term categories ahead of the next Long-term Plan process in 2018. Some medium- and long-term projects will, however, require significant funding and therefore need to be budgeted for ahead of time.

Outcomes

The projects contained in the Urban Growth Plan aim to deliver the following outcomes:

- urban regeneration
- transport improvements
- increased housing supply and choice
- protection and enhancement of the natural environment
- increased city resilience.

For ease of reference, the projects are grouped by type of outcome.

Item 3.3 Attachment 2

People movers:
Public transport is key to the successful growth of Wellington.

2.0 PRIORITY ONE: FLAGSHIP PROJECTS

This section presents our top priority projects for the next 10 years. These projects are considered essential to delivering the outcomes of the Urban Growth Plan. Some of these projects are complex and will be delivered over a period of many years while others are simple, "quick wins" that are able to be delivered immediately to set in motion incremental change in an area.

The diagram opposite shows the proposed sequencing of the flagship projects. This seeks to have projects starting as soon as practicable while recognising that some works, such as street upgrades, need to be staged so as not to cause widespread congestion. Large projects have also been spread to even out the funding burden. Some programmes of work (eg cycle network) are on-going and expected to span the full Long-term Plan period.

More detail explaining the flagship projects follows.


Project
2015-16 Year 1
2016-17 Year 2
2017-18 Year 3
2018-19 Year 4
2019-20 Year 5
2020-21 Year 6
2021-22 Year 7
2022-23 Year 8
2023-24 Year 9
2024-25 Year 10
Urban regeneration
Victoria Street precinct
Lombard Lane
North Lambton Quay
North Kumutoto site 10
Shelly Bay redevelopment
Te Aro regeneration
Adelaide Road
Cambridge and Kent terraces
Laneways activation
Transport improvements
Cycle network
Bus priority
Petone to Grenada
Aro Street
Inner-City RoNS
Housing supply and choice
Special Housing Areas
New medium-density areas
Town centre plans for Tawa and Karori
Northern Growth Area link roads
Natural environment
Watts Peninsula Reserve
Resilience
EQ strengthening of heritage buildings
Project stages:
Planning and design
Construction

Quick wins

These projects are simple initiatives that align with the Urban Growth Plan's strategic direction and are ready to proceed immediately.

Victoria Street precinct

Description: Victoria Street precinct is both a street upgrade and an urban regeneration project. It includes physical works to improve the street for various modes of transport, and facilitation work to stimulate the redevelopment of adjoining sites.

The street upgrade includes:

- realigning, widening and significantly improving the footpaths on both sides
- planting 55 new street trees
- retaining the existing road width to allow for future bus and cycling improvements
- developing new paved parks at the corner of Ghuznee Street (Volunteer Corner) and near the intersection with Vivian Street where the triangular slipway is at the moment
- a 1.7-metre-wide southbound cycle lane between parked cars and the traffic (cyclists currently share a 3-metre-wide lane with general traffic)
- a new left-turn lane onto Vivian Street
- evening peak-hour clearways on both sides of the road between Vivian and Abel Smith streets.

The Council will also help facilitate the redevelopment of sites along Victoria Street by working directly with developers and landowners. This is expected to provide more than 1100 new apartments for 2500 residents and 37,000 square metres of commercial or retail space. The Victoria Street precinct will also accommodate a combined Whitireia and WelTec campus for more than 1000 students.

Benefits: A compact city - increased residential density and student numbers in the central area. A liveable city - new retail and commercial spaces, as well as improved transport movement and pedestrian amenity. A city set in nature - continuing the greening of the central area. A resilient city - encouraging residential intensification in an area of the central city that is not hazard-prone, renewing our building stock and strengthening existing earthquake-prone buildings.

Time frame: Work on the street upgrade is well under way and expected to be completed in 2015. Private investment in new and upgraded buildings will span a longer time frame.

Item 3.3 Attachment 2

Victoria Street:
Artist's impression of the upgraded street.

Lombard Lane:
Artist's impression of the upgraded lane - Jasmax

Lombard Lane

Description: Cook Strait Properties Ltd is proposing to redevelop its site at 113 Victoria Street. The site lines the west side of Lombard Street and the south side of Denton Park. The proposed development will include new retail units along Lombard Street and eateries facing onto Denton Park. The quality of the public spaces along both these facades is currently very poor so the redevelopment is reliant on the street and park being upgraded.

The improvements proposed include restricting vehicle access along the narrowest part of Lombard Street, providing new paving and lighting to create an attractive and safe environment for pedestrians along the lane, extending and redesigning Denton Park to maximise its use throughout the day and evening, and maintaining a safe pedestrian crossing at the junction of Bond and Victoria streets.

Benefits: The project will generate new economic activity in the area (restaurants, cafes and shops), will increase the amenity of Denton Park for all, and will improve the safety of the lane at night. The Council's investment in the upgrade will be more than matched by private investment in a new building that in turn will generate additional rates.

Time frame: The upgrade is planned to follow the building redevelopment, which is scheduled to take place in 2016. The upgrade is expected to be completed in 2017.

Cost: $1.5 million for the lane and park upgrade.

Current state of Lombard Street

North Lambton Quay

Description: The area around the northern end of Lambton Quay is a very important part of the "Golden Mile", which runs from Courtenay Place to Wellington Railway Station. It is home to a high concentration of office workers and central government departments but currently lacks the street vitality of other parts of the Golden Mile. This project is about improving street life in this area through localised pedestrian and amenity improvements. The project also supports the central government's office accommodation review.

The project includes:

- an upgrade of Stout Street between the MBIE and Public Trust buildings. This involves widened footpaths, new street trees and seating. Stout Street provides a direct connection between the North Lambton Quay area and the train station
- improved pedestrian crossing of side streets connecting onto The Terrace
- improved pedestrian amenity at the corner of Bowen Street and The Terrace
- widened footpath along part of Featherston Street next to the Z petrol station to improve the link between the North Lambton Quay area and the train station.

Benefits: Improved pedestrian amenity and safety in areas with high traffic volumes.

Time frame: Designs are ready to be implemented and can be delivered in the first few years of the plan.

Cost: $1 million.

Current state of Stout Street

Item 3.3 Attachment 2

North Lambton Quay:
Artist's impression of the Stout Street upgrade.

On-going programmes (years 1 to 10)

These projects are fundamental components of the Urban Growth Plan that are already under way and expected to continue for the full duration of the Long-term Plan.

Cycle network

Description: Over the next 10 years, we will be undertaking works to establish a strategic cycling network and improve local cycling routes. These works will join schools, tertiary campuses and businesses, and connect the city's cycle network with the growing regional and national networks.

This strategic network will be delivered in six packages guided by the Wellington Cycling Framework:

- Central City - providing the heart of the network between the Basin Reserve, Oriental Parade and Wellington Railway Station
- Eastern - providing links from the city and Newtown to Kilbirnie, Lyall Bay and Miramar
- Petone - linking central Wellington to Ngauranga and Petone
- Northern - connecting Ngaio, Khandallah, Johnsonville, Newlands, Tawa and Linden to the city and harbour
- Southern - connecting Newtown, Berhampore and Island Bay with the city
- Western - connecting Aro Valley, Brooklyn, Kelburn, Karori and the city

We will seek to take advantage of the central government's Urban Cycleway Fund by working collaboratively with NZTA to deliver the Central, Eastern and Northern packages in the first three years of the Long-term Plan.

Benefits: Greater transport network efficiency, effectiveness and resilience; Wellington becoming a more sustainable, liveable and attractive city; and improved safety for people on bikes.

Cost: $51 million, including external funding from NZTA and the Urban Cycleway Fund.

Bus priority

Description: Bus priority measures give buses priority over other traffic. Wellington already has a number of bus lanes and other bus priority measures in place that are working well, but we need more.

The Council plans to gradually expand the city's network of bus lanes and introduce other bus priority measures. Bus priority schemes are planned for the major suburban routes to Kilbirnie via Newtown and Hataitai, north via Hutt Road and Thorndon, and to Island Bay, Brooklyn, Karori and through Mt Cook.

Benefits: Bus priority measures make travel by bus more attractive and reliable; encourage a shift from private cars to public transport; provide a more efficient and environmentally friendly means of transport; future-proof bus movements from the effects of growing traffic congestion; help buses bypass congestion thus reducing journey times; and help reduce carbon emissions.

Cost: $21 million, inclusive of NZTA subsidy. This is in addition to the funding allocated to the Adelaide Road and Cambridge and Kent terraces projects, which include bus priority measures.

Earthquake-strengthening of heritage buildings

Description: The Built Heritage Incentive Fund (BHIF) helps with conserving and restoring Wellington's heritage-listed buildings. The fund's focus is on earthquake strengthening, including initial engineering report or assessment and grants towards the actual strengthening work.

Benefits: Resilience through improved building stock and preservation of our built heritage.

Cost: $750k in Year 1, $1.25 million in Year 2, $1 million in Year 3, and $400k per year for years 4 to 10.

Laneways activation

Description: The city has a number of lanes that are under-utilised, unattractive or unsafe. Lanes provide short-cuts for pedestrians through large urban blocks and, if lined with shops, cafes and other public uses, they can contribute to the liveliness of the city. This project is about increasing the level of economic activity and pedestrian movements along inner-city lanes. The locations to be considered may include Bond Street, Mason's Lane, Cable Car Lane, Garrett Street, Wigan Street, Left Bank, Felix Lane and Edward Street.

Benefits: The project will generate new economic activity, improve pedestrian amenity, make lanes safer, and generally contribute to the city's liveability.

Cost: $400k per year over 10 years.

Short-term projects (years 1 to 3)

These projects have been sufficiently planned or developed to make them suitable for implementation in the first three years of the Long-term Plan.

North Kumutoto sites 8 and 10

Description: The waterfront's site 10 is to be developed with a five-storey building providing a mix of commercial, retail and public areas on the ground floor with four levels of premium quality office space above. More than 60 percent of the ground floor will be publicly accessible, which potentially could include a cafe and other commercial uses. The ground floor will also include a creative business hub. The building will provide sheltered walkways on both sides and have a diagonal cut through the ground floor, providing a visual and physical connection between Waterloo Quay and the harbour. The development will also include more than 9000 square metres of high-quality public space, including the landscaping of site 8.

Benefits: The project will generate new economic activity in the area. It will potentially accommodate in excess of 500 additional central city office workers and will provide improved amenity for pedestrians along both the waterfront and Waterloo Quay. The new open spaces will add to what the waterfront already has to offer.

Time frame: Resource Management Act consents are expected to be obtained in 2015 with the construction work starting in early 2016. The building is planned to open in late 2017.

Cost: The building is funded by the developer. The development of the public open space will be funded by the Council with proceeds from the development.

Item 3.3 Attachment 2

North Kumototo: *Artist's impression of new open space and building - Athfield Architectus and Isthmus.*

Miramar Peninsula:
Watts Peninsula, Mount Crawford and Shelly Bay from above.

Shelly Bay redevelopment

Description: The former Shelly Bay defence base is under-utilised and in need of investment. Part of this site is owned by Port Nicholson Block Settlement Trust (PNBST) and the rest by the Council. With its prime waterfront location and secluded setting at the edge of Watts Peninsula, this site offers a unique opportunity for high-quality mixed-use development providing both residential accommodation and public uses.

To facilitate development, the Council needs to review the regulatory framework applying to the site, work with the PNBST leaseholder, consider hazards, develop a plan for upgrading the infrastructure network, and review its ownership interest. A joint masterplanning exercise between the Council and PNBST is the first step recommended towards delivering a long-term solution for the site.

Benefits: Economic development through construction activities in the short term, and tourism, retail and commercial activities in the long term. Provision of housing on previously developed land ("brownfield") contributes to keeping our city compact.

Time frame: Joint masterplanning is recommended to start in 2015. Any District Plan change arising from this work will follow the normal regulatory process and timeline. Any investment in infrastructure upgrades will be considered in the subsequent Long-term Plan (2018-28).

Cost: $100k for the masterplanning in 2015-16

Watts Peninsula Reserve

Description: The Crown has agreed to protect, preserve and develop the former defense force land on Watts Peninsula as a distinctive national destination that will bring together the natural environment with venues for the celebration and enjoyment of national heritage, recreation, culture and the arts.

In September 2014, the Council signed a Memorandum of Understanding (MOU) with the Crown and PNBST to prepare a future vision for the development of Watts Peninsula. The concept centres on the development of a heritage park and associated development.

Benefits: Protection and promotion of an important historical site and natural landscape. The heritage park will contribute to achieving the recreation and biodiversity outcomes of Our Capital Spaces strategy. It will also contribute to our tourism offer and support investment at Shelly Bay and adjoining sites.

Time frame: Joint planning started when the MOU was signed. It is recommended this work ramps up in 2015/16.

Cost: $3.25 million from the Charles Plimmer Bequest is to be set aside to help fund a specific project as part of the park development.

Te Aro regeneration

Description: The area located between and including Taranaki Street and Kent and Cambridge terraces has changed significantly over the last decade with numerous apartment developments, the opening of the Arras Tunnel and the construction of Pukeahu National War Memorial Park. The area contains a high number of earthquake-prone buildings that will require strengthening or demolition over the next 10 to 15 years, as well as low-quality buildings that are under capitalised for the location. Situated next to the central city and waterfront, the area has strong locational advantages that will continue to drive investment in the future.

To maximise the benefits to the city and future residents of development in the area, the Council needs to review its planning framework for the area and communicate a clear vision to investors, developers and stakeholders involved in shaping the area.

Benefits: Coordinated approach to investment.

Time frame: Planning for the area is recommended to start in 2015. Any District Plan change arising from this work would follow the normal regulatory process and timeline.

Cost: $100k per year over 2 years.

Special Housing Areas

Description: In June 2014, Wellington City Council and the Crown entered into a Housing Accord, under the Housing Accords and Special Housing Areas Act. The Accord and new Special Housing Areas (SHAs) streamline the processing of resource consents and will help to increase the supply of housing.

Two groups totalling 21 SHAs have been identified across the city. The sites span a range of development opportunities, including greenfield, brownfield and infill development sites. To encourage development in the SHAs, an incentives package has been developed to include a "one-stop resource consents shop" for the processing of consents and financial incentives such as deferred rates increases and waived pre-application consent fees. Further work is being done to identify additional SHAs.

Benefits: Special Housing Areas are intended to increase the supply of housing in the city and improve housing affordability. The Wellington Housing Accord has a target of 7000 consented dwellings and/or sections by 2018/19.

Time frame: The Accord will be effective until 2018.

Cost: No cost to the Council.

New medium-density areas and town centre plans

Description: Our suburban housing stock is dominated by a single type: the detached family house. As our population ages and smaller households become more prevalent, we need to facilitate the development of a range of housing types to respond to different household needs.

Medium-density residential areas support the development of houses on smaller lots, terraced housing and low-rise apartments close to town centres, in areas with good access to public transport, shops and facilities. Medium-density housing provides opportunities for residents to age in their community without the burden of maintaining a family house and may provide a more affordable alternative to a traditional house.

We have already created medium-density residential zones in Johnsonville and Kilbirnie. We have commenced investigations and consultation with the local communities around other suburban centres (Karori and Tawa) to define the extent of the areas and the District Plan provisions suitable for them.

We will also work with the local communities to identify aspects of the town centres that could be improved to better cater for an increased population.

Benefits: Increases housing supply, choice and affordability; supports the use of public transport, walking and cycling; helps keep our city compact by reducing the need for greenfield development; optimises the use of existing infrastructure and facilities.

Time frame: Community consultation will occur in 2015 in Karori and Tawa. Any District Plan change arising from this work will follow the normal regulatory process and timeline. Physical works arising from the town centre plans will take place in years 4 and 5 of the Long-term Plan.

Cost: $300k for planning and community consultation, and $2 million for upgrades in the two town centres.

Affordable housing: *Award-winning Council housing in Newtown.*

Medium-term projects (years 4 to 10)

These projects require further planning or design and are therefore recommended for implementation in the later years of the Long-term Plan.

Adelaide Road

Description: The Adelaide Road project is both a transport and an urban regeneration project. It includes physical works to improve the street for various modes of transport and facilitation work to stimulate high-quality mixed-use development in the area.

The Adelaide Road corridor is set to accommodate a cycle route, a bus priority route in the short term and a bus rapid transit (BRT) route in the medium term. These will require physical improvements to the corridor.

The regeneration aspect of the project will build on the Adelaide Road Framework and seek to change the perception of the area and stimulate private investment in new and upgraded buildings.

Benefits: Adelaide Road can deliver housing for up to 2000 people along with major multi-modal transport improvements.

Time frame: Detailed design is planned for 2016-18. Corridor designation and land acquisition are expected from 2018, with the physical works to follow.

Cost: It is expected that detailed design, land acquisition and physical works will cost $29 million.

Cambridge and Kent terraces

Description: This project is about improving Kent and Cambridge terraces for all modes of transport and creating a desirable location for more intensive development.

The street upgrade includes a reconfiguration of the road layout to deliver public transport, cycle and pedestrian improvements, a central median landscaped park and pedestrian crossings in key locations.

Benefits: This project is a key component of the public transport and cycling network. It will change the perception of the area and stimulate private investment. It will create an attractive environment for new residential and commercial development.

Time frame: Planning and concept design for the project will be undertaken in years 1 to 3 of the Long-term Plan. Detailed design is programmed for 2019-21 with construction to follow.

Cost: Preliminary estimates put the cost of the upgrade at $43 million. This figure will be refined at the detailed design stage so that a revised cost can be considered in the subsequent Long-term Plan (2018-28).

Petone to Grenada Link Road

Description: NZTA is considering a potential new east-west road link between Tawa/Porirua and the Hutt Valley to improve travel on two of Wellington's main highways, assist with the region's economic development and provide a transport network that is more resilient to major natural hazard events.

The new link would reduce congestion along SH1 and the Ngauranga Gorge by bypassing the SH1-SH2 interchange.

Benefits: The Link Road will reduce the congestion along SH1, easing the travel of workers commuting into and out of the city and making freight movements more efficient.

The Link Road will provide access to greenfield areas at Lincolnshire Farm and open up opportunities for business and residential development. It will also ensure that there is an alternate route if a major natural hazard event prevents the use of SH1.

Time frame: NZTA will seek RMA approvals in 2015. A detailed design will be developed between 2016 and 2018. Construction is expected to start in 2019 and be completed by 2023.

Cost: This project is to be funded by the NZTA.

Northern Growth Area link roads

Description: The Northern Growth Management Framework and the Lincolnshire Farm Structure Plan provide for greenfield urban expansion to the north of the city. The Council is required to give effect to these documents by providing the infrastructure necessary to support development, including key roads. These include:

- the north-west connector roads, Westchester side, include connecting the two ends of John Sims Drive, extending McLintock Street to Cortina Avenue and connecting Ohariu Valley Road to Westchester Drive
- the Lincolnshire Structure Plan roads include two key routes - Mark Avenue to Lincolnshire and Woodridge to Lincolnshire
- the Mark Avenue to Grenada North link continues the development of a local link road along the eastern side of the motorway between Newlands and Tawa.

Benefits: Supports the provision of new housing; supports economic growth through opening up land for employment purposes.

Time frame: The timing of the works will depend on the actual rate of development and will be staged over a number of years starting in 2017/18.

Cost: $20.1 million.

Aro Street

Description: NZTA is undertaking works on Karo Drive to improve the efficiency of the inner city by-pass. To build on these works, we plan to improve access between Victoria Street and Aro Street thus increasing the connectivity of Aro Valley and the wider community across the eastern side of the city. The project will also improve the complex intersections of Webb Street/Willis Street and Aro Street/Willis Street.

Benefits: Through the creation of a direct road link, the reallocation of existing road space and the introduction of new traffic lights, the project will improve access, efficiency and safety for all modes of transport including public transport, cycling and walking. The project will help address the pressure created by on-going urban growth in this part of the city.

Time frame: The work is planned for 2022-24.

Cost: $6 million.

Inner City Roads of National Significance

Description: NZTA is investigating improvements to the State Highway 1 corridor through the inner city. The proposals include:

- work around the Basin Reserve to improve traffic flows and help reduce journey times for public transport
- a second Mt Victoria tunnel
- widening Ruahine Street and Wellington Road
- a new pedestrian and cycle facility between the Basin Reserve and Cobham Drive
- capacity improvements to the Terrace Tunnel.

Benefits: The project will increase SH1's capacity. This will relieve congestion and free up key local roads to enable public transport to operate more efficiently and provide better facilities for pedestrians and cyclists. It will also provide a dedicated pedestrian and cyclist route from Cobham Drive to Karo Street.

Time frame: A High Court decision on the Basin Reserve is expected in 2015/16. RMA approvals on the wider project are likely to be sought in 2016/17 with the detailed design and construction work to be completed by 2023.

Cost: This project is to be funded by NZTA.

3.0 PRIORITY TWO AND THREE: OTHER PROJECTS

This section covers all other projects contained in the Urban Growth Plan.

Short-term projects (years 1 to 3)

Below are the projects that are recommended for delivery in the first three years of the Long-term Plan. These projects are recommended for short-term implementation either because:

- they are important to achieve the outcomes of the Urban Growth Plan
- they are ready to proceed
- they are necessary to enable private investment
- they are a precursor to other works.

Those short-term projects requiring funding over and above normal operating budgets (eg capital expenditure for construction of new assets) will need to be funded through the 2015-25 Long-term Plan.

Urban regeneration

Citywide initiatives

Project	Timing	Priority	Council role
Infrastructure modelling: Using information on the current state and capacity of infrastructure (sewerage, water reticulation, surface drainage), this project will identify areas with spare infrastructure capacity that are able to accommodate growth now and in the future without the need for upgrades. We will first focus on identified growth areas (central area, growth spine) and potential future medium-density residential areas.	Yrs 1-3	2	Planning
Port Access Plan: Work with NZTA and GWRC to plan improved road access to the port.	Yrs 1-3	2	Advocacy
Supporting facilities: Assess the provision of community, open space and recreational facilities in growth areas.	Yrs 1-3	2	Planning

Central Area initiatives

Project	Timing	Priority	Council role
Waterfront: Frank Kitts park redevelopment.	Yrs 1-3	2	Physical works
Central City Framework: Review and update the document.	Yrs 1-3	2	Planning

Suburban initiatives

Project	Timing	Priority	Council role
Johnsonville town centre: • Seek opportunities for development and support medium density housing. Liaise with mall owner over future re-development. • New library co-located with the community centre and swimming pool to form a hub.	Yrs 1-3	2	Facilitation/physical works
Kilbirnie town centre: Seek opportunities for development and support town centre densification and medium-density housing.	Yrs 1-3	2	Facilitation/physical works
BIDs: Establish new Business Improvement Districts.	Yrs 1-3	3	Facilitation

Transport improvements

Project	Timing	Priority	Council role
Walking tracks: Extend the walking track network as per Our Capital Spaces.	Yrs 1-3	2	Physical works
Pedestrian accessibility: Develop a pedestrian accessibility improvement plan and deliver improvements.	Yrs 1-3	2	Planning/physical works
Cycle parking: Increase cycle parking provision in the central city and suburban centres.	Yrs 1-3	2	Physical works
Mountain biking: Extend the mountain biking network throughout the city.	Yrs 1-3	3	Facilitation/physical works
Bus shelters: Increase the number of bus shelters.	Yrs 1-3	2	Physical works
Roads of National Significance: Work with NZTA on Transmission Gully.	Yrs 1-3	2	Advocacy
Network Operating Framework: Develop road allocation space principles and review the road hierarchy map in the District Plan.	Yrs 1-3	2	Policy
Research: Conduct research in a number of areas including urban freight, network legibility and way-finding, the one-way road system, commuter parking, on-street parking prices.	Yrs 1-3	3	Research
Transport modelling using real-time information	Yrs 1-3	3	Planning
Car share scheme: Facilitate the implementation of car share schemes.	Yrs 1-3	3	Facilitation

Housing supply and choice

Project	Timing	Priority	Council role
Regulatory framework: Review the Residential Design Guide and District Plan provisions, particularly for medium-density housing.	Yrs 1-3	3	Regulatory
Social housing: Continue the Housing Upgrade Project.	Yrs 1-3	2	Physical works
Social housing: Work with Housing NZ to support the implementation of their strategic framework.	Yrs 1-3	2	Planning
WoF: Develop and implement a rental Warrant of Fitness.	Yrs 1-3	2	Facilitation
Insulation grants: Continue providing grants to improve home insulation for low-income households.	Yrs 1-3	3	Funding

Natural environment

Project	Timing	Priority	Council role
Open space and recreation: • Implement Our Capital Spaces: An Open Space and Recreation Framework for Wellington. • Monitor the provision of recreation, open space and sport facilities in residential growth areas.	Yrs 1-3	2	Planning/facilitation
Biodiversity: • Implement Our Natural Capital: Biodiversity Strategy and Action Plan. • Protect priority sites and species and manage the impact of urban growth. • Restore ecological networks across the city. • Research how indigenous species interact with the urban environment in Wellington.	Yrs 1-3	2	Planning/facilitation
Stormwater: • Implement an Integrated Catchment Management Plan. • Develop and implement water-sensitive urban design guidelines.	Yrs 1-3	2	Planning
Green standards: Investigate mechanisms to encourage higher levels of sustainability in new builds and retrofits.	Yrs 1-3	3	Planning
Renewable energy generation: Review the District Plan provisions regarding home solar energy systems and small wind installations.	Yrs 1-3	3	Regulatory
Regulatory framework: Review protection of natural landscapes and open spaces, indigenous biodiversity and ecological areas in the District Plan.	Yrs 1-3	2	Regulatory

Resilience

Project	Timing	Priority	Council role
Earthquake building risk assessments: • Conduct assessment of all post-1976 buildings. • Conduct a detailed engineering assessment of Council-owned buildings. • Work with central government on new legislation for building strengthening.	Yrs 1-3	2	Regulatory
Resilience Strategy: Develop a comprehensive resilience strategy for the city's infrastructure and communities.	Yrs 1-3	2	Planning
Council infrastructure: • Identify and undertake priority upgrades of critical infrastructure. • Secure our key routes and lifelines.	Yrs 1-3	2	Planning/physical works
Non-Council infrastructure: Work with other infrastructure asset owners to increase the city's resilience.	Yrs 1-3	3	Advocacy
Climate change: Complete information gathering and risk assessment on climate change impacts, and make decisions to prepare for sea-level rise, severe storms and other risks.	Yrs 1-3	2	Planning
Regulatory framework: Review Council policy and the District Plan provisions regarding resilience. Give effect to the NZ Coastal Policy Statement through the District Plan.	Yrs 1-3	3	Regulatory
Research: • Continue to work with GNS Science on It's Our Fault. • Research the impact of natural hazards, including the risks and possible responses.	Yrs 1-3	2	Research
Community preparedness: Continue to provide community preparedness assistance such as Quake Check.	Yrs 1-3	2	Planning/facilitation

Medium-term projects (years 4 to 10)

This section covers the projects that are recommended for delivery in the later years of the Long-term Plan (years 4 to 10). These projects are recommended for implementation in the medium-term either because:

- they require some planning work before they can be delivered
- they are reliant on other work taking place first, or
- they are less critical to delivering the outcomes sought through the Urban Growth Plan than other projects and can be delayed.

These projects are less well-defined than the shorter term ones and therefore, less detailed information is provided.

Urban regeneration

We will continue planning for and facilitating development along the waterfront, particularly North Kumutoto site 9 and uses around Queens Wharf.

Once the centre planning for Tawa and Karori is well under way, we will identify the next suburban centres in need of attention and start consulting with the local communities.

Transport improvements

We will review selected transport policies to facilitate the implementation of the Urban Growth Plan.

We will continue rolling out safety improvements to make the city more pedestrian-friendly.

Housing supply and choice

We will work with the landowners at Upper Stebbings Valley to develop a structure plan for inclusion in the District Plan. This will provide the regulatory framework for the development of additional housing between Churton Park and Tawa.

We will review the future supply of land for housing and contrast it with actual development activities to inform the Urban Growth Plan review.

Natural environment

We will continue implementing Our Natural Capital and Our Capital Spaces through facilitation, advocacy, planning and physical works.

We will extend the walking tracks network by completing the Skyline track (a connection along Marshall Ridge will be delivered sooner) and Harbour Escarpment track.

We will investigate the need for additional or improved open spaces in the central city as the inner city population grows.

Resilience

We will follow our planning work on a Resilience Strategy with facilitation and physical works to implement the actions identified in the strategy.

We will continue to do strengthening work on identified Council buildings.

We will continue working with our partners to improve the resilience of key infrastructure and provide new infrastructure to support population growth, eg new reservoir.

We will identify and start work on physical adaptations to climate change.

Long-term projects (beyond year 10)

Ten years is a long time when planning for future urban growth. Unexpected events, changes in immigration and other factors can cause us to change our course of action. With this in mind, this section provides an overview of the projects we can expect to see developed and delivered beyond the horizon of the Long-term Plan 2015-25.

Some of these projects require significant planning and development before they can be implemented, some are reliant on works or investment by third parties that are not expected in the next 10 years, and others are part of long-term, on-going programmes of work that we expect to continue into the future.

Urban regeneration

We will plan for a potential upgrade of Taranaki Street to add street trees or other forms of "greening" to this corridor and generally improve its amenity. Any upgrade will be coordinated with the renewal of stormwater, waste water or other buried utilities.

We will work with the owners of the Kilbirnie Bus Barns when they are ready to redevelop the site for a mix of residential, retail and employment uses.

We will continue planning for improvements in the Parliamentary Precinct, around the train station and the bus terminus.

Transport improvements

We will continue extending the cycle network outwards and complement our core routes.

We will continue fine-tuning the public transport corridors and deliver improvements where required.

We will facilitate the uptake of electric vehicles through the provision of supporting infrastructure.

Housing supply and choice

We will continue delivering improvements to our social housing stock through the Housing Upgrade Project, which runs until 2028.

Natural environment

We will advocate for and facilitate the implementation of smart electricity grid systems.

Resilience

We will take actions to retreat from or defend our vulnerable coastal areas.

REPORT OF THE TRANSPORT AND URBAN DEVELOPMENT COMMITTEE MEETING OF 21 MAY 2015

Members: Mayor Wade-Brown, Councillor Coughlan, Councillor Foster (Chair), Councillor Lee, Councillor Lester, Councillor Pannett, Councillor Woolf, Councillor Young.

The Committee recommends:

TRAFFIC RESOLUTION TR 22-15 - COUTTS ST AND SALEK ST, CYCLE LANE

Recommendations

That the Council:

1. Agrees to:

   a. Approve the following amendments to the Traffic Restrictions, pursuant to the provisions of the Wellington City Council Consolidated Bylaw 2008.

Add to Schedule G (Stop and Give Way Controls) of the Traffic Restrictions Schedule

Column One	Column Two	Column Three
Coutts Street	*Stop Control*	*Salek Street, at its intersection with Coutts Street. (Grid coordinates x= 1750746.2m y=5424024.7m)*

Add to Schedule A (Time Limited Parking) of the Traffic Restrictions Schedule

Column One	Column Two	Column Three
Coutts Street	*10 Hours Maximum – At All Times*	*North side, commencing 136 metres east of its intersection with Tirangi Road (Grid coordinates x= 1751092.1m y=5423695.0m) and extending in an easterly direction following the northern kerbline for 30 metres.*

Add to Schedule C (Turning and One Way Restrictions) of the Traffic Restrictions Schedule

Column One	Column Two	Column Three
Coutts Street	*Shared Path, Cyclists*	*North side, commencing 178*

	must give way to pedestrians	*metres east of its intersection with Tirangi Road (Grid coordinates x= 1748338.3m y=5423670.3m) and extending in an easterly direction following the northern kerbline for 14 metres.*

Add to Schedule I (Cycle Lanes) of the Traffic Restrictions Schedule

Column One	**Column Two**	**Column Three**
Coutts Street	*Cycle Lane*	*North side, commencing 12 metres east of its intersection with Tirangi Road (Grid coordinates x=1750987.5m y=5423761.4m) and extending in an easterly direction following the northern kerbline for 166 metres.*
Coutts Street	*Cycle Lane*	*South side, commencing 17 metres east of its intersection with Tirangi Road (Grid coordinates x=1750987.8m y=5423753.3m) and extending in an easterly direction following the southern kerbline for 168 metres.*

TRAFFIC RESOLUTIONS TR 23-15 - NGAURANGA GORGE, CYCLE LANE

Recommendations

That the Council:

1. Agrees to approve the following amendments to the Traffic Restrictions, pursuant to the provisions of the Wellington City Council Consolidated Bylaw 2008.

Delete from Schedule B (Restricted Parking) of the Traffic Restrictions Schedule

Column One	**Column Two**	**Column Three**
Centennial Highway	*Bus Stop – At All Times*	*North side, commencing 82.5 metres west of its intersection with Malvern Road and extending in a westerly direction following the northern kerbline for 12 metres.*

Add to Schedule D (No Stopping Restrictions) of the Traffic Restrictions Schedule

Column One	Column Two	Column Three
Ngauranga Gorge Road	*No Stopping – At All Times*	*South side, commencing from its intersection with Glover Street (Grid coordinates x=1751934.4 y=5432731.1m) and extending in an easterly direction following the southern kerbline for 14 metres.*
Ngauranga Gorge Road	*No Stopping – At All Times*	*South side, commencing 105 metres east of its intersection with Glover Street (Grid coordinates x=1752008.0m y=5432664.7m) and extending in an easterly direction following the southern kerbline for 18 metres.*

Add to Schedule I (Cycle lanes) of the Traffic Restrictions Schedule

Column One	Column Two	Column Three
Centennial Highway	*Cycle lane*	*North side, commencing 217 metres west of its intersection with Glover Street (Grid coordinates x=1751723.6m y=5432819.6m) and extending in an easterly direction following the northern kerbline for 249 metres.*
Ngauranga Gorge Road	*Cycle lane*	*North side, commencing 21 metres east of its intersection with Glover Street (Grid coordinates x=1751955.2m y=5432731.0m) and extending in an easterly direction following the northern kerbline for 120 metres.*

Add to Schedule B (Class Restricted Parking) of the Traffic Restrictions Schedule

Column One	Column Two	Column Three
Ngauranga Gorge Road	*Bus Stop – At All Times*	*North side, commencing 42 metres east of its intersection with Glover Street (Grid*

		coordinates x=1751970.9m y=5432719.8m) and extending in an easterly direction following the northern kerbline for 13 metres.

Add to Schedule A (Time Limited Parking) of the Traffic Restrictions Schedule

Column One	Column Two	Column Three
Ngauranga Gorge Road	*2 Hours Maximum – At All Times*	*South side, commencing 18 metres east of its intersection with Glover Street (Grid coordinates x= 1751948.0m y=5432723.5m) and extending in an easterly direction following the southern kerbline for 20 metres.*

TRAFFIC RESOLUTION TR 22-15 - COUTTS ST AND SALEK ST, CYCLE LANE

Recommendation/s

That the Transport and Urban Development Committee:

1. Receive the information.
2. Agrees to recommend to Council to:
   a. Approve the following amendments to the Traffic Restrictions, pursuant to the provisions of the Wellington City Council Consolidated Bylaw 2008.

Add to Schedule G (Stop and Give Way Controls) of the Traffic Restrictions Schedule

Column One	Column Two	Column Three
Coutts Street	*Stop Control*	*Salek Street, at its intersection with Coutts Street. (Grid coordinates x= 1750746.2m y=5424024.7m)*

Add to Schedule A (Time Limited Parking) of the Traffic Restrictions Schedule

Column One	Column Two	Column Three
Coutts Street	*10 Hours Maximum – At All Times*	*North side, commencing 136 metres east of its intersection with Tirangi Road (Grid*

		coordinates x= 1751092.1m y=5423695.0m) and extending in an easterly direction following the northern kerbline for 30 metres.

Add to Schedule C (Turning and One Way Restrictions) of the Traffic Restrictions Schedule

Column One	**Column Two**	**Column Three**
Coutts Street	*Shared Path, Cyclists must give way to pedestrians*	*North side, commencing 178 metres east of its intersection with Tirangi Road (Grid coordinates x= 1748338.3m y=5423670.3m) and extending in an easterly direction following the northern kerbline for 14 metres.*

Add to Schedule I (Cycle Lanes) of the Traffic Restrictions Schedule

Column One	**Column Two**	**Column Three**
Coutts Street	*Cycle Lane*	*North side, commencing 12 metres east of its intersection with Tirangi Road (Grid coordinates x=1750987.5m y=5423761.4m) and extending in an easterly direction following the northern kerbline for 166 metres.*
Coutts Street	*Cycle Lane*	*South side, commencing 17 metres east of its intersection with Tirangi Road (Grid coordinates x=1750987.8m y=5423753.3m) and extending in an easterly direction following the southern kerbline for 168 metres.*

TRAFFIC RESOLUTIONS TR 23-15 - NGAURANGA GORGE, CYCLE LANE

Recommendation/s

Item 3.4

That the Transport and Urban Development Committee:

1. Receive the information.
2. Agrees to recommend to Council to approve the following amendments to the Traffic Restrictions, pursuant to the provisions of the Wellington City Council Consolidated Bylaw 2008.

Delete from Schedule B (Restricted Parking) of the Traffic Restrictions Schedule

Column One	Column Two	Column Three
Centennial Highway	*Bus Stop – At All Times*	*North side, commencing 82.5 metres west of its intersection with Malvern Road and extending in a westerly direction following the northern kerbline for 12 metres.*

Add to Schedule D (No Stopping Restrictions) of the Traffic Restrictions Schedule

Column One	Column Two	Column Three
Ngauranga Gorge Road	*No Stopping – At All Times*	*South side, commencing from its intersection with Glover Street (Grid coordinates x=1751934.4 y=5432731.1m) and extending in an easterly direction following the southern kerbline for 14 metres.*
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Add to Schedule B (Class Restricted Parking) of the Traffic Restrictions Schedule

Column One	**Column Two**	**Column Three**
Ngauranga Gorge Road	*Bus Stop – At All Times*	*North side, commencing 42 metres east of its intersection with Glover Street (Grid coordinates x=1751970.9m y=5432719.8m) and extending in an easterly direction following the northern kerbline for 13 metres.*

Add to Schedule A (Time Limited Parking) of the Traffic Restrictions Schedule

Column One	**Column Two**	**Column Three**
Ngauranga Gorge Road	*2 Hours Maximum – At All Times*	*South side, commencing 18 metres east of its intersection with Glover Street (Grid coordinates x= 1751948.0m y=5432723.5m) and extending in an easterly direction following the southern kerbline for 20 metres.*

Attachments
Nil

REPORT OF THE ENVIRONMENT COMMITTEE MEETING OF 4 JUNE 2015

Members: Mayor Wade-Brown, Councillor Ahipene-Mercer, Councillor Coughlan, Councillor Eagle, Councillor Foster, Councillor Free, Councillor Lee, Councillor Lester, Councillor Marsh, Councillor Pannett (Chair), Councillor Peck (Chair), Councillor Ritchie, Councillor Sparrow, Councillor Woolf, Councillor Young.

The Committee recommends:

OUR NATURAL CAPITAL: WELLINGTON'S BIODIVERSITY STRATEGY AND ACTION PLAN

Recommendation

That the Council:

1. Agree that the strategy and action plan included as Attachment One be adopted as Council strategy.

Note: the Committee's recommendation regarding the increase in expenditure of the amended financial implementation plan for the Our Natural Capital: Wellington's Biodiversity Strategy and Action Plan were referred to the meeting of the Governance, Finance and Planning Committee held on 11 June 2015.

FINAL 2015/16 STATEMENTS OF INTENT FOR COUNCIL CONTROLLED ORGANISATIONS

Recommendation

That the Council:

1. Agree to approve the 2015/16 Statements of Intent for the Wellington Zoo Trust and the Karori Sanctuary Trust.

Attachments

Our Natural Capital

Wellington's biodiversity strategy and action plan 2015

Absolutely Positively
Wellington City Council
Me Heke Ki Pōneke

Cover photo: **Juvenile New Zealand fur seal at Frank Kitts Park, Wellington City.**
The main Wellington seal colony is at Sinclair Head on the edge of Te Kopahau Reserve. This is a "haul out" area for New Zealand fur seals during winter (May–October). Breeding season is November–January. New Zealand fur seals are also seen around Wellington Harbour. When around seals, people are advised to stay at least 10 metres away and to keep their dogs on a lead. New Zealand fur seals – particularly those living near the city – connect people with the natural world and represent the link between the marine and terrestrial environments.

CONTENTS

1. SUMMARY

Our Natural Capital *is about Wellington's indigenous biodiversity. These are the species that occur or occurred naturally in Wellington.*

Our Natural Capital: Wellington's Biodiversity Strategy and Action Plan is the Wellington City Council's a shared vision for the city's indigenous biodiversity. The strategy outlines our vision, goals and objectives, and sets the priorities that give our work direction and purpose, underpinned by a set of guiding principles.

The aim of the strategy is to protect and restore our indigenous biodiversity. In order to protect and restore our indigenous biodiversity we have to connect people with it and carry out research so we can better manage it. These are the four themes under which our biodiversity management guidelines, goals, objectives and actions are grouped.

- To achieve our biodiversity goals, we will aim to protect the ecologically significant areas on both private and public land.
- We will restore these areas, create safe buffer zones around them and connect them together.
- We will reduce pest numbers throughout Wellington City to a point where our native species can survive and expand.
- Throughout the urban environment, we will focus on raising awareness of the issues facing indigenous biodiversity and connecting people to their natural environment. We will enable our community to continue restoration work across all of our reserves and we will support them in these efforts.

We recognise that Wellington is an urban environment and will continue to contain a wide range of species, both exotic and indigenous. As a city, we need to take into account the role of all species in contributing to our cultural identity and our role in protecting species that are threatened in their original habitat. Exotic biodiversity is only considered within this plan where it has a direct role in the survival of indigenous species. The strategy recognises that healthy biodiversity contributes to healthy environments and that creates healthy people. It also recognises that healthy biodiversity contributes to our economic sustainability – through tourism, by providing a desirable base for businesses, and contributing to our quality of life.

It is the Council's responsibility to recognise, protect, and maintain indigenous biodiversity, but we won't be able to achieve our desired outcomes without working closely with our partners.

Since the 2007 Wellington Biodiversity Action Plan was approved, we have moved from a position of needing to identify much of our significant biodiversity to actively managing it. Our protection and restoration programmes now focus on ecological needs. We continue to question our techniques, and are working to improve our knowledge and refine our approach. The Council's role continues to strengthen, and we are known for being a collaborative organisation. However, we are still facing some major challenges such as the ongoing degradation of our aquatic ecosystems and the development pressures faced through the needs of our growing city.

There are also wider issues that affect the health of Wellington's indigenous biodiversity, including land and water use, waste, response to natural disasters, and transport. While

these have an effect on biodiversity and contribute to the success of this strategy, they are dealt with under other plans and policies, as are issues of city-wide resilience.

This strategy ensures that international, national, and regional targets relating to biodiversity are translated into local action, and that Wellington City is positioned as a world leader in urban biodiversity. Our Natural Capital covers biodiversity within Council boundaries and jurisdiction, but acknowledges that biodiversity does not recognise these boundaries.

We will achieve our goal of protecting biodiversity by focussing on the protection of priority biodiversity sites on public and private land and rare, threatened, or locally significant species; controlling pest animal and pest plant species to sufficient levels and eradicating them if possible; and managing the impact of urban growth and human activity on all ecosystems and remaining habitat.

To restore biodiversity, we will increase the number and size of indigenous species and their habitats and create resilient ecosystems; we will improve aquatic ecosystem health across the city; put restoration programmes in place for rare, threatened or locally significant species and develop ecological networks across the landscape.

People will be connected with biodiversity by making it a common experience for all Wellingtonians; we will help people to understand the importance and value of biodiversity to their wellbeing; and enable them to take action to protect and restore biodiversity. A range of partners will work with us to achieve a shared vision for Wellington's biodiversity.

We will gain an increased understanding and knowledge of biodiversity, actively share this knowledge and use it to improve our programmes; we will gain a better understanding of our biodiversity management through enhanced monitoring programmes.

Wellington's residents have made it clear that having an attractive and healthy city environment is important to them, and that they'll work alongside us to achieve this.

Part One: Strategy

Female saddleback (threat status - 'at risk') perching near its nest at Polhill Reserve, just minutes from the Wellington CBD. Photo courtesy of Paul Ward, member of Polhill Restoration Project.

2. INTRODUCTION

This plan supports Wellington's wider vision to be the "Smart Capital", and be internationally recognised for its connection with and love of nature. Wellington's open spaces and natural areas are part of what make Wellington an exciting and vibrant city in which to live, work and visit. Our physical proximity to nature plays a key role in our excellent quality of life, which as a city is our greatest strength. Wellington City Council is also unique in that we manage most of the publically owned open space land (around 4500 hectares).

The purpose of this plan is about ensuring Wellington indigenous biodiversity is protected and restored. Part of ensuring the ongoing protection and restoration of our biodiversity is to get people to value and respect it. We can achieve this through allowing people to form a connection with the natural world. To ensure the best outcome for our biodiversity, we also need to carry out research to create and refine innovative biodiversity management practices.

The protection of biodiversity not native to Wellington is not addressed in this strategy except where exotic species are currently protecting indigenous values such as providing habitat or shelter or can be used as a mechanism to connect people with nature.

Some of the aspects in this plan are aspirational, whereas others are easily achievable. Our community has told us they desire both as part of a comprehensive strategy, provided Council reports back regularly on what has been accomplished. Some actions depend on our partners to implement, and Council will have a facilitation role. Some actions are dependent on future funding decisions, planning decisions, and open to statutory changes.

2.2 What is natural capital?

We are a "Natural Capital" due to our natural environment and our nature-driven attractions. It is part of what makes us the "coolest little capital in the world". It is an important part of what makes people want to live and work here, and helps to attract visitors.

Natural capital is our stock of natural assets, which includes biodiversity as well as earth, air and water. Cities depend on a healthy natural environment that continuously provides a range of benefits, known as 'ecosystem services'. Healthy ecosystems are the foundation for sustainable cities, influencing and affecting human well-being and most economic activity.

Biodiversity is an integral part of this range of services. The cost to replace, replicate or restore these ecosystem services far outweighs the cost of maintaining and protecting these functions today. The biodiversity that contributes to these services exists in our reserves, parks, urban gardens, waterways, wetlands and coast.

2.3 What is biodiversity?

Biological diversity – or biodiversity – is the complete variety of life on earth, and people are an integral part of this. Biodiversity is easiest to understand when you think of the different kinds of plants and animals around us and all the species that support and link them. "High biodiversity" can mean that there are a lot of different species, while "biodiversity loss" means that these species become extinct. Biodiversity is more than plants and animals, however. Biodiversity also includes:

- genetic diversity, which is the variability in the genetic make-up amongst individuals of the same species
- species diversity, which is the variety of species within a particular area

ecosystem diversity, which is the variety of ecosystem types and associated biological communities or habitats (eg scrubland, forest, sand dunes, wetlands, streams).

Biodiversity incorporates all biological life, including fungi and micro-organisms, the genes they contain and the ecosystems of which they form a part. These life forms contribute to essential ecological processes.

Global biodiversity

The protection of biodiversity is a global issue and is an essential ingredient of sustainable development. The Convention on Biological Diversity (CBD) recognises that biodiversity is about plants and animals as well as people and our need for food, medicines, fresh air and water, shelter, and a clean and healthy environment. The CBD was reviewed at the 11th Conference of Parties (COP11) in Aichi, Japan in 2011 and a new strategic plan *Living in Harmony with Nature* was developed.

New Zealand is a signatory to the CBD and is bound by the Aichi agreement. *New Zealand Biodiversity Strategy* (2000) was prepared as part of New Zealand's commitment to biodiversity protection, and established national goals to "turn the tide" on biodiversity decline and included action points for local authorities. Retaining a high level of indigenous biodiversity will result in a high level of global biodiversity. The New Zealand Government is in the process of updating the *New Zealand Biodiversity Strategy* to incorporate the Aichi Targets.

Globally, biodiversity is in decline and the rate of biodiversity loss is accelerating.

Indigenous Biodiversity

New Zealand is an internationally recognised 'hotspot' for biodiversity. This is because we have exceptionally high numbers of endemic species (species found nowhere else in the world). This high endemism is largely the result of our long isolation from other land masses and diverse habitat and climate, which has allowed unique flora and fauna to develop. Around 90 percent of New Zealand's insects and marine molluscs are endemic. This is also true for 80 percent of our vascular plants (which includes trees, ferns and flowering plants); 25 percent of bird species; all of our 60 reptiles; our four remaining species of frog and all our species of bat. In comparison, Britain which is a similar size to New Zealand has only two endemic species.

Biodiversity conservation is about ensuring the:

- **viability** ***of naturally occurring local populations of species***
- **resilience** ***of the range of habitats and ecosystems that makes Wellington unique***

2.4 Why is this important?

All Wellingtonians (including the Council) have a positive or negative effect on biodiversity, both global and local. This comes through political choices, jobs, economic activities, and daily actions. There is a huge opportunity for all of us to become more aware and more responsible; to enhance biodiversity generally through positive actions, small and large. Perhaps the greatest challenge is to make everyone realise that they have an impact on biodiversity and can play a part in its conservation.

Humans depend on our natural capital (including biodiversity) for a wide range of services, often called ecosystem services, which make life possible. Resilient and stable ecosystems are essential to sustain all of our activities in a functioning environment. The most obvious ecosystem services include the food we eat, the water we drink, the air we breathe, and the plant materials we use for fuel, fibre, building materials and medicines.

There are also many less visible ecosystem services, such as water management, the millions of tonnes of carbon stored by our forests, natural storm defences provided by sand dunes, or the pollination of plants by insects. Without healthy biological resources and ecosystem processes, we would be without basic services such as the production of raw materials, clean water, waste decomposition, soil conservation and climate regulation.

Even less visible are cultural ecosystem services such as the inspiration we take from wildlife and the natural environment, which influences our health and wellbeing. Much of Wellington's distinctive identity, its sense of place, is bound in its natural areas. Ecotourism is important in attracting national and international visitors who visit areas such as Makara Peak Mountain Bike Park, Otari-Wilton's Bush, Zealandia and Taputeranga Marine Reserve. This brings business arising from recreation in our open spaces. There is also intrinsic value in biodiversity and for many, particularly Māori; it is an essential part of their world view.

All life on earth – humans included – depends on a varied and diverse natural environment.

Wellington's natural capital gives us the following services:

- **Freshwater** – Wellington is reliant on drinking water from outside the city boundaries, but this freshwater is reliant on healthy forest catchments and healthy groundwater supplies from artesian wells in the Hutt City area
- **Local climate and air quality regulation** –natural vegetation helps to moderate extremes, and plays a role in improving air quality and reducing pollution
- **Energy** – much our energy comes from solar and wind power
- **Carbon sequestration and storage** – the City's native bush and exotic forestry is an important part of Wellington's climate change strategy and helps Wellington move towards being carbon neutral
- **Moderation of extreme events due to climate change**– natural ecosystems have an important role in protecting infrastructure and housing from increasingly frequent and severe weather events.
- **Waste-water treatment** – at present streams and the coastal environment are a vital part of our waste-water network. Ecosystems such as wetlands also filter waste and act as a natural buffer to the surrounding environment
- **Pollination services** –healthy ecosystems and a diverse range of pollinators will pollinate many plants, including edibles and ornamentals

- **Recreation and mental and physical health benefits** - recreating in green space is not only a good form of physical exercise but also lets people relax
- **Tourism and economics** – Wellington's natural environment is increasingly one of our selling points for domestic and international tourists, which in turn provides considerable economic benefits.
- **Cultural and spiritual wellbeing and sense of identity** - language, knowledge and the natural environment have been intimately related throughout human history. Biodiversity, ecosystems and natural landscapes have been the source of inspiration for much of our art, culture and increasingly for science. Nature is a common element of all traditional knowledge, and associated customs are important for creating a sense of belonging
- **Soil formation and stabilisation** - soil filters our wastewater, provides essential nutrients to our forests and crops, helps regulate temperature and is the foundation for our cities and towns

3. MĀORI AND MANA WHENUA RELATIONSHIP TO BIODIVERSITY

Mana whenua of Te Whanganui ā Tara are Taranaki Whānui and Ngāti Toa Rangatira. Mana whenua consider that the relationship with biodiversity is an intrinsic and important part of their responsibilities as Kaitiaki within their whaitua/rohe/takiwā. As mana whenua they encourage collaboration and partnership to ensure that together we care for the environment entrusted to us.

"Whatungarongaro te tangata, toitu te whenua"
"As man disappears from sight, the land remains"

Wellington City Council acknowledges the mana whenua status of Taranaki Whānui ki te Upoko o te Ika and Ngāti Toa Rangatira to the Wellington City area and we will work in partnership with iwi groups in the development and delivery of this strategy. We will also support and work with other Māori groups who are active in restoring the mauri of the area. In achieving the vision for Our Natural Capital we will work in partnership with Māori, acknowledging the connection tangata whenua have with our city's natural taonga and weaving the principles of tikanga Māori, kaitiakitanga and manaakitanga through the work we do.

We acknowledge the unique relationship Māori have with New Zealand's natural taonga – our indigenous biodiversity - as tangata whenua, and their role as kaitiaki. We also recognise and value the Māori world view in understanding and communicating the unique status of our natural taonga. The holistic approach of the Māori world view speaks of the interconnectedness of species and ecosystems, and the importance of managing at an ecosystem and a landscape scale. It also encompasses the need for the sustainable management of natural resources.

We have strived to ensure the strategy is aligned with Māori approaches to resource management by looking at whole systems, the relationships between these systems, and by recognising the connection of the people with the land.

"Toitu te marae a Tane, toitu te marae a Tangaroa, toitu te iwi"

"Care for the domain of Tane Mahuta and Tangaroa, so too will the people endure"

4. VISION

Wellington is Our Natural Capital:

We haven't lost any more species indigenous to Wellington and the size of ecologically significant areas has not been reduced. The population size of previously threatened and locally significant species has grown and areas with the potential for future restoration are recognised and valued.

All known original ecosystems are found within Wellington, and a range of indigenous biodiversity thrives within them. These areas provide source populations that can disperse to surrounding areas, enhancing and enabling the ecological restoration of the city's wider habitats.

Wellingtonians are connected to nature. They are knowledgeable and passionate about Wellington's biodiversity and want to live in a city of abundant nature that is in close proximity to them. They have become kaitiaki of the natural environment and take action to support its protection and restoration.

Others come to Wellington City Council for advice on how to manage indigenous biodiversity in an urban context, due to the knowledge we have gained through research programmes. We actively share this knowledge and use it to continually improve our own biodiversity management.

5. GUIDING PRINCIPLES

We will build on our natural capital

This strategy will help to build and enhance Wellington's natural capital. We will respect the importance of indigenous biodiversity to New Zealand and its intrinsic right to exist. The Council's work to protect and restore Wellington's indigenous biodiversity will recognise this. We will protect the high value areas, and restore other areas that allow the city's biodiversity as a whole to thrive.

We will work within our city context

Wellington's natural environment has been heavily modified and consists of a complex mixture of species and habitats across urban, suburban and rural areas. While some introduced species pose a threat to native ecosystems, many do not and are part of Wellington's rich cultural heritage. This strategy acknowledges this and our biodiversity management will work within these novel ecosystems. We will focus on the function provided by species and recognise that ecological function can sit across a range of different land uses.

We will weave biodiversity through our city's DNA

Our indigenous biodiversity is part of our local economy and its conservation is an investment that will yield benefits for present and future generations. Everything we do will seek to bring the importance of nature into mainstream thinking. We will do this by telling the stories of the city's natural and cultural heritage, celebrating and sharing success, and promoting the role of biodiversity in creating a unique identity and sense of place for Wellington, in New Zealand and in the world.

We will provide direction and leadership

As a city, Wellington will provide leadership in highlighting the value of incorporating indigenous biodiversity in urban sustainable development, and will promote the importance of cities that have a connection with and respect for nature. The Council will provide leadership that reflects these values through our policies, strategies and management plans.

We will work collaboratively

The Council is committed to working with iwi, government, agencies, landowners, businesses, researchers and the community. We recognise that we need to share knowledge, costs and benefits, to be clear about our different roles and responsibilities, and to have the capability and resources to contribute.

We will recognise the significance of people's connection with nature

We will recognise the importance of public awareness and education for ensuring the conservation of biodiversity. All Wellingtonians engage with nature at some point in their daily lives and we will acknowledge and build on these experiences. We will promote and enhance people's awareness of and connection to nature. We recognise that these experiences actively contribute to people's sense of health and wellbeing.

We will learn from the relationship between Māori and biodiversity

Matauranga Māori and the wealth of traditional knowledge in the conservation, management and sustainable use of biodiversity will be recognised, promoted and used with the involvement of those who possess this knowledge. We will learn from the principles of manaakitanga, wairua, and kaitiakitanga and include these in everything we do.

We will actively engage with research

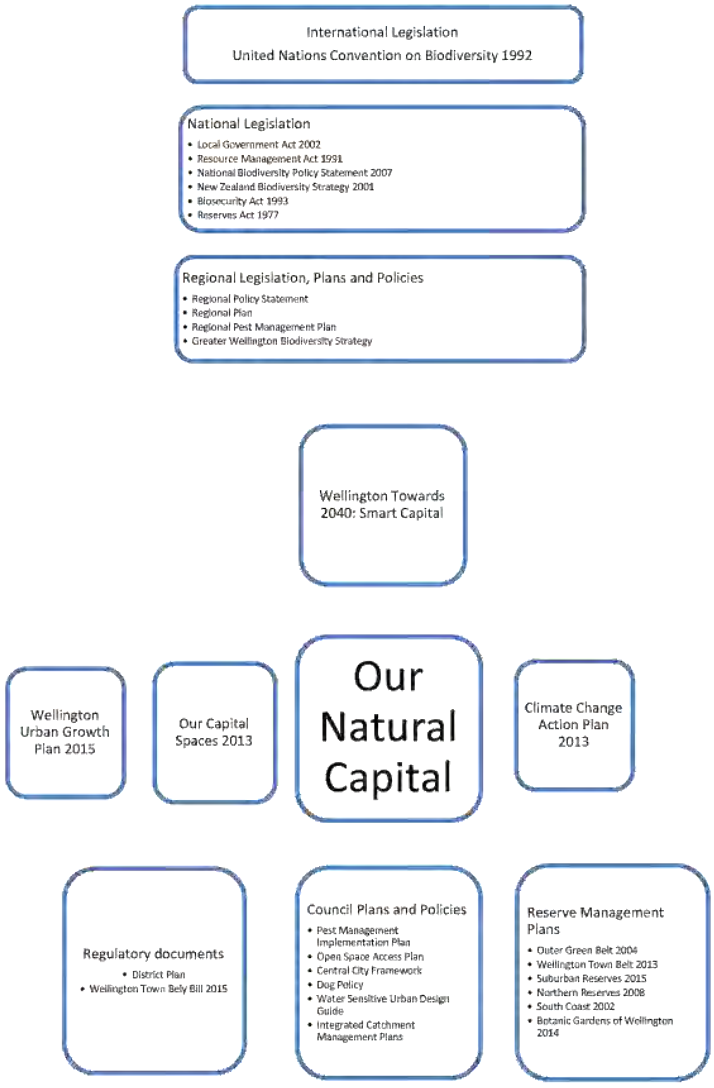
The actions in Our Natural Capital will be evidence-based and monitored, informed by research where this exists. We recognise that we do not fully understand the complex interactions between the urban environment, introduced species of plants and animals and native ecosystem functioning. We will not avoid action because of a lack of knowledge, but will instead use this as an opportunity to increase our knowledge. We will be adaptive and aim for continual improvement as new knowledge is gained, and we will actively seek and share this knowledge.

6. POLICY FRAMEWORK

Our Natural Capital underpins everything that we do as a City.

The city is part of a greater whole and needs to be seen in the context of the agencies that have responsibilities for the Wellington region and the country as a whole. This includes national and regional policy influencing biodiversity as well as Wellington City Council's strategy, policy and planning documents. For a more comprehensive description of policy context see Appendix 1.

Our Natural Capital Policy framework:



WELLINGTON'S BIODIVERSITY JOURNEY

7.1 Past

Wellington once had flora and fauna as diverse and abundant as any other coastal site in the lower North Island. It was once cloaked in lowland broadleaf-podocarp forest. Trees such as northern rata, with its bright red flowers, would have been a common sight, along with rimu, matai, kahikatea and totara. These would have been emerging through a solid canopy of tawa, kohekohe, kamahi, titoki, pukatea and kowhai. The forest interior would have been thick with climbers like kiekie and supplejack, and the forest floor carpeted with ferns[1,2]. Early European settlers described a number of birds including saddleback, piopio, robin, kokako, stitchbird, banded rail, little spotted kiwi, weka, and huia. Local Māori brought kereru and kaka to the Thorndon village for barter and kakariki were prolific.

The main wetland areas were dominated by flax, rush, raupo and cabbage tree. Flowing into these were major Wellington stream systems, which had abundant eel, koaro, bullies, koura, various galaxiid species and summer swarms of mayflies and other freshwater insects.

Geckos and skinks were easily found in the forests and around the coast and native frogs lived in dark forested streambeds. In summer the forest would have been alive with insects. At night, the morepork (ruru) and laughing owl (whekau) came out to hunt and the calls of brown and little spotted kiwi echoed throughout the forests.

The rocky coastline was the winter haul-out for large groups of male fur seal. Weka cruised the beaches investigating seaweed and driftwood. Large numbers of little blue penguin would have emerged from the surf each night and the coastal ranges covered in sooty and fluttering shearwater burrows. The wind-buffeted and salt-laden coastal escarpments facing the Cook Strait (Wellington's south coast), as well as the harbour escarpments, were covered with a mix of coastal forest, dense coastal scrub, flax and tussockland, and scree. The coastal forest was dominated by kohekohe, ngaio, northern rata, akiraho and kowhai, while the dense coastal scrub was characterised by tauhinu, mingimingi, matagouri, prostrate kowhai, pohuehue and speargrass. Tuatara scurried through these coastal forests feeding on large insects, small lizards and sea bird eggs. The coastal waters and harbour would have supported a great number and diversity of fish. The harbour was visited by whales, dolphins and porpoises.

~~Early settlers were unaware of the extent of their impact on our indigenous biodiversity, and their priorities were about establishing a life in this new city.~~ Much biodiversity was destroyed when Wellington was cleared for human settlement and the trend of losing biodiversity as the city grew continued until recent times. ~~in one form or another until the present day.~~

[1] Gabites, Isobel (1993). *Wellington's Living Cloak: A Guide to the Natural Plant Communities*. Wellington Botanical Society/Victoria University Press, Wellington.

[2] Boffa Miskell (1998). *Wellington's Native Vegetation: A Brief Survey of Early Historical Records*. Prepared by Boffa Miskell Ltd for Wellington City Council.

7.2 Present

Today we have 5% of our original lowland broadleaf-podocarp forest and 1% of our original coastal forest remaining. We are dealing with these fragmented sites supporting our remaining biodiversity, many of these within the heart of our city. Most of our wetlands have been lost and our streams piped and filled. However, there have been significant achievements in recent times. There has been extensive land protection since the early 1990's. The establishment of Zealandia (NZ's first fully-fenced urban sanctuary) in 1995 and ongoing predator control by the city and regional councils now means a number of iconic (and formerly rare or locally extinct) bird species are now commonly experienced by Wellingtonians. Taputeranga Marine Reserve, established in 2008, is the first marine reserve in the heart of a city. ~~However, since~~ As a result of the 2007 Biodiversity Action Plan we have gained a good picture of where Wellington's ecologically significant sites are within Wellington and these have been mapped. We have 517 identified ecologically significant sites across the city (see Appendix 4), most of which are protected on public land. These sites can be seen in more detail on the Wellington City Council website.

We also have a lot more information on the location of our threatened species. We have moved from a position of needing to identify much of our significant biodiversity to actively managing it. Our restoration programmes have developed from a focus on operational requirements and amenity value to a focus on ecological needs. The Council's role in biodiversity protection and restoration has continued to strengthen, and other organisations respect our achievements.

We have moved from the identification of significant sites, to the identification and protection of the species within those sites and refining our techniques for restoration. We have acknowledged, and continue to acknowledge, the role that people play in Wellington's biodiversity journey.

Our bird monitoring programme has expanded and we have conducted the first study showing the distribution of native lizards within the city. We have a diverse range of species in Wellington.

Wellington's indigenous biodiversity today is maintained by habitats that can be broadly grouped into nine different categories.

Habitat	Current cover (ha)
Lowland forest	932
Coastal forest	59
Scrub and shrublands	116
Coastal scrub	813
Coastal fringe	1.5
Offshore islands	3.4
Wetlands	3.5
Streams	260km
Urban area	4190
Harbour and coastal waters	8900

Each of these habitats supports a unique community of species and faces a different range of threats; although habitat loss and pest species are common threats across all habitats.

Forest

Lowland forest
Today, the original lowland broadleaf-podocarp forest that remains is mostly found in gullies and remote areas out of the reaches of development, fire and early logging. Some areas have also been preserved by early Wellingtonians. Otari-Wilton's Bush and the Wellington Botanic Garden native forest remnant are some of the best examples of these.

These remaining areas of ancient forest are now accompanied by regenerating forest dominated by the ever-present mahoe. These new forests are growing up through the gorse that colonised Wellington's retired farmland and are now a valued part of Wellington's open space[3]. They also have an important role in buffering the ancient forest from the effects of fragmentation.

The remnants of original forest are important seed sources for the regenerating areas. The regenerating areas are important for the health and eventual restoration of many forest species, including birds such as kaka, kakariki and bellbird, and even the long-tailed bat.

Many animals that would have once occurred in Wellington's forests are now extinct in the region, while others – such as Wellington's green gecko – are thought to be in critical decline. However tui, kereru and kaka have become a regular sight and sound in Wellington and, along with saddleback, kakariki and North Island robin are breeding outside the safety of a fence on the mainland for the first time in over 100 years. Tuatara have also been reintroduced to the sanctuary, as have giant weta, while some lizards have been identified as having translocation potential. Invertebrates such as the giant pill millipede and large land snails may also be released in the sanctuary one day.

Coastal forest
Some small remnants of original coastal forest can be found along the harbour escarpment, as well as some areas along the south coast. Spooky Gully within Te Kopahou Reserve is a good example of a south coast forest remnant, with its spectacular tree hebe forest interwoven with scramblers such as native jasmine and native clematis.

The coastal escarpment is an important habitat for many species that are now threatened, due mainly to habitat loss. One example is the speargrass weevil. The speargrass weevil and Hutton's speargrass weevil live on speargrass around the south coast. However, speargrass has been decreasing due to grazing, pig rooting and out competition by weeds, so the weevil's habitat is being lost. Another example is the geometrid moth, a striking orange, black and white moth. Again, the main threat to this species is habitat loss, in this case the decline of its host plant pinatoro.

Scrub and shrublands

Wellington has two main kinds of scrub and shrubland communities: grey scrub and manuka/kanuka shrubland. These ecosystems are a special part of Wellington's biodiversity, are important transitional communities in ecological succession, and are essential habitat for lizards, insects, and some birds.

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[3] Park, Geoff (1999). *An Inventory of the Surviving Traces of the Primary Forest of Wellington City*. Prepared for Wellington City Council.

Grey scrub
Grey scrub tends to occur in the relatively exposed environments of Wellington's south-west peninsula. Grey scrub is characterised by small-leaved divaricate shrubs (shrubs that have fine, right-angled branches with a woody, tangled appearance), and climbers such as pohuehue. It is called grey scrub because it appears grey from a distance. In Wellington's grey scrub, you will generally find small leaved coprosmas, pohuehue, coastal tree daisy, tauhinu, kowhai, manuka and bush lawyer. Te Kopahou has one area of dracophyllum, which is locally significant. Grey scrub is also habitat for the nationally vulnerable plant shrubby tororaro and regionally threatened matagouri.

Manuka/kanuka shrubland
Manuka/kanuka shrubland is generally found on disturbed, previously forested land and lightly grazed hill country. It has become relatively rare in Wellington as gorse has taken over its ecological niche. Wellington's remaining manuka/kanuka shrublands are important to protect to maintain a natural process of forest succession. Research has found that forest growing up through gorse has less diversity of species than forest that grows up through kanuka/manuka, and that some plant groups, such as podocarps, orchids, and small leaved shrubs, are less common in gorse than in manuka/kanuka shrubland[4].

Coastal scrub
The scrub of the coastal scarp has fared a little better than the coastal forest but is still in serious decline[5]. Matagouri is now endangered in the Wellington area, however pohuehue, mingimingi, tauhinu and taupata are still a relatively common sight along the coast, as are flax-clad cliffs.

Coastline

Coastal fringe
Wellington's coastal fringe is a dynamic mix of rocky foreshore, coastal turf communities, and coastal dunes.

Wellington's rocky foreshore defines the "wild coast" experience, but on closer inspection the rocky foreshore is actually an intricate mix of coastal turf communities (or herbfields), coastal shrubland, sedges, grasses, and rushes. A great example can be found at Hue-te-Taka (Moa Point).

The unifying feature of Wellington's coastal communities is that they are adapted to tolerate very salty and windy environments. The coastal turf communities are characterised by low-growing dense mats of herbs, often with very fleshy leaves that protect the plant from desiccation (for example NZ iceplant, shore bindweed, glasswort). Sedges, grasses and rushes growing in these areas are also specialists at withstanding salt and dehydration. Many also tolerate very low nutrient levels and shifting sands. You can also find coastal shrubs in some of these areas, including tauhinu, sand pimelea and sand coprosma.

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[4] Sullivan, J.J.; Williams, P.A.; Timmins, S.A. (2007). Secondary forest succession differs through naturalised gorse and native kānuka near Wellington and Nelson. *New Zealand Journal of Ecology* 31.

[5] Sawyer, J.W.D (2004). *Plant Conservation Strategy: Wellington Conservancy 2004-2010*. Department of Conservation, Wellington.

Coastal dunes form where there is shelter from strong waves, a supply of sand, and onshore winds[6]. The side closest to the sea (foredune) is very dynamic, and sand-binding plants have an important role. The two main native sand-binders are pingao and spinifex; however, the introduced marram grass is now most commonly seen. Other native species of coastal foredunes are sand tussock, sand coprosma, and sand daphne. An important site for coastal dunes in Wellington is from Owhiro Bay to Karori Stream. In the past, all five native foredune species have been recorded in this area, but in the last 10 years only sand tussock, spinifex and pingao have been found. This area is one of the only sites in the North Island where "Marlborough minimac" geckos occur. Common, brown, and copper skinks and common geckos have also been recorded here[7].

The interface between the land and the sea is an important access area for many species. The coastal fringe provides habitat for many seabird species, but many of these bird species are now threatened. The banded dotterel is one example; this bird nests in soil, shingle or sand dunes using little, if any, nest material. This means that its breeding ground is easily disturbed by vehicles, people, and pets. Banded dotterel were found breeding on the South Coast in 2014. The little blue penguin is another example. The "little blue" is the smallest penguin in the world, and adults come ashore in Wellington between May and June to prepare nests, laying eggs from August to November. The landscape has been modified, and their habitat destroyed as a consequence. While many of them have adapted to nest under houses or reserves around the coast, many are killed by vehicles, pets, ferrets and stoats.

Wellington's wild coast also has a number of seal "haul-outs"; the most accessible site is at Red Rocks/Sinclair Head. Between May and October, male fur seals rest up here between feeding.

Offshore islands

The only island that sits within Wellington District is Tapu Te Ranga in Island Bay. Tapu Te Ranga is typical of Wellington's south coast environment and, as an island, potentially offers a safer place for nesting and roosting seabirds. Tapu Te Ranga is designated as a Conservation Site in the District Plan. It is characterised by flaxland, salt marsh and scrubland, and is home to two rare plants found nowhere else in Wellington: *Crassula moschata* and *Suaeda novae-zelandiae*.

Coastal waters

Wellington's coastal waters are home to marine mammals such as the common dolphin and orca, and Wellington Harbour has unique marine features including a giant kelp forest and a population of rare sponge. The waters of Wellington's south coast support a rich and varied mix of plants and animals, due partly to a complex topography and wide variety of habitats. The high biodiversity is also due to the collision of three major oceanic currents, the result being a mix of warm Pacific and cold sub-Antarctic waters. The community of plants and animals found here is unique in New Zealand, with many species occurring at the northern and southern limits of their range. At least 100 different species of algae (seaweed) have been recorded on the south coast, and sea horses, many fish species, crayfish and paua can

[6] Milne, R. & Sawyer, J. (2002). *Coastal foredune vegetation in Wellington Conservancy*. Department of Conservation, Wellington.

[7] Melzer S & Bell, T. (2014).Lizard survey of Wellington City Council-administered parks & reserves: final report. Unpublished EcoGecko Consultants Ltd report prepared for the Wellington Council, June 2014.

all still be found. Even Wellington's intertidal zone is filled with a rich number of seaweeds, shellfish and other invertebrates.

Nationwide, scientists estimate that as much as 80 percent of New Zealand's indigenous biodiversity may be found in the sea. Yet less than 1 percent has ever been surveyed. On average, seven new marine species are identified every fortnight.

The marine environment is also very important for many of our freshwater fish species. Almost half of them are diadromous, using both the streams and the sea to complete their life cycle. Our native eels are thought to breed in deep ocean trenches somewhere near Tonga. Their larvae return to New Zealand on the ocean currents and re-enter the stream systems. The adults never return as they die after spawning.

Wellington city is also the access point to Taputeranga Marine Reserve. Taputeranga Marine Reserve is home to over 180 species of fish and is particularly rich in invertebrates such as octopus, rock lobster, crabs and starfish. Only minutes away from downtown Wellington, it gives residents and visitors the opportunity to experience the highly biodiverse marine life of the Cook Strait.

Freshwater

Streams

Streams are one of the Wellington region's threatened ecosystems. The streams are also affected by what happens in their catchments, which is the area of land drained by that stream system. Wellington's streams can be described simply as rural streams and urban streams. Rural streams include lower Karori Stream, Makara Stream and Ohariu Stream – as well as some of the more remote streams, such as Oteranga Stream. Much of the country associated with these rural streams has a long history of farming and grazing, and these streams are often characterised by a lack of riparian vegetation. Some rural streams, such as Waiariki and Opau Streams, also flow through areas of fragmented or regenerating forest.

Urban streams include Owhiro Stream, Kaiwharawhara, Ngauranga and the Porirua Stream system, as well as the "lost streams" (now piped) of Te Aro, Houghton Bay, Miramar and the inner city. The Porirua Stream system, or catchment, is the largest in Wellington, running north from Johnsonville to exit at Porirua Harbour. There are also small local streams throughout Wellington which, although often fragmented, also have important biodiversity values and can provide habitat for landlocked populations of native fish such as banded kokopu. Urban streams have been, and continue to be, heavily modified and influenced by residential development and urban living.

Streams provide habitat and food for hundreds of plants and animals – from algae to eels. They also provide freshwater for people and animals to drink and places for people to play[8]. Although many of Wellington's streams are small, and some are even dry at certain times of the year (ephemeral), their biological health is important both for the species they support and also for the harbour and sea they flow into.

[8] Report from the Parliamentary Commissioner for the Environment, Water quality in New Zealand: Understanding the Science, March 2012

Stream margins, or riparian areas, are an important part of stream biodiversity – providing riparian habitat as well as improving water quality and habitat by providing shelter for fish, lowering water temperature, removing sediment, filtering out some pollutants, preventing damage to stream banks, and increasing bird and insect life.

Nearly all of New Zealand's freshwater fish species migrate between freshwater and the sea during their lives and this is an important part of their breeding cycle. This means that if streams are lost, or if there are barriers to fish passage, then fish will become extinct from that particular stream. Giant kokopu, long finned eel and short jawed kokopu are all nationally threatened fish that are known to live in Wellington.

Wetlands

Wetlands include swamps, bogs, shallow lakes and salt marshes – essentially, any area of land covered by water for some period of time[9]. Man-made ponds are not normally considered to be a wetland. Wetlands are important places for biodiversity – they support more bird species than any other ecosystem. Wetlands are also important places for water purification (trapping sediment and removing excess nutrients), for preventing flood damage, for healthy fisheries, and for recreation[10].

Most of Wellington's wetlands have been drained, filled and built on. Those that remain are mostly small swamps, usually characterised by raupo, carex and harakeke. These include a raupo wetland in Opau Valley, a carex wetland in Hawkins Hill and a wetland in Takarau Gorge. There is also a small estuary at the mouth of the Kaiwharawhara Stream and a recreated wetland at the head of the Kaiwharawhara catchment, within Zealandia.

Salt marsh estuary

Wellington's only salt marsh estuary is located at Makara Beach. It is the only area in Wellington suitable for inanga spawning[11]. Estuaries are incredibly rich biodiversity spots due to the combination of terrestrial and wetland plants, seashore life and wading birds. At Makara Beach Estuary there is a community of saltmarsh ribbonwood, as well as salt turf, sedges and rushes. It is an important area for white-faced heron, rare freshwater snails, and black flounder breeding.

Urban, Suburban and Rural Areas

Approximately 5500 hectares of Wellington are in a built urban environment, compared with 4207 hectares of Council-owned open "green" space. The urban environment also includes 1200 kilometres of road reserve. About 65% of the total City is rural land.

It is possible for an amazing amount of biodiversity to be found in these environments. There are about as many wild native plants in New Zealand cities (350–550 species or 14– 22 percent of the flora) as in National Parks (440–660 spp. or 17–26 percent) (Given & Meurk

[9] Greater Wellington (2003). Wetland Action Plan.

[10] Russi D., ten Brink P., Farmer A., Badura T., Coates D., Förster J., Kumar R. and Davidson N. 2013. "The Economics of Ecosystems and Biodiversity for Water and Wetlands." IEEP, London and Brussels; Ramsar Secretariat, Gland.

[11] Taylor, M.J. & Kelly, G.R. (2001) Inanga spawning habitats in the Wellington Region, and their potential for restoration. NIWA, report prepared for Wellington Regional Council.

2000)[12]. Some rural land is reverting back to native bush in parts of Makara and South Karori and contains areas of indigenous vegetation and habitat for indigenous fauna.

Much of Wellington's land environment[13] that has been identified as acutely threatened[14] sits within the built urban and rural areas. The majority of this land is privately owned. Planning that protects and restores the indigenous remnants within these areas is critical to the survival of many species, mitigating the effects typical of human occupation[15].

Private gardens can greatly contribute to the overall biodiversity of the city through suitable plant choice and gardening practices. This not only provides a habitat for the plants themselves, but also creating an attractive environment for indigenous birds, lizards and insects.

People's interaction with the natural environment also plays a key role; it is within the urban area, including Wellington's central business district, that most people experience these interactions. An awareness of the value of biodiversity in our own backyards can lead to an appreciation of the ecological importance of the wider landscape. In this context, social objectives can be as important as ecological outcomes[16]. People in Wellington are increasingly aware of our indigenous biodiversity, but often this isn't translated into action.

Introduced species

New Zealand is characterised by a mix of native and introduced species, which make up the country's total biodiversity. New Zealand has the highest number of introduced mammals of any country in the world and the second highest number of introduced birds. We also now have more introduced species of vascular plants in the wild than native ones, and this number is increasing all the time.

Many of the pressures on New Zealand's indigenous biodiversity are from plants and animals that were introduced with the arrival of humans. These species were introduced into Wellington from other parts of the country, as well as from overseas. However, these introduced species are neither all "good" nor all "bad".

Introduced species can threaten our indigenous biodiversity through processes such as out-competition, hybridisation, predation, and browsing. But they can also provide benefits depending on the situation in which they are found.

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[12] Given, D.; Meurk, C. D. (2000). Biodiversity of the urban environment: the importance of indigenous species and the role urban environments can play in their preservation. *In*: Stewart, G. H.; Ignatieva, M. E. *ed*. Urban biodiversity and ecology as a basis for holistic planning and design. Proceedings of a workshop held at Lincoln University 28–29 October 2000. *Lincoln University International Centre for Nature Conservation No. 1*. Christchurch, Wickliffe Press. Pp. 22–33.

[13] Leathwick, J; Morgan, F; Wilson, G; Rutledge, D; McLeod, M; Johnston, K. (2003). Land Environments of New Zealand: Technical Guide. Auckland: David Bateman Ltd.

[14] Walker, S; Price, R; Rutledge, D. (2005). New Zealand's remaining indigenous cover: recent changes and biodiversity protection needs. Report no: LC0405/038 prepared for Department of Conservation, by Landcare Research.

[15] Clarkson, B; Wehi, P; Brabyn, L. (2007). Bringing back nature into cities: Urban land environments, indigenous cover and urban restoration. CBER report No. 52. University of Waikato, Hamilton.

[16] Kilvington, M; Allen, W. (2005). Social aspects of biodiversity in the urban environment. *In* Greening the City. Royal New Zealand Institute of Horticulture (Inc.).

Introduced species can provide complementary food for a range of indigenous species. For example, the presence of bottlebrush from Australia provides a feeding source for tui. A forest stand, whether indigenous or exotic, provides an extra dimension of habitat (height) in comparison with grassland. This is reflected in the indigenous insect and bird populations that find cover in these habitats.

Our primary production is dependent on introduced biodiversity in agriculture, horticulture and forestry. The revenue from this introduced biodiversity also enables us to further protect our indigenous biodiversity.

Introduced species can be used to effectively convey conservation messages and used as examples for education purposes, such as at Wellington Zoo and the Wellington Botanic Garden. The messages of conservation and sustainability can be shared regardless of the provenance of the species involved. These places also run breeding and propagation programmes, safeguarding global genetic biodiversity in a controlled environment.

Wellingtonians value many introduced species for aesthetic, cultural, and heritage reasons. Introduced species can enable the community to identify with the city by providing evidence of its past in the existing environment. For example, the Wellington Botanic Garden has some of the oldest radiata pine in the country (dating back to the 1860s), which went on to become New Zealand's main timber tree. One area of significance to local iwi is a karaka grove between Red Rocks/Pariwhero and Sinclair Head/Te Rimurapa, which is associated with a pre-European Māori settlement site. Karaka is native to the north of the North Island, but has been introduced to Wellington. Pohutukawa, another introduction to Wellington from the north of the North Island, is also of cultural significance and contributes to Wellington's sense of place.

The challenge is to find a balance between the benefits provided by introduced species and the threats they may present to local biodiversity. This balance is best determined on a case-by-case basis.

Surrounding districts

Wellington's biodiversity does not end at the edge of Wellington City's boundaries, neighbouring areas are very important. For example, many birds migrate to and from Kapiti Island in the north-west, the Tararuas to the north, and the Rimutakas to the east. Stream systems, such as that drained by the Porirua Stream, can incorporate multiple districts within their catchment area. Although this action plan focusses on Wellington City's biodiversity, we must be aware that it is not confined to legal boundaries and ensure that we work with our neighbours to ensure local biodiversity protection.

7.3 Future

In the future, as a result of adaptive management, partnerships, and ongoing investment, Wellington has achieved the biodiversity goals stated in 2015.

Our significant ecosystems are healthy and resilient to change. They are valued and no longer under threat from people's actions. They contain a complex array of habitats and a large diversity of indigenous plants and animals thrive within them.

Urban and backyard conservation is at the centre of everything we do. We support and initiate restoration programmes across people's backyards as well as within reserves. Wellingtonians willingly contribute to the ongoing restoration and protection of their natural

environment. They know how important it is for them to spend time in natural areas and they eagerly do so, whether joining a community planting beside Owhiro stream, picnicking in Otari-Wilton's Bush, mountain biking in the Wellington Town Belt or snorkelling in Taputeranga Marine Reserve. There is national recognition of the role of urban parks in helping people to begin their natural journey, and the benefits to people encountering indigenous wildlife within our cities.

Restoration planting within reserves, large native street trees and people planting in their own backyards has created stepping stones between isolated remnants. This allows indigenous wildlife to disperse to surrounding areas, assisting in the ecological restoration of the city's wider habitats. All ecologically significant sites are protected and have large buffer zones, expanding and protecting them; and corridors where possible, linking areas through recently established community planting.

We have moved from focusing on planting for habitat creation to managing species in clever and innovative ways, working closely with our partners. We know exactly where our threatened species are and what they need within an urban context, and we are actively managing them to achieve their lasting protection. The species spilling out from sites such as Zealandia and Otari-Wilton's Bush inspire people to take action in their own backyards to make our city safe for indigenous wildlife.

Less effort is required to control and eradicate pest species and we continue to refine our methodologies, working closely with the community. We have reduced our dependence on toxins and chemical pest control, instead using innovative trapping methods and biocontrol to deal with environmental pests. Biocontrol agents have eliminated the threats of weed species such as tradescantia and darwins barberry. Miramar Peninsula has been designated as New Zealand's first pest free urban area and the difference to our biodiversity is noticeable. This is another step towards eradicating significant pests from Wellington.

Catchments all have coordinated groups of volunteers working across them. They are well vegetated and all streams have wide riparian strips dense with native vegetation. Streams within reserves have been daylighted, creating further habitat for indigenous freshwater species and areas for nature play. Barriers to fish passage have been removed and artificial wetlands capture and treat stormwater.

We have a clear understanding of how the aquatic system within Wellington works and despite ongoing growth, we manage our stormwater in a way that doesn't create any adverse effects on our freshwater or marine environments. We advocate for the marine environment and our role in this is supported and recognised by our partners.

Wellington is a sought-after destination for international and domestic visitors because of its amazing combination of natural areas and thriving wildlife within a vibrant city. Healthy ecosystems and accessible natural areas are seen as an inseparable part of our economic growth.

When other cities are trying to restore biodiversity in an urban context, they use Wellington as a case study for how it can be done. We share the knowledge we have and use it to continually improve our own biodiversity management.

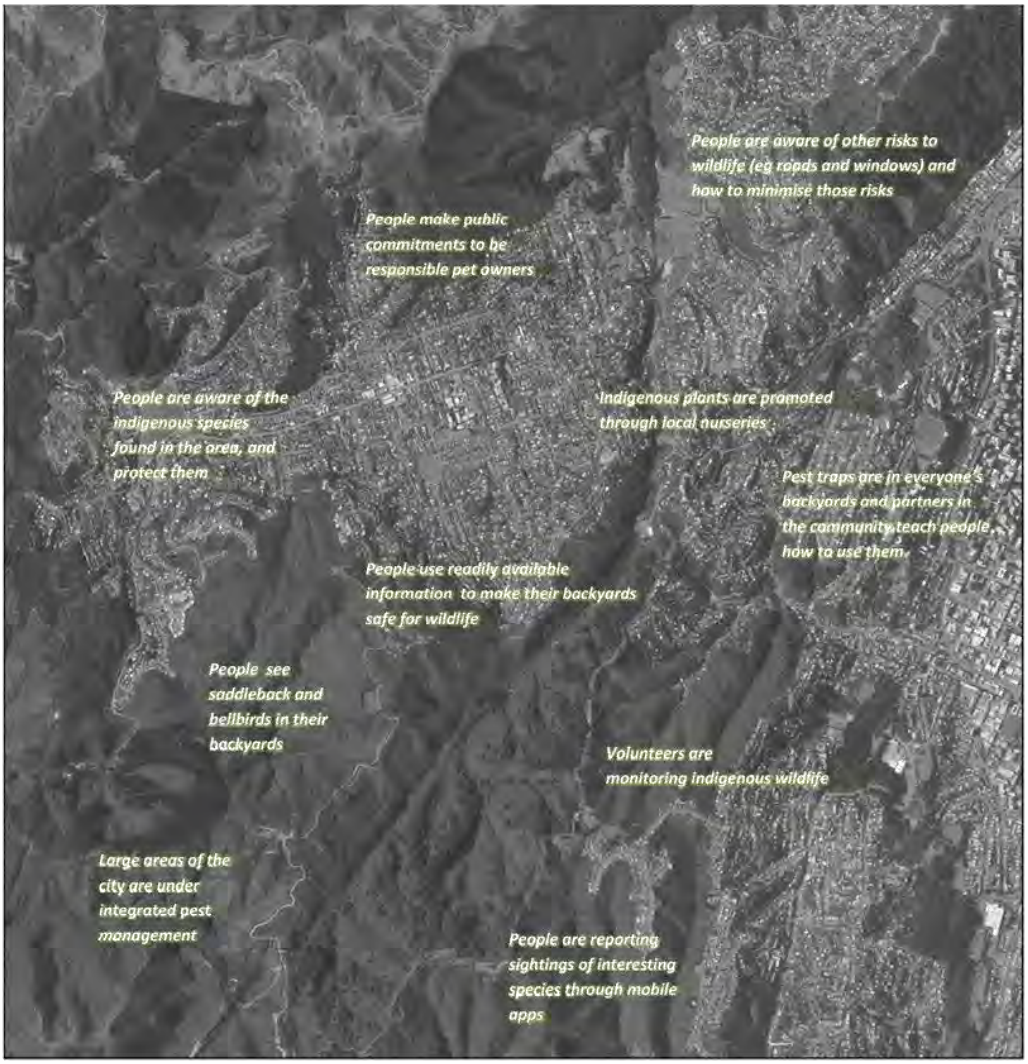
8. CONCEPT PLANS

These concept plans are an illustrative example of what the actions could look like when pulled together under a single overarching project. They describe generally, in narrative and with illustrations, the vision of each project and what its goals and objectives are. They provide a set of actions that, if followed, should ensure that the vision is realised.

8.1 Wildlife Safe Wellington

Wildlife Safe Wellington is about creating a safe haven for indigenous fauna through the city by maximising pest animal control and getting people planting in their backyards. It's an opportunity for a city to be the place where people connect with our indigenous fauna. This project strengthens current populations of indigenous fauna and allows them to spread.

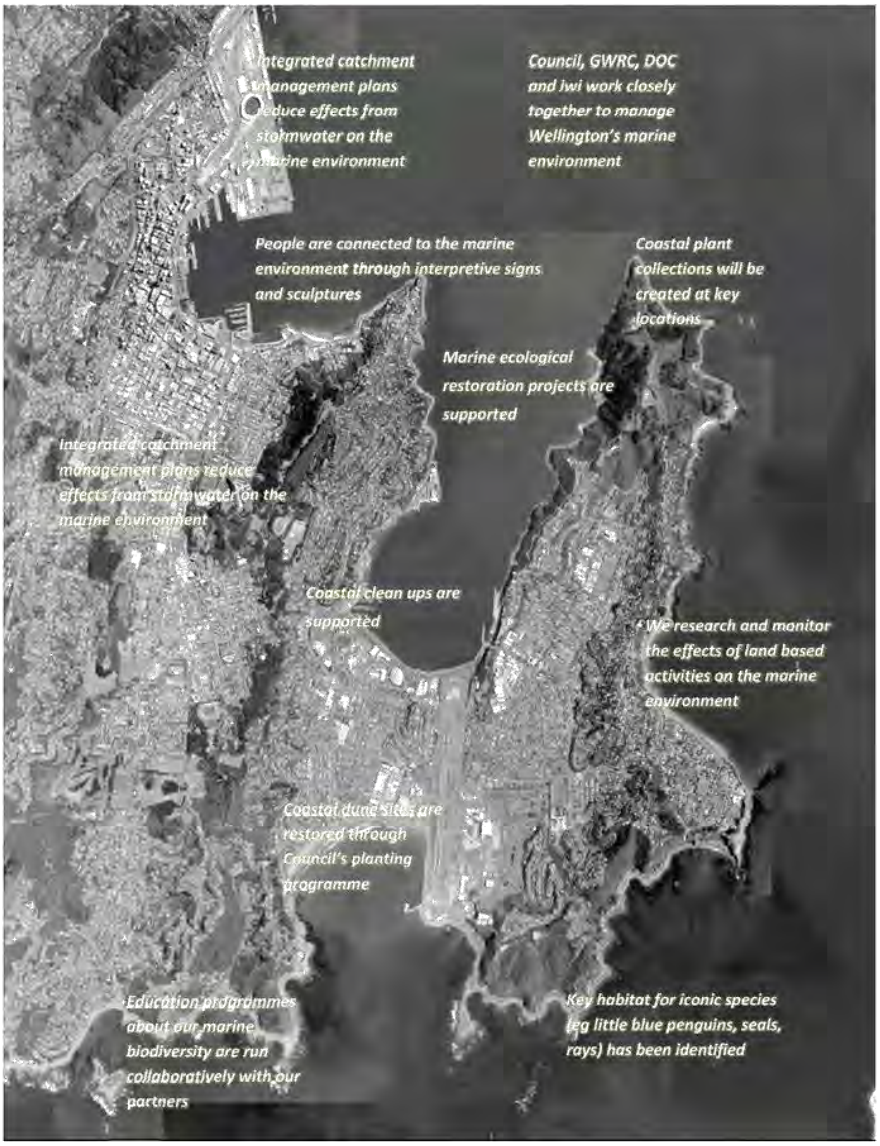
Wildlife Safe Wellington means that nesting success of indigenous bird species has improved; people are aware of indigenous flora and fauna and are planting indigenous plant species in their backyards; they are visiting natural areas to experience indigenous biodiversity; backyards across the city are safe for and supporting indigenous wildlife, all Council reserves in Wellington are indigenous wildlife-friendly refuges.



8.2 Blue Belt

In the same way as Wellington has a green belt, it also has a magnificent harbour and coastline, which interrelates with land to form a "blue belt". Through highlighting the value and significance of the harbour, Blue Belt can provide education about conserving and restoring marine life.

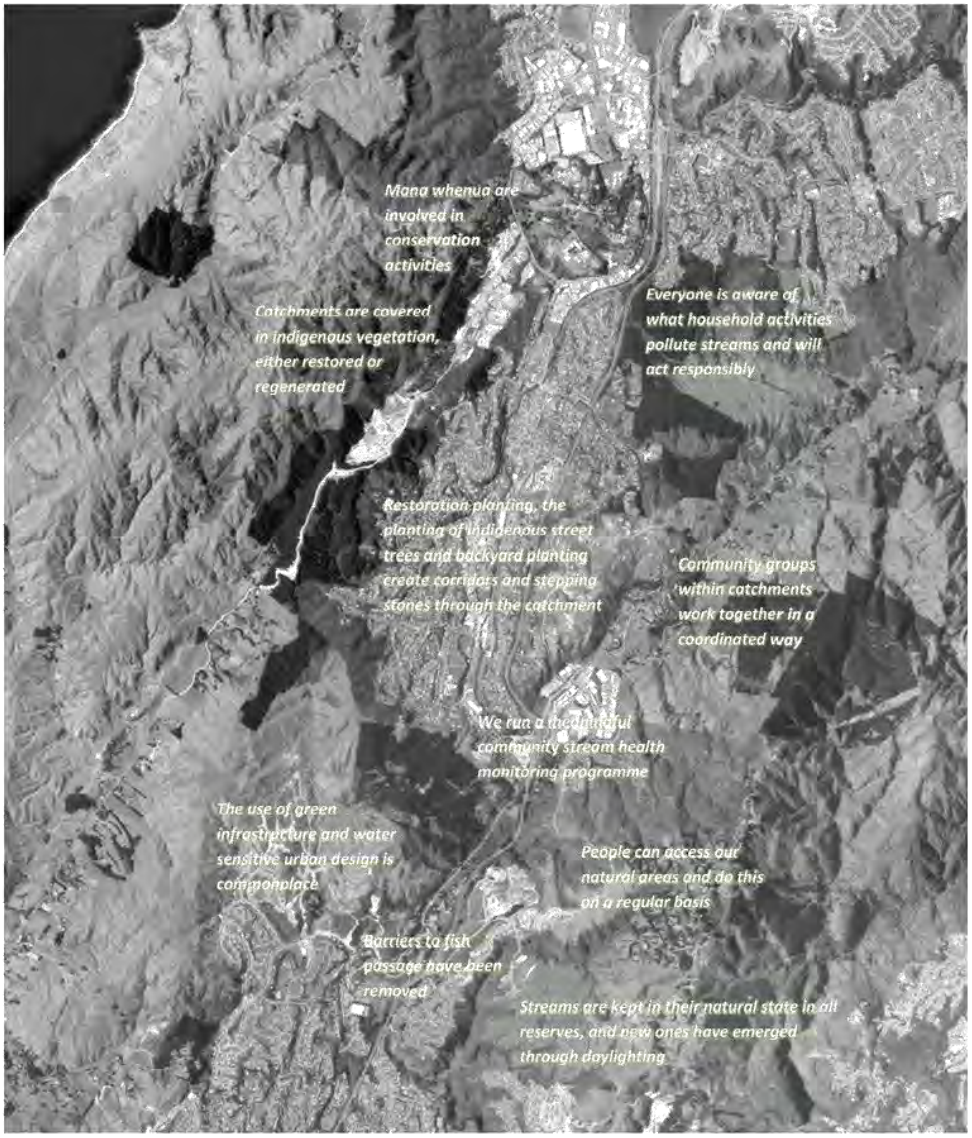
The Blue Belt will work towards the restoration of the ecology and water quality of our harbour and coast; Wellingtonians and visitors will be aware of the significance of our harbour and coast and the connections to it from the land; multiple collaborations will increase the recognition and restoration of our marine and coastal environment and our harbour and coast and its many values will be celebrated.



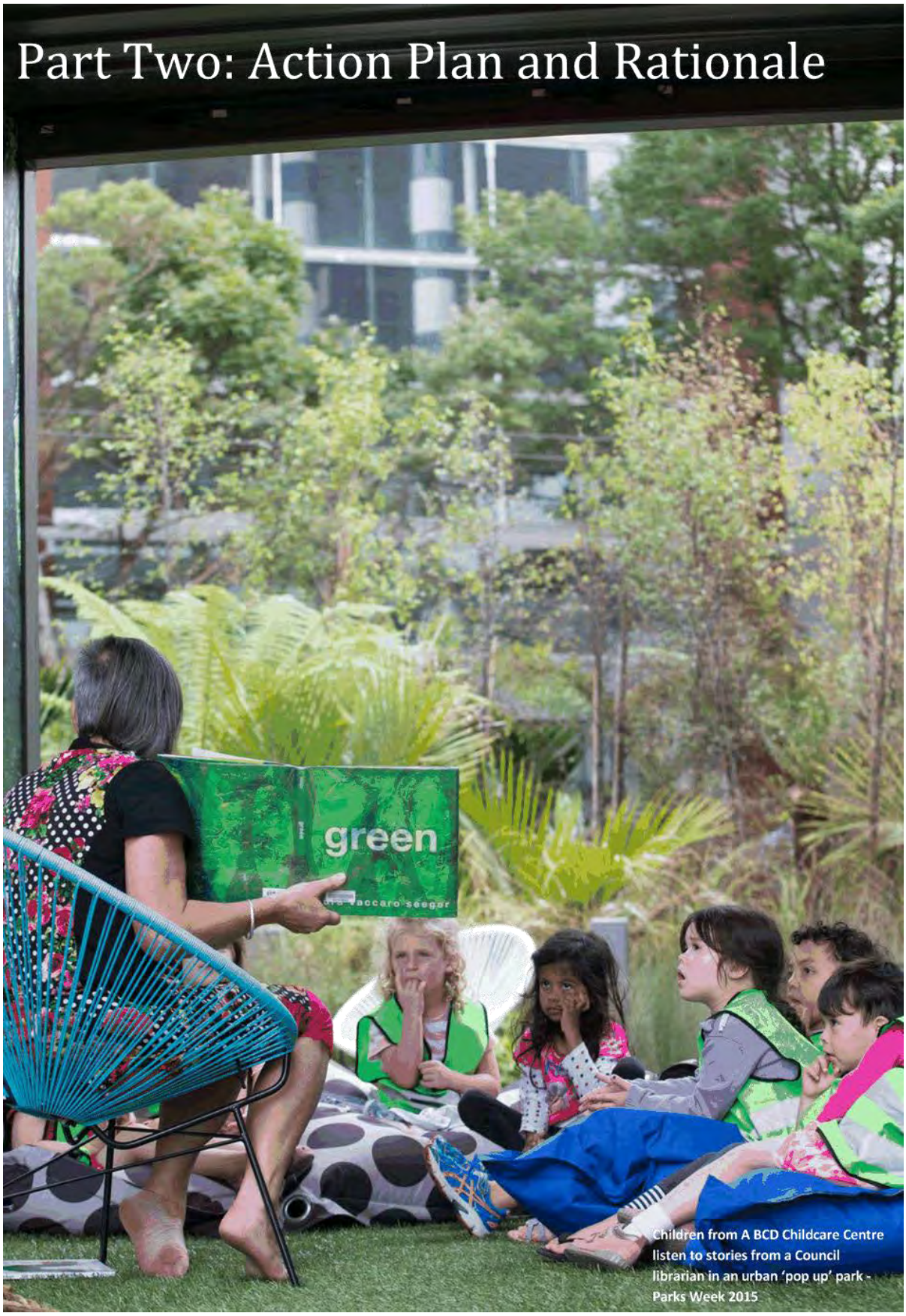
8.3 Community Catchments

Wellington is a city of catchments, which have people at their core. Community catchments is about carrying out integrated whole of ecosystem approaches to restoration. Building healthy terrestrial and freshwater ecosystems and strong communities.

Community restoration projects, whether focused on land or streams, will work together on a catchment based approach to enable holistic restoration. Biodiversity will be connected between land and stream, across different reaches of streams and across both public and private land. Individuals will be encouraged and supported to take action, and meaningfully contribute to monitoring the results of those actions.



Part Two: Action Plan and Rationale



Children from A BCD Childcare Centre listen to stories from a Council librarian in an urban 'pop up' park - Parks Week 2015

9. ACTION PLAN

In order to establish healthy and resilient indigenous biodiversity within Wellington, we need to focus on certain areas. We need to protect what we have, we need to restore what is degraded, we need to research the requirements of our biodiversity and the best methods for looking after it, and we need to connect people to it.

These actions are covered under the following areas: protect, restore, connect and research.

Many of the actions will be funded through budgets developed for the relevant asset management plans and annual plans.

Other actions will be funded through alternative budget sources. This means funds will be sought from sources such as sponsorship and grants in liaison with key internal and external partners such as government agencies, educational institutes and non-government-organisations. The actions outlined in this plan will be prioritised as part of Wellington City Council's planning and budgeting processes and itemised into work programmes.

Funding: N = New funding required, E = Existing funding, Ex = Expansion of existing funding or reprioritisation within existing resources
Priority: 1 = Action essential to success of plan; 2 = Action important to the success of plan; 3 = Action useful to the success of the plan.
Time frame for completion: Ongoing, Short (1-3 years), Medium (3-5 years) or Long (5-10 years).

1. PROTECT

GOAL 1.1 – Priority biodiversity sites on public and private land are protected				
Objectives	Actions	Funding	Priority	Timeframe
1.1.1 Protect all areas of ecological significance on Council-owned land through active management, working with partners such as Greater Wellington Regional Council (GWRC)	a. Ensure that all ecologically significant areas on Council-owned land are vested as reserves	*E*	*1*	*Ongoing*
	b. When reviewing or preparing reserve management plans, ensure that biodiversity is recognised and provided for	*E*	*1*	*Ongoing*
	c. Create ecological management plans for all areas of ecologically significant public land, linking with local community groups, GWRC and iwi where applicable	*E*	*1*	*Long*
	d. Develop a master plan for Te Kopahau Reserve	*E*	*1*	*Short*
1.1.2 Identify and protect all areas of ecological significance on privately owned land through District Plan protection	a. Review Conservation Sites listed in the District Plan as part of the DP review	*E*	*1*	*Short*
	b. Include in the District Plan mechanisms to better protect significant ecological areas on private land	*E*	*1*	*Short*
	c. If there is an ecologically significant site on Open Space zoned land, investigate changing that zone to Conservation	*E*	*3*	*Medium*

GOAL 1.2 – Rare, threatened or locally significant species are protected				
Objectives	Actions	Funding	Priority	Timeframe
1.2.1 Work with partners, including the Department of Conservation (DOC), community groups and others, to ensure that no nationally or regionally threatened or locally significant species is lost	a. Partner with relevant organisations for the in-situ and ex-situ protection of threatened species through the development of action plans for nationally or regionally threatened and locally significant species	*E*	*1*	*Ongoing*
	b. Be actively involved in the New Zealand	*E*	*3*	*Ongoing*

to Wellington, and ensure that genetic diversity is retained as far as possible	Indigenous Flora Seed Bank by contributing knowledge, seeds and appropriate permits.			
	c. Work with partners to locate and map all nationally or regionally threatened and locally significant species	*E*	*1*	*Ongoing*
1.2.2 Ensure that animal pest control is sufficient to allow for the survival of nationally or regionally threatened and locally significant species	a. Develop a set of guidelines for animal pest control methods based on the biodiversity outcomes we want to achieve	*E*	*1*	*Short*
	b. Establish the optimal bait station network across our reserve network and the frequency with which this network needs to be maintained	*Ex*	*1*	*Short*
	c. Ensure that animal pest control within a buffer zone around Zealandia is sufficient to allow for successful breeding	*Ex*	*1*	*Short*
	d. Establish criteria and protocols to decide which species within Wellington warrant additional protection if discovered through monitoring programme	*Ex*	*2*	*Short*

GOAL 1.3 – Pest species are controlled to sufficient levels to protect our biodiversity, and eradicated if possible				
Objectives	Actions	Funding	Priority	Timeframe
1.3.1 Control pest animals and plants that threaten sites of ecological significance	a. Develop a revised pest management implementation plan and review the pest management programme to determine whether the size, scope, scale, intensity and duration are likely to sustain viable populations of key species (including vegetation and processes, birds, lizards, fish and invertebrates) within the Council's open space network and where possible on relevant private land	*E*	*1*	*Short*
	b. Carry out pest control based on priority sites in accordance with ecological significance criteria and priority threats	*E*	*1*	*Ongoing*
	c. Support other organisations carrying out control activities that fit with Council priorities	*E*	*1*	*Ongoing*
	d. Expand the number of hectares of ecologically significant public land under integrated pest control from 52% in 2014 to meet agreed target of 70% by 2020 and 100% by 2025	*Ex*	*1*	*Long*
	e. Identify and address gaps in the possum control network	*N*	*2*	*Medium*
	f. Adapt the National Pest Control Agency guidelines for ethical and humane practices for animal pest control for use by Council, its contractors and volunteers	*E*	*3*	*Short*
1.3.2 Control pest animals and plants with the greatest potential to have adverse impacts on indigenous biodiversity	a. Work with GWRC to maintain a list of Wellington pest plants with the greatest potential to increase their range and pose a threat to areas of ecological significance, and prioritise their control	*E*	*1*	*Ongoing*
	b. Carry out pest control based on priority species with the greatest potential to have adverse impacts, across all public land	*E*	*1*	*Ongoing*
	c. Work with other organisations (including GWRC, DOC, Predator Free NZ, Zero Invasive Predators) to ensure we are using the best methodologies for controlling pest species			
	d. Protect key lizard populations in known high	*Ex*	*1*	*Short*

	priority areas - review pest control for mustelids, hedgehogs and rodents; particularly in south coast parks such as Red Rocks, Moa Point, Point Dorset, Tarakena Bay and Palmer Head			
	e. Continue sustained control of feral goats across the south-west peninsula with the ongoing aim of ultimately eradicating feral goats. Continue to seek more tools including regulatory tools to achieve eradication	*E*	*2*	*Ongoing*
	f. Work closely with the New Zealand Transport Agency (NZTA) and OnTrack to remove significant environmental pest plants from transport corridors not owned by the Council	*N*	*2*	*Medium*
1.3.3 Increase the area of land under integrated pest control by supporting landowners, occupiers and community groups to take an active role in controlling pest plants and animals and preventing the spread of pests in the city	a. Support the capacity of new and existing community groups to engage in pest animal and pest plant control	*Ex*	*1*	*Short*
	b. Implement animal pest control in the areas of rural land to the south-west of Zealandia	*E*	*2*	*Short*
	c. Work with other stakeholders to explore the possibility of making Miramar Peninsula pest free	*Ex*	*3*	*Long*

GOAL 1.4 – The impact of urban growth and human activity on all ecosystems and remaining habitat is managed				
Objectives	Actions	Funding	Priority	Timeframe
1.4.1 Ensure that all ecological and recreation values of open spaces are recognised in the District Plan, including for their future potential as part of a city green network, and for the ecosystem services they deliver such as health and wellbeing benefits	a. Identify all sites of ecological significance and sites that are important, or could be, for maintaining or enhancing connectivity between ecologically significant sites.	*E*	*1*	*Short*
	b. Initiate a review of Conservation sites in the District Plan to ensure that all the sites identified in 1.4.1.a on public land (including important buffer zones and corridors) are listed as Conservation Sites or Open Space	*E*	*1*	*Short*
	c. Seek to protect all the sites on private land sites identified in 1.4.1.a through a review of Conservation sites in the District Plan, voluntary agreements and /or acquisition	*E*	*1*	*Short*
	d. Identify areas of road reserve that could be reclassified as reserve and carry out road stopping, where those areas are not needed for roading purposes, they contain forest remnants or significant vegetation over 0.5ha in area and adjoin an existing reserve	*N*	*2*	*Long*
1.4.2 Increase regulatory protection through the District Plan provisions for all sites of ecological significance (including ecological linkages) to prevent further clearance and fragmentation	a. Provide specialist ecological advice on District Plan changes and conditions on consents	*E*	*1*	*Ongoing*
	b. Ensure District Plan changes adequately protect biodiversity values through goals, policies and rules	*E*	*1*	*Ongoing*
	c. Monitor regulatory effectiveness to ensure that compliance around biodiversity protection and restoration is achieved	*Ex*	*2*	*Ongoing*
1.4.3 Reduce impacts of urban development and land-use on aquatic ecosystems	a. Assist Wellington Water and stakeholders to complete Integrated Catchment Management Plans for Wellington's eight catchments: Lambton Harbour/Oriental Bay, Evans Bay, Island Bay/Houghton Bay, Lyall Bay, South-east Coast, Owhiro Bay, Kaiwharawhara, and Onslow/Ngauranga/Horokiwi	*E*	*1*	*Ongoing*
	b. Work with GWRC and within the Council to ensure no new permanent barriers to fish	*E*	*1*	*Ongoing*

	passage are created through works in streams or stormwater systems where these link significant stream habitat together.			
	c. Ensure that Council chemical use has no net negative impact on aquatic ecosystems	*E*	*1*	*Ongoing*
	d. Build on our relationship with partners working on the protection of the marine environment, focussing on education programmes.	*E*	*1*	*Ongoing*
	e. Retain all streams on reserve land in a natural state	*E*	*1*	*Ongoing*
	f. Under District Plan provisions, and considering the approach set out in Policy 43 of the RPS (protecting the aquatic ecological function of water bodies), prevent any further loss of whitebait spawning sites, and require that any significant works within whitebait spawning areas restores their operation	*E*	*1*	*Short*
	g. Integrate best practice WSUD into Council projects	*E*	*2*	*Ongoing*
	h. Complete mapping of streams as part of asset mapping of all stormwater infrastructure	*E*	*2*	*Short*
	i. Develop technical detail of Water Sensitive Urban Design (WSUD) in the Code of Practice for Land Development	*E*	*2*	*Short*
	j. Develop updated guidelines for earthworks on small sites in collaboration with GWRC	*E*	*2*	*Short*
	k. Identify and prioritise streams that should be kept in their natural state and strengthen provisions in the District Plan for their protection	*E*	*2*	*Short*
	l. Ensure there are provisions in the District Plan to protect and enhance riparian strips	*E*	*2*	*Short*
	m. Ensure that all contractors working in and around streams have undertaken sediment control training	*Ex*	*2*	*Medium*
	n. Develop at least one example of best practice WSUD in a high-profile location	*N*	*3*	*Long*
1.4.4 Ensure existing biodiversity is conserved and enhanced on proposed development sites	a. Develop evidence based guidelines and criteria (working with stakeholders) for trail development on Council owned land to balance recreational needs with ecological values.	*E*	*2*	*Short*
	b. Educate and advise landowners and developers around methods for protecting natural values in developments and sub-divisions, including enhancing ecosystems and recreational opportunities through habitat creation, pest control, low-impact urban design and water sensitive urban design	*Ex*	*1*	*Medium*
	c. Provide consent officers with access to up-to-date information and interpretation of information so they can make informed decisions	*E*	*2*	*Ongoing*
	d. Investigate the impact of street lighting on biodiversity as part of new developments	*E*	*3*	*Long*
1.4.5 Advocate for biodiversity values to be included in all Council plans, strategies and programmes that potentially impact on these values	a. We will incorporate biodiversity principles into Council plans and policies such as the Code of Practice for Land Development, Subdivision Design Guidelines.	*E*	*1*	*Ongoing*
	b. Consider the impact of future climate change on all biodiversity management activities	*E*	*2*	*Ongoing*

2. RESTORE

GOAL 2.1: The loss or decline of our indigenous biodiversity is reversed, and self-sustaining and resilient ecosystems created				
Objectives	Actions	Funding	Priority	Timeframe
2.1.1 Create resilient and self-sustaining ecosystems	a. Continue the Council's restoration planting programme of at least 45,000 native eco-sourced plants annually	*E*	*1*	*Ongoing*
	b. Create a city wide planting strategy (including suburban areas and the CBD) to ensure a representative range of sites across the different ecosystems – forest, shrubland, wetland, streamside (riparian), rocky shore and coastal – are included as part of the Council's restoration planting programme	*E*	*1*	*Ongoing*
	c. As part of the strategy, ensure that a mix of plant types is included in the restoration planting programme, including emergent trees, climbers and groundcovers	*E*	*1*	*Ongoing*
	d. Write citywide guidelines for enrichment planting, including where best to source plant propagules, different species' habitat requirements, the importance of mycorrhizal associations, and the most effective methods of propagation	*E*	*2*	*Short*
2.1.2 Continue to use eco-sourced plant material and promote it to the wider community	a. Review eco-sourcing guidelines for use in different practical contexts, involving relevant organisations and community groups	*E*	*1*	*Short*
	b. Continue the provision of eco-sourced plants through Berhampore Nursery	*E*	*1*	*Ongoing*
	c. Work with community and private nurseries to ensure they all have seed collection permits and are following eco-sourcing guidelines	*E*	*1*	*Short*
2.1.3 Restore the function of ecosystems, recognising the role that all species may play	a. Evaluate the ecological function of large exotic trees on public land and if removals are required (eg for safety reasons), consider replacing that function before removals occur	*E*	*1*	*Ongoing*
	b. Trial ways of restoring native forest underneath a canopy of exotic conifers to build on our knowledge of long term restoration options in these environments	*E*	*1*	*Short*
	c. Initiate a programme to gradually replace over-mature conifers with native vegetation over 20–30 years, in accordance with priorities in existing management plans such as the Wellington Town Belt Management Plan	*E*	*2*	*Ongoing*
	d. Ensure that future Council amenity and landscape planting (including street trees) will not threaten indigenous biodiversity, and enhance indigenous biodiversity where practicable	*E*	*2*	*Ongoing*
	e. Trial the practice of damaging weed trees where appropriate and leaving them standing (veteranisation) to create cavities for birds, lizards and insects	*Ex*	*2*	*Short*

GOAL 2.2: Aquatic ecosystem health across the city is improved				
Objectives	Actions	Funding	Priority	Timeframe
2.2.1 Continue stream restoration programmes in accordance with	a. Continue streamside (riparian) planting programme (including indigenous vegetation	*E*	*1*	*Ongoing*

community and catchment priorities	buffers)			
	b. Identify and prioritise streams that should be restored from their current state	E	1	Short
	c. Support or seek funding with agencies such as Million Metre Streams, supporting community groups to apply for funding via these organisations	E	1	Short
	d. Ensure all Council works in stream are in accordance with GWRC best practice guidelines.	E	1	Ongoing
	e. Conduct walkover of Kaiwharawhara, Owhiro and Haape streams to map and identify barriers to fish passage	N	1	Short
	f. Seek to restore (daylight) piped sections of stream within large natural catchments to contribute to overall stream network health	E	2	Ongoing
	g. Prioritise barriers to fish passage and schedule their modification or removal as part of an annual programme	N	2	Medium
	h. Support Zealandia to explore the eradication of pest fish within the lakes and streams of the valley	E	2	Medium
	i. Work with local farmers to fence and plant riparian areas on their land.	N	2	Long

GOAL 2.3: Restoration programmes are in place for rare, threatened or locally significant species				
Objectives	Actions	Funding	Priority	Timeframe
2.3.1 Ensure threatened fauna has the habitat needed to complete lifecycles	a. Plant food species for threatened fauna as part of restoration planting programmes	E	1	Ongoing
	b. Install suitable nesting sites for cavity nesting species in reserves where these species are known to be present.	N	2	Short
2.3.2 Re-establish populations of threatened plants in Wellington	a. Propagate threatened species at Council nurseries for planting as part of the restoration planting programme	E	1	Ongoing
	b. Work with community and professional nurseries on the propagation of threatened species	E	1	Ongoing
2.3.3 Work in partnership with other organisations to develop species restoration programmes for both terrestrial and aquatic species	a. Work with DOC to ensure the Council is following 'threatened species recovery plans' where these are in place	E	1	Ongoing
	b. Support other organisations with restoration programmes where these are already in place	E	2	Ongoing
	c. Consult other organisations to ensure current species restoration programmes are being followed	E	2	Short
	d. Work with relevant organisations to investigate the restoration of indigenous fauna through reintroduction programmes	N	2	Medium

GOAL 2.4: Ecological networks are developed across the landscape				
Objectives	Actions	Funding	Priority	Timeframe
2.4.1 Create connections between reserves for key plant and animal species (ie create a Green Network Plan)	a. Identify key species for which connections would be beneficial and can be achieved	E	1	Short
	b. Identify individual dispersal mechanisms and requirements for each of these key species and where current populations are located	E	1	Short
	c. Carry out restoration planting and strategic street planting where practicable to allow for travel of these key species between core areas	E	2	Medium

	d. Prepare a discussion paper on roadside reserves as potential corridors between remnants	E	2	Medium
	e. Work with private landowners to close gaps between identified ecologically significant areas where the reserve network is not sufficient	N	2	Long
2.4.2 Work with private landowners to restore areas of ecological significance	a. Assist landowners with seeking grants to fund the ecological restoration on sites with identified ecologically significant areas	E	1	Ongoing
	b. Identify and prioritise the areas of private land that contain large areas of prime and secondary forest remnant or wetlands and work with landowners of these sites on restoration programmes	E	1	Short
	c. Give advice to private landowners on restoration planting	E	2	Ongoing
	d. Work with QEII to protect ecologically significant sites on private land	Ex	2	Short
	e. Identify, create and implement incentives to get people to care for biodiversity on private land	Ex	2	Medium
	f. Work with private landowners to create ecological restoration plans for areas of ecological significance	Ex	2	Long
2.4.3 Work with Porirua City Council, Lower Hutt City Council, GWRC and DOC to ensure cross-boundary management of important catchments and ecosystems	a. Work with Porirua City Council, GWRC and Ngāti Toa on the implementation of the Porirua Harbour Strategy	E	1	Ongoing
	b. Work with GWRC on the establishment and implementation of the Porirua and Wellington Harbour Whaituas	E	1	Short
	c. Work with GWRC to identify the spread of species between Belmont Regional Park and Council Northern reserves	Ex	3	Medium

3. CONNECT

GOAL 3.1: Biodiversity is a common experience for all Wellingtonians				
Objectives	Actions	Funding	Priority	Timeframe
3.1.1 Ensure all Wellingtonians encounter nature on a daily basis	a. Promote and increase use of native plantings in Council amenity planting, particularly within the central city	E	1	Ongoing
	b. Investigate the use of live feed cameras on bird nests (eg kaka and/or little blue penguin, and/or underwater marine environment in inner harbour) and promote these images to the public	N	2	Medium
	c. Increase the number of large trees planted in the central city, focussing in particular on the east-west connections. Explore the use of suitable local native tree species.	Ex	2	Long
	d. Make green infrastructure and water-sensitive urban design (WSUD) standard as part of new buildings and upgrades within the Council property portfolio	N	2	Long
	e. Incorporate indigenous biodiversity into Wellington's urban design strategies	E	3	Medium
	f. Include New Zealand nature and natural imagery into public space upgrade projects	E	3	Medium
	g. Install green roofs and walls on at least one public building in the central city and surrounds	N	3	Medium
3.1.2 Ensure Wellingtonians	a. Ensure all Wellingtonians in suburban and urban	E	1	Ongoing

connect with nature as part of recreation activities	areas can access a natural space within a 10-minute walk or cycle			
	b. Support the development of community gardens and edible planting groups	*E*	*2*	*Ongoing*
	c. Restore natural areas near key recreational areas such as sportsfields and playgrounds	*E*	*2*	*Medium*
	d. Promote cycling and walking links through and along the appropriate green and blue networks	*E*	*3*	*Ongoing*
	e. Ensure legal protection over private land provides for public access where practicable	*E*	*3*	*Ongoing*
	f. Promote and protect areas which provide tranquil green space to assist with mental health and wellbeing	*N*	*3*	*Long*

GOAL 3.2: People understand the importance and value of biodiversity to their wellbeing				
Objectives	Actions	Funding	Priority	Timeframe
3.2.1 Raise Wellingtonians' awareness of the significance and value of biodiversity	a. Educate the public around Council use of indigenous vegetation to increase community awareness and appreciation of local plants eg through Otari-Wilton's Bush, garden beds and traffic island displays; identify suitable indigenous species for specimen planting where appropriate	*E*	*1*	*Ongoing*
	b. Celebrate our indigenous biodiversity and our successes in relation to its conservation	*E*	*2*	*Ongoing*
	c. Create and install interpretive signage within key reserve areas to educate people about the biodiversity values of that area	*N*	*2*	*Ongoing*
	d. Create and install interpretation materials telling stories of cultural and natural history and promoting community restoration initiatives	*N*	*3*	*Long*
3.2.2 Use technology to connect people with biodiversity and ensure that people have access to current information on biodiversity	a. Inform and educate the public through a number of activities and programmes, including production of communications such as our e-newsletter Branch Out	*E*	*1*	*Ongoing*
	b. Promote Nature Watch as a citizen science tool to collect information on biodiversity and environmental pest species	*E*	*2*	*Ongoing*
	c. Have all biodiversity information and research available through the Council website	*E*	*2*	*Medium*
	d. Develop an easily used species identification guide for lizards and implement standardised lizard reporting procedures	*E*	*3*	*Short*
	e. Create a physical public research hub where the community can access research advice and reference collections	*N*	*3*	*Medium*
	f. Develop smart and easily accessible information to enable people to access areas of high biodiversity, including smart phone applications and interactive mapping	*E*	*3*	*Medium*
3.2.3 Give children and youth the opportunity to experience and learn about nature	a. Create the Children's Garden at the Wellington Botanic Garden to fire the imagination of children and inspire adventures	*N*	*1*	*Short*
	b. Create opportunities for schools to get involved in conservation initiatives and edible planting and identify which schools are near to reserves that could be "adopted"	*E*	*1*	*Short*
	c. Continue to produce educational resources at Otari-Wilton's Bush to enhance visits by schools	*E*	*2*	*Ongoing*

	and other interested parties			
	d. Where appropriate and aligned with our strategy, continue support for environmental education programmes eg Enviroschools, Wellington Zoo's Bush Builders programme and the Zealandia education programme	*E*	*2*	*Ongoing*
	e. Review the Council's environmental education approach and develop a more coherent approach to working with children, schools and other environmental education providers	*E*	*2*	*Short*
	f. Create at least one natural playscape and use natural elements in other playground upgrades	*N*	*2*	*Medium*
	g. Identify and promote outdoor recreation opportunities for children and youth	*E*	*1*	*Short*

GOAL 3.3: More people are connected to nature, so take action to protect and restore biodiversity				
Objectives	Actions	Funding	Priority	Timeframe
3.3.1 Promote responsible pet ownership to protect wildlife in our open spaces	a. Review the animal control bylaw and use it to minimise the impact of pets on native biodiversity	*E*	*1*	*Short*
	b. Work with partner organisations to reduce the impact of cats (domestic, stray and feral) on our indigenous wildlife.	*N*	*1*	*Short*
	c. Work with communities in high biodiversity risk areas on how best to minimize or avoid impacts of cats and dogs on indigenous biodiversity.	*N*	*1*	*Short*
	d. Run education and awareness programmes to encourage people to desex cats and keep them indoors as much as possible	*N*	*1*	*Short*
	e. Investigate subsidising microchipping for cats near sensitive wildlife areas as a voluntary approach	*E*	*1*	*Short*
	f. Work with partners to run a behaviour change programme informing people of the need to keep dogs on leashes near sensitive wildlife areas to protect ground dwelling/nesting birds, such as coastal penguin habitat and in forests during crucial fledging periods	*N*	*1*	*Medium*
3.3.3 Promote enhanced biodiversity awareness in all Council practices	a. Work with all Council business units and Council controlled organisations to have input into relevant Council standards and policy	*E*	*1*	*Ongoing*
	b. Run at least one internal training programme per year on issues relating to biodiversity. These should initially focus on threatened environments such as streams and dunes	*E*	*2*	*Ongoing*
3.3.5 Increase active participation in biodiversity projects and celebrate that action	a. Publicise biodiversity projects through Council channels and work with NatureSpace portal to assist people to volunteer and get involved	*E*	*1*	*Ongoing*
	b. Publicise the Council's and other organisations' activities, events and achievements relating to Wellington's biodiversity through social media, media articles and publications	*E*	*1*	*Ongoing*
	c. Promote opportunities for people to participate in decision-making affecting biodiversity (RMA processes, submitting to Council, joining ERG etc)	*E*	*2*	*Ongoing*
3.3.6 Engage the wider community in Citizen Science projects	a. Continue involvement in the annual backyard bird survey and the Kereru Count	*E*	*2*	*Ongoing*
	b. Engage the community in other species-based programmes such as lizard monitoring,	*N*	*2*	*Ongoing*

	potentially using NatureWatch as a tool			
	c. Lead one BioBlitz (terrestrial and aquatic) within Wellington every 3 years	*N*	*2*	*Short*
3.3.7 Encourage and support individuals and households to take action to support biodiversity	a. Continue to support annual initiatives with partner organisations that encourage all people to remove weeds from their gardens and plant native plants instead	*E*	*1*	*Ongoing*
	b. Implement an awareness programme about environmental weeds (including native weeds), the impact of garden dumping and risk of birds and wind spreading seeds to nearby parks and reserves	*E*	*1*	*Short*
	c. Encourage people to have wildlife friendly backyards by providing information on creating habitat and planting food species.	*E*	*1*	*Short*
	d. Work with the community to explore options for chemical free pest control and recommend chemical free approaches for small scale operations	*E*	*3*	*Medium*
	e. Promote backyard trapping by providing information and facilitating the supply of equipment	*N*	*1*	*Short*
	f. Develop and publish plant lists and guides for zones around Wellington (based on species that originally grew there) so people can be informed about the appropriate species to plant	*E*	*1*	*Short*
	g. Work with partners (including Wellington Water) to provide and promote information on the impact of household activities, such as car washing and the use of paint and chemicals, on water pollution	*Ex*	*2*	*Ongoing*
	h. Investigate possible options to get more green waste from the city going to the compost facility at the Southern Landfill	*Ex*	*2*	*Medium*
	i. Work with community partners to establish a teaching garden to educate people on the difference between similar plant species (both weed and native)	*Ex*	*2*	*Medium*

GOAL 3.4: We work with a range of partners towards a shared vision for Wellington's biodiversity				
Objectives	Actions	Funding	Priority	Timeframe
3.4.1 Work in partnership with iwi and other Māori groups	a. Ensure local mana whenua have the opportunity to be involved in conservation initiatives	*E*	*1*	*Ongoing*
	b. Identify areas of traditional Māori use and biodiversity value, and work with iwi to conduct an assessment of biodiversity sites of cultural significance	*E*	*2*	*Medium*
	c. Identify opportunities on Council parks and reserves where rongoa Māori can be celebrated, plants labelled and interpretation provided	*E*	*3*	*Medium*
	d. Identify opportunities on Council parks and reserves where species required for raranga can be cultivated eg pa harakeke	*E*	*3*	*Medium*
	e. Explore opportunities to use appropriate traditional structures and buildings in our interpretation (for example pou whenua, waharoa	*E*	*3*	*Long*
3.4.2 Collaborate with partners to achieve agreed goals, effectively	a. Continue relationships between organisations with a strong biodiversity focus, such as	*E*	*1*	*Ongoing*

utilising resources and creating strong partnerships	Wellington Zoo , WWF-New Zealand, Zealandia and Forest & Bird			
	b. Partner with other agencies to support the NatureSpace portal for community restoration work	*E*	*1*	*Ongoing*
	c. Continue to support Restoration Day	*E*	*1*	*Ongoing*
	d. Facilitate discussions to agree a shared direction for Wellington region's biodiversity outcomes with partners to ensure efficiencies by not duplicating work and responsibilities	*E*	*1*	*Short*
3.4.3 Work with partners to identify opportunities for increased business involvement and support	a. Pursue opportunities for business involvement and partnerships including sponsorship, planting programmes, encouraging sustainable business practices. Support and encourage corporate volunteer programmes	*E*	*2*	*Ongoing*
	b. Develop guidelines with other organisations that use corporate volunteers, such as DOC and GWRC, to establish in which sites corporates should engage	*E*	*2*	*Medium*
3.4.4 Support and build the capacity of existing and new community groups engaging in biodiversity projects	a. Continue the Living City grants scheme with an ongoing financial commitment of at least $80,000 per annum to support projects on public and private land that have biodiversity benefits for Wellington	*E*	*1*	*Ongoing*
	b. Continue to provide at least 34,000 native eco-sourced plants annually to the community	*E*	*1*	*Ongoing*
	c. Continue support for environmental restoration groups through the provision of plants, materials, technical advice and in-kind support	*E*	*1*	*Ongoing*
	d. Develop an annual programme of training and workshops to complement Restoration Day (in partnership with DOC, GWRC and NGOs)	*E*	*1*	*Short*
	e. Facilitate the establishment of a community plant nursery network to promote best practice, access to training opportunities and cooperation	*E*	*1*	*Short*
	f. Ensure information on funding sources is available for community groups to carry out biodiversity conservation work. Promote funding sources available for private landowners to protect and manage biodiversity on their own land (including carbon credits)	*E*	*2*	*Ongoing*
	g. As part of a city wide planting strategy, identify where groups are working in areas with missing plant species, and ensure those groups have the ability to plant those species	*E*	*2*	*Medium*
	h. Facilitate the coordination between community environmental groups, including potential mergers, to ensure a sustainable community contribution to conservation.	*E*	*2*	*Ongoing*

4. RESEARCH

Goal 4.1: Wellington City Council has increased understanding and knowledge of biodiversity				
Objectives	Action	Funding	Priority	Timeframe
4.1.1 Identify and monitor locally important sites and species	a. Ensure that all known populations of threatened plants are captured digitally and monitored	*Ex*	*1*	*Ongoing*
	b. Ensure that staff collect information on new populations of locally important species	*E*	*1*	*Ongoing*
	c. To ensure we have accurate information, re-	*N*	*1*	*Short*

	survey the boundaries of ecologically significant sites			
	d. Conduct a bat survey to establish whether populations are present in Wellington	*N*	*2*	*Short*
	e. Follow up surveys for Ngahere geckos, barking geckos, spotted skinks, Kupe skinks and ornate skinks using more intensive methods in surveyed parks and reserves with good habitat	*N*	*2*	*Short*
	f. Support researchers gathering information on invertebrates	*N*	*3*	*Medium*
4.1.2 Identify habitat requirements for key species	a. Compile information on the nesting requirements for key bird species and work out where species are present with limited breeding habitat	*E*	*1*	*Short*
	b. Compile information on habitat and dispersal requirements for all freshwater fish species	*E*	*1*	*Short*
	c. Compile information on the microhabitat requirements of all threatened plant species	*E*	*1*	*Short*
	d. Establish the dispersal requirements of sensitive forest-dependent species, such as North Island robins	*Ex*	*2*	*Medium*
4.1.3 Ensure the Council has relevant and current information on the requirements of threatened species	a. Establish regular meetings with DOC biodiversity staff to ensure all information on rare, threatened or locally significant species is shared, including reports of dead animals and recent sightings	*E*	*2*	*Short*
	b. Continue to gather knowledge on the threats to threatened species and use this knowledge to adapt management programmes	*E*	*2*	*Ongoing*

Goal 4.2: Environmental monitoring is consistent across the city, region and country and informs our biodiversity management				
Objectives	Actions	Funding	Priority	Timeframe
4.2.1 Follow international best practice for citywide biodiversity monitoring	a. Carry out the City Biodiversity Index (see 10.1) and put information on Council website. Re-evaluate every 5 years to monitor progress.	*E*	*1*	*Short*
4.2.2 Monitor biodiversity indicators and outcomes in collaboration with partners	a. Set up consistent terrestrial outcomes monitoring framework and annual programme (incorporating existing monitoring work) in a collaborative approach with other key organisations – to include vegetation monitoring, bird monitoring, lizard monitoring	*Ex*	*1*	*Short*
	b. Set up consistent biosecurity output monitoring to evaluate effectiveness of pest animal and plant control programmes	*N*	*1*	*Short*
	c. Ensure common indicators for biodiversity monitoring are used so data can be easily aggregated	*E*	*1*	*Short*
	d. Carry out a monitoring programme for Wellington's streams using the Macroinvertebrate Community Index (MCI)	*N*	*1*	*Medium*
	e. We will work with Greater Wellington Regional Council to monitor the abundance and distribution of high threat Regional Pest Management Plan pest plants on public land	*Ex*	*2*	*Medium*
	f. Work with other organisations to establish monitoring techniques suitable for community groups and individual landowners	*E*	*2*	*Short*
	g. Establish best practice monitoring for urban environments	*Ex*	*2*	*Medium*

	h. Set up permanent 20x20 forest plots in reserves across the city and a programme to revaluate current plots	*E*	*2*	*Medium*
4.2.3 Monitor effects of stormwater runoff on the freshwater and marine environment	a. Work with Wellington Water to implement the global discharge consent	*E*	*1*	*Ongoing*
	b. Work with Hutt City Council to support GWRC'sWellington Harbour sediment investigation monitoring looking at levels of sediment build-up and effects on biodiversity	*E*	*2*	*Ongoing (every 5 years)*
	c. Support research through Victoria University Coastal Ecology lab on the effects of heavy metals and sediment on the marine environment	*N*	*2*	*Medium*
4.2.4 Set up systems to ensure monitoring information is used to improve management of biodiversity, taking climate change into consideration	a. Continue review of Council restoration programmes through monitoring planting success	*E*	*1*	*Ongoing*
	b. Continue review of environmental weed species and their spread in Wellington through weed mapping	*E*	*1*	*Ongoing*
	c. Carry out research on indigenous tree species to determine suitability for specimen and street tree planting	*E*	*2*	*Medium*
	d. In order to obtain information on predator presence, conduct monitoring for pests in all the parks with high numbers of lizard or bird densities and species	*N*	*2*	*Medium*
	e. Monitor the survival of all planted threatened species to improve knowledge of microhabitat requirements	*E*	*2*	*Ongoing*

Goal 4.3: We actively seek and share knowledge about Wellington's biodiversity				
Objectives	Actions	Funding	Priority	Timeframe
4.3.1 Continually identify and coordinate local research needs	a. Fund university research to work on projects aligned with the Council's urban ecology research needs	*Ex*	*1*	*Short*
	b. Maintain a research database collating all past and potential research topics	*E*	*2*	*Medium*
	c. Work with Victoria University and Zealandia to develop a centre of excellence in ecological restoration, and encourage and publicise research with a purpose	*E*	*2*	*Long*
4.3.2 Establish a biodiversity network for information sharing	a. Facilitate discussions with key people to decide the best method for interagency cooperation and collaboration on biodiversity related matters, and ensure the implementation of an agreed system	*E*	*1*	*Short*
	b. Support initiatives from other organisations on the development of a biodiversity information-sharing mechanism	*E*	*2*	*Medium*
4.3.3 Have one source of information for everyone	a. Capture all high level biodiversity information related to the Council in the GIS system in a way it can be shared with external organisations	*E*	*1*	*Short*
	b. Develop processes so that information available to the public is updated at the same time as other Council databases	*E*	*3*	*Medium*

Goal 4.4: Through knowledge we have gained, we are continually improving our biodiversity management				
Objectives	Actions	Funding	Priority	Timeframe
4.4.1 Continue to improve our internal expertise and capacity in biodiversity conservation	a. Ensure staff have the ability to set up and monitor forest plots and the ability to carry out rapid vegetation assessment surveys	*E*	*1*	*Short*

	b. Remain informed about the impact of climate change to ensure current species selection is appropriate	*E*	*2*	*Ongoing*
	c. Add requirement for 'consideration of impact on indigenous biodiversity' to Council report templates	*E*	*1*	*Short*
4.4.2 Ensure that the community can get involved in research, including monitoring	a. Facilitate training programmes for community groups that want to carry out monitoring across all terrestrial and aquatic environments	*E*	*2*	*Short*
	b. Develop a meaningful community stream health monitoring programme and a mechanism for the collection and sharing of that information	*N*	*3*	*Medium*
4.4.3 Promote best practice in biodiversity protection locally, regionally, nationally and worldwide	a. Ensure that all knowledge gained through Council programmes is shared through appropriate forums and the Nature Space website	*E*	*1*	*Short*

10. MEASURING WELLINGTON CITY COUNCIL'S PERFORMANCE

Accurately and openly monitoring biodiversity trends (and the results of actions we are taking) is essential to determine if progress has been made. Performance measures are used to translate goals and objectives into measurable indicators of progress. They are a vital part of an adaptive management approach, and provide useful information for decision makers to evaluate if actions are successful in addressing goals and objectives.

In addition to these performance measures, Council will establish a consistent monitoring framework (see objective 4.2.2) which will bring together existing monitoring and address any gaps.

Performance measures have been divided into two categories, the **City Biodiversity Index** (which measures outcomes) and **Operational monitoring** (which measures outputs).

Unfortunately there is limited historical data in some areas available to measure our progress against. In these cases we need to establish baseline information to ensure that our progress into the future can be measured.

10.1 City Biodiversity Index

The following indicators are from the City Biodiversity Index[17] and will be used as a baseline measure for the city, and then a measure by which we can assess our progress. The aim is to see an increase in all these indicator measures to increase over time. This index provides high level monitoring to look at long term trends and how we are tracking to achieve our outcomes. City wide bird counts are incorporated into this index, and also reported through Council annual plans.

Indicator	Explanation	How to calculate
1. Proportion of natural areas in Wellington City	*Natural ecosystems harbour more species than disturbed ones, hence the percentage of natural areas compared to that of the total city area gives an indication of the biodiversity richness. Natural areas comprise predominantly native species and natural ecosystems, which are no longer, or only slightly influenced by human actions, except where such action is intended to protect or restore native biodiversity.*	(Total area of natural areas, restored and regenerated areas) / (Total area of city) * 100%
2. Connectivity between ecological sites	*Fragmentation of natural areas is one of the main threats to biodiversity in a city. The fragmentation of natural areas affects species differently. To encourage positive action to increase connectivity or reduce barriers to connectivity, it is more meaningful to measure connectivity rather than fragmented plots. This indicator score can be improved when more of the fragments are connected.*	$\frac{1}{Atotal} = (A1^2 + A2^2 + A3^2 + ...+ An^2)$ Where: · n is the total number of connected natural areas · Atotal is the total area of all natural areas · A1 to An are areas that are distinct from each other (i.e. not connected). They may consist of areas that are the sum of two or more smaller patches which are connected (less than 100m apart).

[17] Convention on Biological Diversity. User's Manual for the City Biodiversity Index. 2012.

		However, exceptions to the above rule includes anthropogenic barriers such as: · Roads (15m or more in width; or are smaller but have a high traffic volume of more than 5000 cars per day) · Any other artificial structures that the Council would consider as a barrier
3. Native biodiversity in built-up areas (bird species)	*Cities comprise largely of urban, suburban and rural sites with minimal natural features. However, built-up areas do harbour biodiversity. Some urban, suburban and rural sites have more biodiversity than others. By enhancing certain features in such areas, the biodiversity could improve. Hence, native biodiversity in urban, suburban and rural sites should be an indicator. We have the most data on bird species, therefore this taxonomic group will be used as the indicator. Implementing appropriate measures such as planting, may attract birds into these areas of the city.*	The total number of native bird species in built-up areas which includes urban parks, golf courses, private gardens, cemeteries, roadside planting and impermeable surfaces like buildings and roads.
4. Change in number of native species	*Five key taxonomic groups have been selected as "core indicators" – birds, vascular plants, butterflies, lizards and freshwater fish. The indicators will measure the change in number of species over time rather than the absolute number of the species. Conducting more surveys on the target groups will result in the finding of and reintroducing 'extinct' native species would help to increase the number of extant native species.*	Once a baseline has been established, net change in species from one survey to the next is measured as: Total increase in number of species (as a result of rediscovery, new species found, re-introduction) minus the number of species that have gone locally extinct
5. Proportion of protected natural areas	*Protected or secured natural areas indicate the city's commitment to biodiversity conservation. The definition of protected natural areas includes legally protected, formally secured areas, and other administratively protected areas.*	(Area of protected or secured natural area) / (Total area of the city) *100%
6. Climate regulation: carbon storage and cooling effect of vegetation	*Two important aspects of climate regulation are carbon storage and cooling effects provided by vegetation, in particular tree canopy cover. Canopy cover of trees, which includes those that are naturally occurring and planted, is accepted as an indirect measure of the carbon sequestration and storage services. The extent of tree canopy cover can also act as a proxy measure for filtering of air and numerous other biodiversity benefits.*	Tree canopy cover can be measured via satellite and LIDAR imagery. (Tree canopy cover) / (Total terrestrial area of the city) * 100%
7. Amount of accessible green space	*Biodiversity provides invaluable recreational, spiritual, cultural and educational services. It is essential for physical and psychological health. This measure ensures social equity within the community with regards to equal access to natural areas*	(Area of parks and reserves with natural areas) / 1000 persons
8. Proportion of invasive exotic species (as opposed to native	*Exotic invasive species are species whose introduction and/ or spread threaten biodiversity. It is inevitable in cities, which are open to external influences, to have*	To ensure that the comparison of invasive exotic species with that of native species is meaningful, it needs to be a comparison of identical taxonomic groups. Therefore

species)	*exotic species. Exotic species which are not invasive or detrimental to native species are not considered in this indicator. In fact in many cities, exotic species enhance the diversity.*	for this measure we will look at vascular plants and bird species. (Number of invasive exotic species) / (Number of native species) * 100%
9. Regulation of the quantity of water	*Climate change is in many places predicted to result in increased variability in precipitation which in urban landscapes translates to high peaks in water-flow and damage to construction, business and transport. Open space and vegetation has a significant effect in reducing the rate of flow of water through the urban landscape. This indicator looks at the proportion of all permeable areas to the total terrestrial area of the city.*	Proportion of all permeable areas (including areas identified in Indicator 1 plus other parks, roadside greenery, green roofs, private gardens, streams etc) to total terrestrial area of the city (excluding marine areas and artificial permeable surfaces) (Total permeable area) / (Total terrestrial area of the city) * 100%
10. Number of formal education visits per child to natural areas	*Involving our young people with nature is an essential part of achieving our goals. This measure gives an indication of school children's use of recreational services provided by ecosystems and ensures that our green spaces are being utilised by formal education providers.*	Number of formal education visits per child below 16 years to parks and reserves with natural areas. The Council will have to work with schools to gather information on this measure.
11. Number of biodiversity projects implemented by the city annually	*This indicator measures the number of biodiversity related projects and programmes that the Council is involved in, either as the main player or in partnership. Projects could include those about species conservation, biodiversity surveys and restoration projects. For a project or programme to be included in this indicator, biodiversity must be an important consideration. A programme designed to conserve non-native species, but threatened elsewhere, can also be considered.*	Total number of programmes and projects that are being implemented by the Council or in partnership or support of the Council. This list will then be categorised by type into projects and programmes that are: 1. Biodiversity related 2. Ecosystem services related
12. Number of organisations/ companies/NGOs/academic institutions with which the city is partnering in biodiversity activities, projects and programmes	*As it is impossible for any single agency to carry out all the activities, responsibilities, projects and programmes that have biodiversity implications, it is inevitable that engagement of all levels of the population must be facilitated. This measures the extent of informal and/or formal partnerships, or collaboration with other entities. Such partnerships should have substantial and long-term involvement from the Council.*	Total number of organisations/ companies/NGOs/academic institutions with which the city is partnering in inter-agency cooperation around biodiversity activities, projects and programmes
13. Number of outreach or public awareness events held in Wellington City per year	*The event should either be organised entirely by the Council, or there should be a heavy involvement of the Council before the event to be considered for inclusion in the indicator. Events that just take place within Wellington city with no Council involvement or support will not be considered as part of this indicator.*	Total number of outreach or public awareness events held in Wellington city per year

10.3 Operational monitoring

These are short term output measures tracking on-the-ground implementation of management actions. Outputs measure activities carried out in order to reach outcomes. The following table shows the progress that has been made since the 2007 Wellington City

Council Biodiversity Action Plan, the situation in 2014 when Our Natural Capital was written and the targets we want to reach by the time this plan is scheduled for review in 2020.

Measure	2007 (actual)	2014 (actual)	2020 (target)
Ecological management plans created per year for sites with significant biodiversity value	0	4 per year	All significant ecological sites
Native plantings undertaken by the Council annually*	43,000	45,000	45,000
Survival of plants in Council plantings	65%	77%	90%
Native plants provided annually by the Council for community planting*	27,160	34,000	40,000
Number of enrichment species available for restoration planting	200	1000	2000
Total plants planted in Wellington for ecological restoration	700 000	1 240 000	2 000 000
Amount of land under active weed control (number of sites and hectares)	25 sites	75 sites	85 sites
	No information	570ha	1000ha
Reserves surveyed for high threat Regional Pest Management Plan pest plants on public land	25	50	85
Integrated pest control on Council reserve land (both weed control and control of at least two animal pests)*	No information	52%	70%
Number of sites where animal pest species are monitored	3	3	20
Number of behaviour change programmes (to address behaviour that has a negative impact on biodiversity) per year	0	1	2
Hours worked by environmental volunteers*	7,500	34,611	55,000

Our Natural Capital – Biodiversity Strategy and Action Plan will undergo a comprehensive review, with community consultation, after 5 years, and the action plan updated.

* LTP measures

11. RATIONALE FOR GOALS, OBJECTIVES AND ACTIONS

This section explains the reasoning behind the actions we are taking to achieve our vision. As with the action plan, it is organised into the four themes of protect, restore, connect and research.

This section is important to ensure that everyone understands the rationale behind the decisions we are making. We are dependent on our partners and community in assisting us to achieve our vision. To work collaboratively with them, and be leaders in this area, we need to explain why we have come to the conclusions that we have.

There are also guidelines within this section. While actions are specific and have measurable timeframes, the guidelines in this section inform how the Council will operate while carrying out those actions. These guidelines are for the Council and will be implemented throughout the Council's activities.

11.1 PROTECT

11.1.2 Introduction

The current state of our indigenous biodiversity is a legacy of human settlement and subsequent land-use changes. Much of Wellington's original habitat has been lost and altered beyond recognition. As a result there are now only small remnants that still resemble their original state. These are all modified to some extent, influenced by human processes and introduced animals and plants, many of which pose an ongoing threat. Although there has been a change in attitude to the environment, there are still a number of ongoing threats to indigenous biodiversity. This strategy recognises that we need to address these threats if we are to halt the decline of indigenous biodiversity in Wellington, and sets priorities for its protection. Our priorities for the sites we protect will be decided using our ecological significance criteria (Appendix 2). The strategy uses the Pressure-State-Response framework to identify and address threats.

- **Pressure** – Human activities exert pressures on the environment, changing both its quality and the quantity of natural resources.
- **State** – These changes alter the state, or condition, of the environment.
- **Response** – The human responses to these changes include any organised behaviour or policy that aims to reduce, prevent, or mitigate undesirable changes.

11.1.3 What do we need to protect biodiversity from?

11.1.3 (a) Environmental pests

Pressure and state

Environmental pests (Appendix 6) are one of the greatest pressures on indigenous biodiversity. Pest animals have a negative effect on native species – including birds, reptiles and invertebrates – impacting ecosystems through predation and competition, as well as browsing damaging native vegetation. Pest plants can alter ecosystems, displacing native species, preventing natural succession and, in some cases, leading to canopy collapse. Amenity weeds are those that occur in such areas as sports fields, play areas, streets or civic gardens and are not the subject of this strategy except where they overlap with legal requirements for control.

Plants

Approximately 11 percent (2068 species) of all plants introduced to New Zealand have become established in the wild. Many of the 24,700 introduced species present could establish in the wild in the future. The greatest source of new pest plants is garden escapes and dumping of garden waste (it is estimated that 75 percent of terrestrial and 50 percent of freshwater weeds became established in this way). There are a number of pathways for pest plant spread and these will be considered by GWRC's Regional Pest Management Plan (RPMP). Roads and railways are one pathway for infestation.

Pest plants pose a threat to native ecosystems as they can out-compete and prevent natural succession of native species. Replacement of native plant communities by exotic communities can isolate populations, reducing genetic variability. Closely related exotic

species can hybridise with indigenous species (such as South African iceplant (*Carpobrotus edulis*)). Non-local indigenous species can also be invasive. Karo (*Pittosporum crassifolium and P. ralphii*), karaka (*Corynocarpus laevigatus*), houpara (*Pseudopanax lessonii)* and pohutukawa (*Metrosideros excelsa*), all native to the northern North Island, have been introduced to the Wellington area and in some locations they are altering local plant communities.

To determine management options relating to pest plants and other exotic species, a number of factors need to be considered. Some exotic or non-local species have cultural or historic associations that will influence their management in specific sites or circumstances. For example, some karaka groves are culturally significant for local iwi and therefore protected. The value of some non-native species also needs to be recognised in providing valuable food and habitats for native species.

Animals

New Zealand also has a large number of introduced animal species – some of which are invasive and pose a significant threat to native ecosystems. These include mustelids (stoats, ferrets and weasels), possums, rats, hedgehogs, mice, cats and browsers such as goats, pigs, deer and rabbits.

These species pose a serious threat to native fauna. They find easy food in native ground and cavity-nesting bird species including saddleback, kakariki and kaka. Mustelids, possums, rats, cats and hedgehogs all predate on eggs, chicks, lizards and invertebrates. Mice feed on lizards and invertebrates. Of the mustelids stoats pose the greatest threat as they occupy a broader range of habitats and breed more quickly. Possums, rats and mice also consume vegetation and seeds, altering the composition of indigenous plant communities, and compete with native species for food. Browsers consume large quantities of vegetation thereby changing the structure of plant communities, preventing regeneration and, in some cases, resulting in removal of vegetation and the compaction of soils – aggravating erosion and creating sites for weed invasion.

Some introduced birds compete with indigenous species for resources, such as eastern rosella. Introduced fish, including brown trout, threaten freshwater ecosystems through predation, competition and habitat alteration. There are also a number of introduced invertebrates that pose a threat, including German and common wasps and Argentine ants.

There are a number of trends, such as increased temperature through climate change, which may increase the risk of new pest plants and animals becoming established in Wellington and making existing species harder to control. But there will also be opportunities offered by national and local innovations, and the continual development of new tools and techniques in pest management.

Response

The Council controls a range of pests on its land in accordance with its responsibilities under the National Pest Plant Accord, the Regional Pest Management Plan (RPMP) and other statutory responsibilities. Our primary focus for pest plants in recent years has been the control of species identified under the RPMP as the responsibility of landowners, specifically old man's beard, cathedral bells, wild ginger and banana passionfruit, as well as site-led management at sites of ecological significance. The sites may be whole sites such as a reserve, several sites in close proximity and with similar values, or the sites might be part of

a bigger site with areas of lesser biodiversity value that are lower in priority for management, such as primary remnant forest in a larger park.

Species will be prioritised for control in accordance with their ability to cause significant damage within each site and the sites are prioritised in accordance with the criteria in Appendix 2. Weeds are then prioritised for each site by tier (climbers, groundcovers then woody weeds) and feasibility of control. The site focus within particular reserves will be on sites of highest ecological value, under high threat, areas currently under a restoration programme or areas which have undergone previous control (where we don't want to lose the gains made). Each site will require its own specific programme to control the pests identified through the ranking process. Each site will be different and each programme will reflect those differences and reflect the control techniques required for each identified pest. Weed species may need the attention of specialist operators, for example large trees need to be treated by qualified arborists. Other factors such as weather, budget and labour resources will also have an influence on the methodology and timing of the programmes.

Council will assist with the eradication or control of pest species listed by GWRC as 'Total Control Species'. We will control pests on land that we own or occupy (including roadside verges for which we are responsible) in accordance with the RPMP rules. We will control species that occur on and threaten sites that are considered ecologically significant. We do not have authority to control weeds on private land without the permission of the land owner. In some instances we will gather this information as part of weed mapping to keep a watching brief on the spread and new incursions of weed species.

Wellington City Council funds possum control work across most of the city. They are controlled in partnership with GWRC within a portion of their three Key Native Ecosystem areas. Other species have been controlled in response to the needs of specific sites and available funding. Goat control has been carried out in response to growing goat numbers in the south-west of the city, and rabbits have been controlled in localised areas dependent on biodiversity needs. Mustelids are controlled in partnership with the community, determined by community priorities. Rats are currently controlled as by kill to possum control operations, but in some areas Council will be looking at intensifying our network where threatened species are found. Rats will be the target species in some of these instances.

Rodent control on private land is the responsibility of the landowner. Rodent control may be required by Council Environmental Health Officers for public health reasons rather than in accordance with the priorities set for the protection of biodiversity values. Other species which may be controlled by Council for public health reasons as opposed to protection of biodiversity include pigeons and ducks.

Approaches to pest control

The pests to be controlled within a site are those that have the potential to adversely affect the biodiversity values of the site. These are generally the widespread species, but can also include species that are currently localised in distribution but have the potential to become significant in the future. A precautionary approach is used. The best time to eradicate or contain a pest species, if it poses a future threat, is in the early stages of infestation, when populations are small and localised. Control costs at this point are relatively low. The more widespread and established a pest, the more difficult and expensive it is to control.

Species led programmes

Species-led programmes are proactive, concentrating on a specific species throughout the region and what is required to control and restrict that species to minimise future threat. Species-led programmes are particularly relevant in managing weeds and pest animals in the early stages of establishment, when numbers are low and/or distribution is limited, and there is potential to minimise future control costs and environmental impacts. Species-led management must assess the potential impacts of a species, how fast and how well it establishes and spreads, and how practical it is to eradicate, contain or manage it. Rapid response to a species is the optimum, but factors such as the size of the infestation, ease of control, effectiveness of control methods and the need for the cooperation of other parties will also have an influence. Two priority groups under species led programmes are climbers and wilding trees.

Site-led programmes

Site-led programmes focus on protecting identified values in ecologically significant sites. The focus is not on individual species but on the site, the values within the site and the threats to those values. These may be specific sites of ecological significance and/or rare, threatened or locally significant species. The sites may be whole sites such as a reserve, several sites in close proximity with similar values, or part of a bigger site, such as primary remnant forest in a larger park.

Pest control on private land

Plant and animal pests occur across both public and private land. Where the Council is intensively managing pests on land with significant biodiversity values, it is essential to consider how the reinvasion of these sites from adjoining non-Council land can best be managed. Education of private landowners is one method but is generally a long-term project. There are certain circumstances where Council control of pests on neighbouring land would help prevent re-infestation of Council land and reduce the need for additional pest control. Landowner/occupier consent would have to be obtained to access the land.

A priority is to look at pest control on private land to create buffer zones around our ecologically significant areas. The impacts of private land ownership and the mobility of pest animals make it more difficult to implement, but for effective control of many pest animal species the co-operation of the community is essential.

As new subdivisions are developed, we also have to consider the future threat of garden escapes, introduction of weeds and some pest animals (including domestic cats) into these areas that have previously been only lightly affected. Land uses that disturb or alter the environment also have the potential to open up new areas to invasion by weeds.

Integrated pest control

Consideration must also be given to the impacts of pest control on the environment, and the control of pests should not create opportunities for further and possibly worse pests. Within an urban context, the impact of removing one pest species on the rest of the ecosystem needs to be considered. To achieve integrated pest management, a "suite of pests" approach needs to be considered, targeting multiple pest species at once to bring their levels down together. This is particularly applicable to predators and will assist in avoiding competitor release and mesopredator release.

Methods used

Agrichemicals are the main method used for controlling pest plants. Currently this is the chosen method given the scale of land and pest species we need to control, but we

recognise this level of chemical use as not desirable and other techniques will be explored over the life of this plan. *Biological control* is the use of naturally occurring parasites, predators and pathogens to control target species. Biological control is primarily used against pest plants, and is strictly controlled and researched nationally to ensure the agent cannot adversely affect native ecosystems. The benefits of biological control include reductions in the use of chemicals, cost-effectiveness and being highly targeted. *Vertebrate toxic agents* are primarily distributed through ground control involving a network of bait stations, and are used across most Council land, primarily targeting possums and reducing rodent numbers. They can also be used for localised ground poisoning operations that target rabbits. *Trapping* is the most effective method for targeting some animal pest species, primarily mustelids and hedgehogs, rats and complements the use of toxins. Trapping is recommended for small scale operations such as in backyards to limit the amount of toxin use. Some species cannot be trapped or poisoned, and *hunting* is the only option for control. These species include feral goats, pigs, rabbits and hares. *Fencing* is the most effective means for excluding goats, pigs, deer and livestock from sites with high biodiversity values or where the natural regeneration of native vegetation is the management objective.

11.1.3 (b) Habitat loss and fragmentation

Pressure and state

Wellington's urban growth poses a threat to remaining indigenous ecosystems. Although large-scale habitat loss is not the threat it once was, there is a continued loss of indigenous habitat by development, land-use intensification and changes in land-use affecting bush remnants, streams and wetlands. The coastal environment is under pressures from subdivision and use, including existing infrastructure and buildings. There is also high demand for coastal sites for new and expanded infrastructure uses, including further reclamation and aquaculture. These all pose a threat to coastal habitats. The cumulative impact of incremental changes needs to be considered. Wellington's remaining indigenous forest is particularly fragmented and its streams modified. Some remaining bush remnants on private land currently have limited protection under the District Plan, making them vulnerable. The Wellington Urban Growth Plan anticipates an additional 45,000 residents in the city by 2045. Housing, business and infrastructure demands can have associated direct, indirect and cumulative effects on biodiversity which need to be addressed and avoided or mitigated early in the development process. Some emerging issues to do with urban development are the impact of light and sound on biodiversity. There is increasing evidence from overseas that street lights and lights within parks have negative impacts on plants, animals and their behaviour.

Habitat loss at a small scale may not appear to be significant but can lead to a degradation of wider ecosystem function at a city-wide scale. This can lead to remaining areas being too small to sustain the necessary processes and remove the areas used by mobile species to travel across the landscape. In urban areas, increased development puts more pressure on ecosystems' ability to cope and potentially reduces the effectiveness of the ecosystem services provided by Wellington's natural capital.

Response

We must promote and invest in actions to reduce the negative impacts of the city's growth and development on the environment, and use a range of regulatory and non-regulatory

tools to do this. There are a myriad of opportunities within Wellington for better management of our infrastructure.The Council's main mechanism for protecting indigenous biodiversity is through the provisions of the RMA 1991. In particular, the preparation of a District Plan that sets objectives, rules and policies that guide land use and the resource consent process. We will seek to strengthen the protection of our biodiversity through the District Plan, focussing on the primary forest remnants, and ensure alignment between the Council's strategies and policies to ensure biodiversity outcomes are achieved alongside economic development and other wellbeing outcomes. We will also look at Council's infrastructure practices to reduce the impact these have on our biodiversity, including the issues of street lighting.In addition to statutory policy and planning mechanisms and the delivery of services, the Council can also achieve its policy objectives to promote the protection of areas of ecological significance on private land through a number of voluntary measures as outlined in the Action Plan.

11.1.3 (c) Aquatic ecosystem degradation

Pressure and state

Everything that goes into the stormwater system eventually ends up in our streams or in the harbour. Stormwater management remains a significant issue within built environments, especially as our city grows and the climate changes. Because stormwater travels from roads and roofs to streams, rivers and seas without treatment, contaminants in stormwater contribute to pollution of the receiving environment. As houses grow larger and sections grow relatively smaller, and with urban intensification, the resulting increase in impervious areas means increased volume and speed of stormwater runoff. Increased runoff and other activities (including stream realignment, piping, damming or creating new urban stormwater discharges) can significantly modify stream habitats.

Aquatic habitats are vulnerable to degradation through heavy metal and microbial pollution, and sediment linked to urban development and increased intensification. Increased areas of impervious surfaces – roads, roofs and car parks – leads to increased peak flow and volume of run-off and increased load on stormwater drains. Stormwater runoff is heavily influenced by surrounding land use and activities. Human and urban activities generate a wide range of contaminants that are often transported in stormwater. When it rains, contaminants are washed off hard surfaces and into stormwater networks. Research shows fairly conclusively that the sources of contamination are from buildings and neighbouring land uses. Roads are contributors, recipients and conveyors of contaminants from adjacent and often extensive contributing areas.

This contamination of stormwater can result in public health risks, close beaches and affect recreation, shellfish gathering, and cultural and tourism values as well as impacting on marine and freshwater ecosystems. Wellington and Porirua harbours, like other coastal environments surrounded by populated areas, receive significant volumes of stormwater with the potential to pollute their ecosystems.

Land development, especially on hill sites, can cause further erosion, resulting in greater sediment loading on aquatic ecosystems. Hydrodynamic modelling of Porirua Harbour indicates sedimentation rates average about 6mm per annum in the Onepoto arm and 9mm a year in the Pauatahanui Inlet. Work has shown that the biggest sediment contribution is from bare land under construction (37 percent), followed by pasture (33 percent) and with urban runoff contributing the rest (10 percent). Silt is smothering the seabed, affecting seagrass and shellfish beds, and may be depleting the harbour's ability to attract and retain

fish. Localised reduction in harbour depths is affecting navigability even for small vessels. These findings reinforce the importance of construction sediment and erosion control, and the need to manage sites in accordance with consent conditions.

Increased sediment affects aquatic ecosystem functioning and sedimentation can affect many miles of stream. Land-based effects from pollution and sediment can have a significant impact on the coastal marine area affecting values associated with the marine environment including recreation, kai moana gathering and cultural values.

Pollution from heavy metals and other chemicals can also affect biodiversity in the freshwater and marine environment. Monitoring conducted by GWRC in 2013/14 shows that water quality in the four streams monitored in the city – Porirua Stream, Makara Stream, Karori Stream and Kaiwharawhara Stream – are degraded having excessively high levels of dissolved phosphorus and (for all but Makara) nitrogen. Raised nitrogen and phosphorus levels cause algal blooms, impacting on ecosystem health. Cyanobacterial blooms within the lower Karori reservoir are also exacerbated by introduced fish, which has downstream ramifications. Common sources of excess nitrogen and phosphorus include fertilizer, herbicides and pesticides, sewers and septic systems entering the stormwater system, domestic soaps and detergents being disposed of from private properties. These streams also have excessive levels of *E. Coli,* making them unsafe to swim in. Despite this, the macroinvertebrate index (MCI) in these streams is still excellent to fair – showing that it is not too late to restore the health of these streams. This pollution also affects other species up the food chain, including sea birds and marine mammals such as orca.

Response

The Council is planning to address land use and growth impacts on soil, water and biodiversity within catchments as Wellington grows. This needs to happen primarily through planning and policy documents, and as part of Integrated Catchment Management Plans (ICMP) and the Whaitua process being run by GWRC.

An ICMP is a plan that takes a holistic approach to managing the inputs and outputs of a stormwater catchment. An integrated approach means taking a range of factors into consideration – activity and urban development in the catchment, the state of the stormwater and wastewater networks, levels of contamination, flooding – when planning how to improve things. In a broader sense, integrated catchment management planning is a subset of environmental planning. It aims for sustainable, resilient outcomes – the quality of water entering the receiving environment, for example – through joint land and water management. An integrated approach contrasts with one that treats the two elements separately. ICMPs also take into account the cyclical nature of an ecosystem, and use scientific and technical data to understand the natural world.

Both Integrated Catchment Management Plans and the Whaitua process are designed to ensure collaborative development of catchment specific programmes and an integrated approach to the management of land and water resources. This includes impacts on the harbour and coast as well as the streams that run through the city. We need to reduce the environmental impacts of urban development and transport, while enhancing our existing natural environmental assets – growing our natural capital.

We need to incorporate Wellington's Water Sensitive Urban Design (WSUD) guidelines into relevant Council plans and policy to minimise future effects on our aquatic ecosystems. We will also take the opportunity to incorporate WSUD into infrastructure upgrades and new

development to improve the treatment of stormwater runoff within urban catchments. The management of our closed landfills also must ensure that leachate doesn't enter our aquatic ecosystems.

Our coastal areas such as Taputeranga Marine Reserve are significant assets for the Council. Although management is not the Council's direct responsibility, we manage the coastal reserves adjoining the marine environment, footpaths, roads and other infrastructure that impacts directly on marine waters. Supporting, managing and improving the health of biodiversity and the functioning of infrastructure assets neighbouring the reserve is a priority.

Everyone in Wellington, property owner or not, shares a responsibility for keeping stormwater clean. There are many opportunities for education to increase the number of people that are aware of their impacts on our aquatic ecosystems. A recent survey in Porirua Harbour showed that 40 percent of people were not aware that the stormwater network drained untreated to our streams and sea. Existing education programmes can be strengthened, working closely with Wellington Water Limited where joint objectives can be met.

11.1.3 (d) Climate change

Pressure and state

The effects of climate change on Wellington's indigenous ecosystems are difficult to predict exactly. Ministry for the Environment climate change predictions[18] for the Wellington Region suggest that Wellington City will experience increased temperatures, rainfall and wind, and sea level rise of at least 0.5m over the next 100 years.

This is leading to increased coastal erosion. Increased storm surges and inundation is damaging remaining dunes and other already fragmented coastal ecosystems (coastal turf communities, coastal scrub), as roads and landward development prevent them from adapting to change by "retreating" landward. The capacity of stormwater systems will be exceeded more frequently due to heavy rainfall events leading to surface flooding and increased number of sewer overflows. More frequent and intense rainfall events will lead to more erosion and landslides, threatening property, infrastructure and the "green ribbon" provided by road reserves and streamside areas. Climate change may lead to an increase in the proliferation of pest species, and subtropical pests may become established – requiring new approaches to pest management.

Response

Our response to the pressures presented by climate change is described in the Council's Climate Change Action Plan (2013). The main linkages with this plan relate to the implementation of Water-Sensitive Urban Design into future urban development (including the use of more water permeable media for surface drainage), increasing the city's ability to sequester carbon by increasing vegetated areas and the importance of pest control in maintaining existing forest cover. With climate change in mind, we also need to ensure that

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[18] Ministry for the Environment (2008). *Climate Change Effects and Impacts Assessment: A Guidance Manual for Local Government in New Zealand.* 2nd Edition. Mullan B; Wratt D; Dean S; Hollis M; Allan S; Williams T, Kenny G and MfE. Ministry for the Environment, Wellington.

the species we select for planting are continually revised, so we are confident in their ability to handle current and future changes in conditions. Dune restoration can also be used to protect our coastal environment from further damage, and ensuring healthy kelp and seaweed beds around the reefs will absorb energy from the waves.

11.1.4 Guidelines

Environmental pests

1. Preventing new species of pest plants and animals from establishing is more effective than eradicating or controlling them.
2. If total exclusion or eradication is not practical or economic, eradication in discrete areas, combined with containment in specific areas and preventing future spread is the next priority.
3. Where pests are established and widespread, and eradication is impractical or uneconomic, the focus will be on controlling them to minimise their adverse impacts on areas with the highest biodiversity values.
4. A precautionary principle will be used when we believe a pest species poses a serious threat to priority ecosystems or species. A lack of detailed knowledge or understanding of a pest plant or animal's full potential for damage is not a reason to do nothing.
5. All pest management must be environmentally, socially, culturally sustainable and financially prudent. Consideration must also be given to the impact of pest control on the environment and the management required. Control of pests should not create opportunities for further and possibly worse pests.
6. All animal pest control will be carried out in accordance with the Animal Welfare Act 1999 to ensure it is carried out humanely.
7. Any traps used by the Council, agents of the Council or groups supported by the Council must meet the requirements of approved best practice. If traps are used in urban reserves or near to residential properties they must be safe for non-target species.
8. Regular, ongoing baiting will be undertaken to ensure that pest populations remain at low levels and less toxin is required.
9. New technologies will be trialled and evaluated as part of the animal predator control network.
10. Qualified hunters will be employed to carry out any hunting operations on Council land and adequate notification of hunting operations will be given to ensure health and safety requirements are met.
11. Fencing effort will be prioritised along the Outer Green Belt where grazing areas are adjacent to ecologically significant areas such as Otari-Wilton's Bush, Khandallah Park and Redwood Bush.
12. All agrichemicals and vertebrate toxic agents will be used safely within guidelines by suitably qualified staff, contractors and volunteers where appropriate.
13. While recognising the necessity of toxin and chemical use, alternatives such as biocontrol, new technologies, and bait station placement will be considered to gradually reduce the amount of toxins and chemicals entering the environment.
14. Chemical and toxin free approaches will be promoted where practicable, such as in small urban backyards.
15. Native vegetation should not be accidently damaged during the use of agrichemicals, and where possible we will reduce our reliance on these chemicals by exploring new techniques.
16. Biological control will be used where practicable for species that are widespread and in high densities, current examples being Darwin's barberry, tradescantia and gorse.

Habitat loss and fragmentation

17. Soil disturbance within ecologically significant sites should be minimised. Ground disturbance, within these sites will undergo evaluation as to whether it should proceed.
18. The Council Parks, Sport & Recreation team will advocate for the protection of natural areas across the Council's business groups, and provide information and advice on the ecological impacts of proposed activities and advice and examples of good practice to reduce or mitigate any impacts.

Aquatic ecosystems

19. There should be no further loss of natural streams within Wellington City
20. The impact of land based activities on our freshwater and marine ecosystems will be recognised and addressed through all Council projects
21. All Council projects should follow the principles of Water Sensitive Urban Design

11.2 RESTORE

11.2.2 Introduction

In addition to protecting indigenous biodiversity, its restoration is also essential for Wellington to become a truly Natural Capital. Much of the Council's restoration work is based around the restoration planting programme to increase the area of indigenous vegetation cover in the city, based on the assumption that if the habitat needs of species are met, species diversity will increase and ecological functions will be enhanced.

Our key focus areas to restore our indigenous biodiversity are:
Ecologically significant sites that closely resemble Wellington's original natural environment. We value these systems because they are rare and irreplaceable.
Ecological functions that are provided by species diversity or habitat structure to support a broad array of species.
Remaining natural open spaces that form an important part of wider ecological networks through supporting biodiversity and/or providing future restoration sites. These areas may not be considered of high ecological significance in isolation, but form the backbone of our green spaces and are a crucial feature in the restoration of our city.
Nationally, regionally and locally significant species that are rare or threatened in New Zealand or the Wellington region, uncommon in Wellington City, have cultural importance, or their loss would threaten the functioning of remaining indigenous ecosystems.

We are aiming to achieve self-sustaining ecosystems that can maintain their structure, species composition and function with ever decreasing input from Council. We also want these to be resilient ecosystems that can deal with (and recover from) the disturbance from outside urban influences, while retaining the same essential structure and functions.

Restoration planting programme

The Council's Berhampore Nursery grows around 100,000 native plants every year, of which 45,000 are planted and maintained by the Council for habitat and species restoration. An additional 35,000 are distributed among community groups and residents for the same purpose. The nursery grows up to 100 species, from hardy pioneer species to emergent tree species. The plants are all grown from eco-sourced seeds, collected by Council staff. Many community nurseries are also involved in growing plants for restoration programmes across the city, including Forest & Bird – Wellington Branch.

We use plants that would have originally occurred in the ecosystem as they are adapted for that area. This keeps the distinctiveness of Wellington's local flora, avoids the risk of planting species that could become invasive and, as local plants are better suited to Wellington's conditions, they are quicker to establish and more likely to survive. We also want to recreate habitat for Wellington's indigenous fauna and the best way of doing this is to look at what grew here originally. Ecosourcing means a much higher commitment in terms of seed collection but is the best way to protect and restore our indigenous biodiversity. Ecosourcing guidelines can be found on the Wellington City Council website.

11.2.3 Priority areas for restoration planting

Restoring the integrity of areas

To restore the ecological integrity of core areas of indigenous forests and shrubland, we need to ensure that there are no gaps in the vegetation cover, thereby reducing potential for weed invasion and establishment. Where areas of habitat can be increased and made denser, the adverse impacts facing forest remnants will be somewhat reduced. Large intact areas are also much easier to efficiently manage than small fragmented areas, and more likely to be resilient and self-sustaining.

Increasing the size and complexity of habitat increases available resources and creates more ecosystem niches, supporting a greater diversity of species and larger populations – making them more sustainable. Larger, intact forest areas have higher quality interior habitat. Planting buffer zones around the outside of these areas not only increases the size but reduces the edge effects.

Weed control, construction work, slips and trail building create canopy gaps, disturb the soil and release buried weed seeds. For this reason the restoration planting programme is tied in very tightly with our environmental weed control and trail programme. Canopy gaps can also be caused by natural processes such as tree fall.

Ensuring the integrity of our few remaining sand dunes is also very important. Not only are dunes a threatened ecosystem within Wellington, healthy functioning dunes provide a defence for the city in the event of large storms. Our native sand-binders (spinifex and pingao) produce dunes with a low regular profile, which are more stable. Vegetation won't stop the erosion of the dune, but native sand-binding species are critical for its recovery after a storm event. This was proven in the storm of June 2013 where the dune at Island Bay protected the infrastructure behind it, and is already on its way to recovery. The seawall, however, had no dune in front of it due to the restricted size of the beach and was severely damaged by the force of the waves.

Restoring missing species

Despite historical clearance of native forest, some areas of Wellington have experienced natural regeneration comprising a mixture of exotic and native species. In most of these sites the usual successional sequence has been altered owing to the presence of exotic species such as gorse and Darwin's barberry. Areas where natives are regenerating through gorse tend to lack the species richness of natural succession as would occur through kanuka, leading to a different final forest composition[19]. Within many areas of regenerating forest as well as restored planting areas, there is now single tier forest with little structural complexity, and there is little evidence of missing species returning to these areas naturally.

Owing to the lack of seed sources and natural dispersal mechanisms for the more common canopy and emergent species, areas where natives have naturally regenerated through gorse tend to be mahoe-dominant. To restore Wellington's native forest to anything like its original state will require enrichment planting in certain areas to increase species diversity and restore functioning ecosystems.

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[19] Sullivan, J. J., Williams, P. A., & Timmins, S. M. (2007). Secondary forest succession differs through naturalised gorse and native kanuka near Wellington and Nelson. New Zealand Journal of Ecology, 31(1), 22-38.

Even in many of Wellington's more mature forest remnants there is a lack of some of the species that are considered to be indicators of primary forest, including large podocarps. As well as the podocarps and missing tree species, a range of plant types are required to increase the complexity of a functioning ecosystem. In many areas the forest floor, understorey, subcanopy and emergent layer are missing. Plant types within these layers need to include not just trees and shrubs but grasses, ferns, fungi, climbers and epiphytes to ensure that each tier of the ecosystem holds a full range of representative species.

Threatened plant conservation will also entail restoring these species to their original habitats. This involves the need for careful sourcing of seed, propagating, planting in appropriate locations and monitoring to observe survival. Species which would be restored under this approach include *Muehlenbeckia astonii, Muehlenbeckia ephedroides, Pimelia aridula* and *Euphorbia glauca.*

Another challenge faced in Wellington is the gradual transition of the conifer forest (pines and macrocarpas) across the city (primarily within the Wellington Town Belt) back into native forest. By 2065 we are aiming to have 65 percent of the Wellington Town Belt in indigenous forest. This needs to be a gradual transition from one vegetation type to the other. Underplanting can accelerate the successional development under these degraded exotic conifer forests[20].

Restoring connectivity

At present, many areas of remnant habitat are not large enough to ensure long-term survival of populations of different species in isolation. In the urban area, it is often difficult if not impossible to extend the size of these core areas through buffer planting. To allow populations to expand and survive localised extinctions or reductions in populations, strategically located clusters of vegetation that provide core habitat for indigenous invertebrates, birds and lizards need to be connected. There is the potential to create a greater area of habitat by linking together these remnants. Creating connectivity across the landscape for fauna also enables them to cross-pollinate plants and disperse seeds.

Creating connectivity between our fragmented areas of habitat facilitates wildlife movement and connects significant areas of vegetation. Ensuring connectivity across the reserve network increases the resilience of populations, as they can be mobile in the face of events such as fluctuating food supply, increasing population and human-induced habitat changes. Without linkages between natural areas, individuals and populations can become isolated, which reduces their food supply and restricts their breeding ability. Animals often rely upon vegetated areas for movement because they cannot move through more inhospitable urban environments.

The aim for restoring our ecological connectivity is not to create continuous vegetated corridors but rather focus on existing natural areas and restoration projects that can contribute to a patchwork of habitats and refuges across the landscape. Such existing areas include parks, road reserves, horticultural and amenity areas, streambanks, coastal fringes, open space and backyards. These areas can be valuable for their undeveloped character and

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[20] Forbes, S., Norton, D., Carswell, F. *Underplanting degraded exotic Pinus with indigenous conifers assists forest restoration.* Ecological Management & Restoration. 2014 Ecological Society of Australia and Wiley Publishing Asia Pty Ltd.

ability to provide connectivity through the surrounding landscape. Wellington is fortunate in its level of native regeneration, so some of these areas can restore themselves to a certain extent with minimal human intervention.

In the urban environment we tend to plant forest patches as "stepping stones" as opposed to a continuous forest tract (corridor). This is a practical solution where city infrastructure is also a priority. Stepping stones through the city facilitate movement of mobile species, for example allowing them to rest and feed while moving between core areas. Tall stature vegetation in the right location can be used to fill this function. Appropriate use of species within urban design is a key part of creating this connectivity through the urban and suburban landscape.

To understand the functional connectivity of habitats, we need to consider the behaviour of the species, the distance it can move and its ability to be supported by the habitats through which it must move. Some target species may use corridors only a few trees wide, utilise stepping stones or may fly over open ground to reach quality remnants/patches. And others require corridors tens of metres wide. There will always be species that have trouble passing barriers. For some lizards, ground-dwelling invertebrates and even sedentary, understorey-inhabiting birds, we need to ensure that the areas these species are currently living in are of a quality that can sustain the population.

Wellington City also has several significant regional ecological linkages that need to be considered. The two main cross-boundary terrestrial linkages within Wellington are links into Belmont Regional Park and into Porirua Scenic Reserve. There is also a significant link for highly mobile bird species across Wellington Harbour to Matiu-Somes Island and Eastbourne. The principal cross-boundary freshwater link is within the Porirua catchment.

11.2.4 Beyond planting

Habitat restoration

As well as planting, there are other requirements for restoring habitat for key species that can't be met in the short term by planting.

Within vegetated ecosystems, the role of logs and leaf litter cannot be underestimated. Leaf litter provides food and shelter for invertebrates. As well as playing an important role as decomposers, invertebrates are essential components of the food web for lizards and insectivorous birds. Rotting logs are good habitat for wētā, lizards and food for other invertebrates. In many areas that are naturally regenerating or being planted, there isn't much natural material to be found on the forest floor.

In an urbanised environment, we have changed things so much that "unnatural" aspects (such as built structures) and introduced species might be forming an important part of the habitat. Within many of the reserves, exotic species are currently filling the role that natives would have originally played. Substituting planting for mature stands of vegetation reduces the functionality of the vegetation as it takes many years to create mature vegetation as habitat for species. This must be considered before any removal of vegetation, whether native or exotic. This is particularly the case when it comes to emergent tree species such as solitary macrocarpas and pines within established native forest canopy. While the intention within ecologically significant areas is gradual replacement to indigenous species, this is a lengthy process and in the meantime these large trees fill an important function in terms of

creating habitat. They can also provide a food source, as is the case with kaka feeding on the sap of pine trees. Another role that these large older trees play is providing the right niche for cavity nesting species, which includes kaka, kakariki, and saddleback.

Habitat can also be created through good urban design, aside from planting. If rock walls are designed with gaps and spaces, not only can plants find a home, but they can also provide a great place for lizards. In addition, habitat restoration does not have to be limited to a terrestrial environment. In Wellington advances have been made in the restoration of marine plant communities and further experimentation in this area is required.

Also to consider is that human intervention has occasionally created areas suited to certain indigenous species. For example, grazing creates grasslands perfectly suited to native skink species. Case by case decisions will be made whether intervention will continue for the sake of the species, or if local extinction of species as natural processes continue and habitats change is an acceptable part of the restoration process. This will depend on the threat status of the species and whether the intervention is acceptable as part of ongoing management.

Restoring our waterways

Wetlands and streams are a priority for restoration as we have lost 99 percent of the wetlands in Wellington and most of our original streams are piped. Planting streamside (riparian) zones around streams is also important for water quality as it slows runoff and filters sediment before it reaches the stream. Sites for riparian restoration are prioritised around sediment source significance and the impact on the stream and harbour depositional environments.

Actions that can minimise excessive stream sedimentation include the establishment of a sufficient riparian zone and bank stabilisation (ideally using soft engineering solutions). A sufficient riparian zone is commonly considered to be at least 10 metres wide (with a width of 15–20 metres being preferable) and consist of native woody vegetation. Within a heavily urbanised context a 5m setback might be considered adequate, whereas in a rural context at least 10m would be appropriate. Both overstorey and understorey vegetation are needed for a fully functioning riparian zone. A healthy riparian zone is important for reducing sedimentation, as well as restoring safe habitat for instream fauna. Vegetation shades the stream (native fish prefer cool temperatures) and overhanging vegetation allows detritus and insects to fall into the stream, providing a food source.

Another key to creating functioning freshwater ecosystems is to allow fish to travel throughout our catchments. Fish passage within Wellington catchments is limited by large drops, high water velocities, perched structures, low water depths and the presence of physical barriers, including weirs, culverts and fords, which block waterways. A priority will be to restore fish passage throughout the catchments that are still largely in a natural state. These will be assessed by monitoring the species above and below the barrier, identifying how much additional habitat will be opened up by the removal of the barrier, ensuring the barrier removal will not allow access to undesirable species (such as trout) and the feasibility and cost of barrier removal. Options are complete removal of barrier, creation of structures that allow fish passage, retrofitting existing structures such as culverts, and identifying areas of concern that could be addressed as upgrades occur.

Waterways can also be restored through the recreation of stream habitat, and we will aim to daylight streams where this is practical. We will be ready to make the most of opportunities to daylight streams where these arise through proposed infrastructure projects. Streams need to have sufficient room around them for their natural processes to occur, which in most cases means allowing riparian areas that may erode as the stream channel migrates. When infrastructure is proposed near streams, we will ensure that riparian areas are of sufficient width to allow for this channel migration and appropriate riparian planting. For this reason, we will promote the daylighting of streams within reserves where there is enough room for these natural processes.

11.2.5 Guidelines

Restoring integrity

1. Restoring the integrity and habitat complexity of our ecologically significant areas is a priority.
2. Our ecologically significant core areas will be buffered through planting where possible to increase their integrity.
3. Our ecologically significant areas will be linked together through corridors and stepping stones to allow species to move between them.
4. Threatened plant species will be restored to areas they are known to have existed.
5. Eco-sourced species will be used for all restoration planting.
6. Canopy gaps created as a result of weed control or construction work (including trail building) will be a high priority for restoration planting. Sites will be replanted as soon as possible, to reduce opportunities for new pest plants to become established.
7. Canopy gaps created through tree fall will be monitored and will be planted if there is insufficient native seed source, a weed seed bank in the soil, or if it offers an opportunity to enrich species diversity through the planting of emergent tree species.
8. Weedy sites around the edge of forest remnants will be planted as part of restoring the buffer zones.
9. Weed control on sand dunes will be immediately followed by planting to ensure that sand is not mobilised. Fertiliser will be used where we need to encourage existing sand-binders to cover bare sand.
10. Maintenance after planting will prioritise controlling weed species that inhibit survival rates

Missing species

11. Large-scale targeted "enrichment" plantings will occur across the city to reintroduce missing species and create a seed source for the city.
12. Within the few forest remnants where the canopy is intact and there are indigenous plants in every tier, no further planting is required. This only applies in a handful of sites in Wellington, including the core area of Otari-Wilton's Bush and Huntleigh Park. Within these sites, enhancement planting will only occur if monitoring shows little evidence of natural recovery.

Connectivity

13. When planting for connectivity through the landscape for flora and fauna, we will work towards the following recommendations[21]:

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[21] Maria Ignatieva, M., Meurk,C., van Roon, M., Simcock, R., Stewart, G. *Urban Greening Manual: How to put Nature Into our Neighbourhoods*. Manaaki Whenua Press, 2008.

>5-hectare patches at about 5-kilometre spacings
>1-hectare patches at about 1-kilometre spacings
0.02-hectare groves at about 200-metre spacings

14. When planting street trees, we will consider their role in connectivity and whether they can be a visual attractant to move indigenous birds along a desired route
15. When we aim to re-establish connectivity for any species we will consider the following movements: daily foraging, dispersal to find new territory, seasonal movements following food sources, and long distance migration.
16. For larger highly mobile bird species (such as tui, kereru and kaka), connectivity will be focussed on ensuring large trees and groups of trees are available in strategic locations.
17. For shy and forest-dependent birds that are unable to move across large expanses of highly modified landscape, we will look at opportunities to create continuous canopy and/or a dense understorey.
18. The role of all open space will be recognised in order to allow plant species to naturally disperse through a fragmented landscape, particularly when those species are wind or water dispersed.
19. The needs of target species will be prioritised when linking together core areas and restoring connectivity through private gardens and vegetated road reserve.

Habitat restoration

20. Where branches or trees are removed, these will be left on site if they don't pose a weed risk, fire risk, don't threaten the existing vegetation and don't compromise amenity values. Leaves and other debris will be kept on site when carrying out tasks such as trail clearance, rather than removing them.
21. In areas where there are cavity nesting species and no natural cavities to be found, nest boxes should be installed to meet this need in the interim. The use of nest boxes for other bird species such as little blue penguins will also be supported. Nest boxes will only be installed in areas where predator numbers are actively managed, or predator-proof nest boxes will be used.

Restoring our Waterways

22. The role of natural stream sections will be recognised as important habitat connections.
23. Daylighting streams on reserve areas will be prioritised, along with maximising opportunities through planned infrastructure projects.
24. Riparian planting will form no less than 20 percent of total Council planting per annum and focus on areas requiring shading or stream bank stabilisation.
25. Marine restoration projects will be supported when these are undertaken by our partners.

11.3 CONNECT

11.3.2 Introduction

"After spending decades struggling to fence off nature from people, conservation is emerging on the global stage with a new vision that emphasizes the importance of connecting nature and people." [22]

We are seeking to make biodiversity a mainstream topic by raising awareness of its value to people's wellbeing, and the steps they can take to conserve it and use it sustainably. By connecting more people to nature we want to increase the role of the community as kaitiaki of the natural environment.

Today, 85 percent of New Zealanders live in cities and, accordingly, ecological consciousness is most relevant to urban populations. The greening of urban areas is increasingly important in providing a nature experience. If people are connected to nature, value it and understand its importance in underpinning their lives this should lead to a better quality of life. Wellington already has very active community involvement in the environment, but this can always be increased, for the sake of the environment and the people themselves.

The Council acts as a steward of urban green space, and needs to balance conservation and recreational objectives. Getting this balance right can engage park users in recreational experiences, such as mountain biking, that also helps them appreciate the need for nature conservation.

People can take action in a number of ways, all of which are needed. Actions include everything from submitting on Council policies and plan changes and making personal "pro-nature" choices to engaging with others to take action directly to protect and restore natural areas.

11.3.3 Awareness and understanding

Our vision for Wellington is that indigenous biodiversity is a part of people's everyday lives – they will encounter native plants in urban landscaping and streetscapes, they will experience the thrill of being "buzzed" by kaka on their way to work, they will see eagle rays and New Zealand fur seals on Wellington's waterfront. Encountering native species is important in raising awareness of what is native and telling stories about what has been lost and what can be restored. If people experience indigenous biodiversity first-hand they will value it more and be prepared to take action to protect and restore it. Indigenous biodiversity also contributes towards strengthening local and national identity by celebrating what is special and unique about New Zealand. The term locally significant species is used in this context as it refers to species that aren't officially listed as threatened but have cultural significance to Wellingtonians and can be used to connect them with all biodiversity.

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[22] Daily, Gretchen C., Karieva, Peter M., Polasky, Stephen., Ricketts, Taylor H., Tallis, Heather. *Natural Capital: Theory and Practice of Mapping Ecosystem Services*. Oxford University Press, 2011.

The Council understands the value of nature to our city and one of our goals is to ensure this understanding is shared by all Wellingtonians so that they understand the importance of nature on their lives, their impact on it, and what they can do to reduce the impact. Wellington has joined a network of cities – the Biophilic Cities Project – that is seeking to increase the connection between people and nature.

> Biophilic cities are cities of abundant nature in close proximity to city dwellers. They are biodiverse cities that value, protect and actively restore this biodiversity. Biophilic cities are green and growing cities where residents feel a deep affinity with the unique flora and fauna found there as well as with the climate, topography and other qualities of place that serve to define their urban home. In biophilic cities, citizens can easily recognise common native species (and in turn care deeply about them). Biophilic cities provide abundant opportunities to be outside and to enjoy nature through active recreation. Biophilic cities encourage us to spend more time amongst nature – increasing our personal wellbeing and resilience.
>
> Biophilic cities place importance on education about nature and biodiversity and on providing many and varied opportunities to learn about and directly experience nature. In biophilic cities there are many opportunities to join with others in learning about, enjoying, deeply connecting with, and helping to steward nature – whether though a nature club, organised walks or volunteering for nature restoration projects. Biophilic cities invest in the social and physical infrastructure that helps to bring residents in closer connection and understanding of nature, whether through natural history museums, wildlife centres, school-based nature initiatives, or parks and recreation programmes and projects. Biophilic cities are globally responsible cities that recognise the importance of actions to limit the impact of resource use on nature and biodiversity beyond their urban borders; biophilic cities take steps to actively support the conservation global nature[1].

The work we are doing means that more people will experience indigenous biodiversity as part of their everyday lives. They will see increasing numbers of native birds as witnessed by the proliferation of tui as a result of Council predator control, and kaka as a result of reintroductions by Zealandia and subsequent dispersal across the city. People already experience marine biodiversity during their interaction with the waterfront through chance encounters with New Zealand fur seals, common sightings of short-tailed and eagle rays in Frank Kitts lagoon during summer, sharing Oriental Beach with variable oyster catchers, and the occasional sighting of orca, dolphins or little blue penguins in the harbour or on the south coast. Other encounters may be more common but less appreciated – such as encounters with red-billed and black-backed gulls.

People can also experience native species through amenity planting. Road reserves and street trees provide an important visual link to nature in an otherwise urban landscape. At present, many of these comprise exotic species as well as natives.

City centres are generally areas where there are limited connections to the natural world. However, connections can be made through references to nature as well as nature itself. References to native species and cultural forms (eg pou whenua, waharoa) in urban design and landscape architecture are an important tool in "place making" and making a city more "biophilic" – celebrating the unique natural character of a city, placing it bio-geographically whilst making it a more attractive and exciting place to live and work. This can be seen

through some iconic Wellington design which references nature, such as Ian Athfield's nikau columns around the central library and the fern ball in Civic Square.

Through existing and future plans there are a number of exciting opportunities to include indigenous biodiversity in the city's urban public spaces – making our streets green and creating an eco-inner-city. These will also shape the city in response to its local setting and create inner-city neighbourhoods that tell our stories[23].

As a city set in nature, we have many opportunities to do this[24]. We have emphasised the importance of better green infrastructure such as open spaces, trees and waterways. These plans also identify the importance of the coastal environment, including ensuring that coastal development and activities respect and enhance the landscape, ecological and character values of the harbour and rugged coastal areas. This offers further opportunities to reconnect people with our coastal fringe and ensure they have easy access to a healthy coastal environment.

We can also make people aware of nature through recreational activities. Mountain biking and dog walking both cause people to spend time outdoors and we can build on these activities to link them more strongly with our biodiversity outcomes. In Wellington, we also have a strong trail building community who create linkages into our natural areas. We acknowledge the importance of allowing people to access these areas, while needing to protecting our ecologically significant areas from further fragmentation. We will work to resolve the tension between these two activities and find a balance that allows for both.

11.3.4 Biodiversity and human wellbeing

In order to create support for the Council to protect and restore biodiversity or take action themselves, people need to understand the importance of biodiversity and natural processes through the life-supporting "ecosystem services" that underpin their lives. The World Health Organization now recognises the interdependence of human health and ecosystem health[25]. The positive, innate bond between human wellbeing and nature is supported by environmental health science[26].

People also need to understand what is "indigenous" and why New Zealand's biodiversity is unique and special, as well as how healthy biodiversity can influence their own health and wellbeing. The Council has a role in informing its citizens about biodiversity. To do this effectively, we also need to work in partnership with other agencies, including DOC, GWRC, NGOs and partners such as Wellington Zoo and Zealandia.

In addition to educating people about the values of our native biodiversity we need to raise awareness around threats to it and the actions we can take to help protect it.

Children must spend more time outdoors – for their good health and the health of our planet. A growing body of research is showing that it is important for children to connect

[23] WCC Central City Framework
[24] Wellington Urban Growth Plan
[25] Zinsstag J, Schelling E, Waltner-Toews D, Tanner M (2011) From "One Medicine to One Health" and systemic approaches to health and well-being. Prev Vet Med 101: 148–156
[26] Keniger LE, Gaston KJ, Irvine KN, Fuller RA (2013) What are the Benefits of Interacting with Nature? Int J Environ Res Public Health 10: 913–935.

with nature and the outdoors for their health, ability to learn, self-esteem and character development. Childhood engagement with nature is the key to building on this relationship for generations to come. This can include everything from natural unstructured play and edible gardening to involvement in local restoration projects.

The Council understands the importance of connecting future generations with nature, and continues to support a number of education programmes to increase environmental literacy amongst school children and young people. This includes making them aware of where food, fibre, medicine and construction materials come from. We are also developing a number of new initiatives that will help bring young people into closer contact with nature, linked to learning outcomes. We currently support a number of initiatives working with schools to increase children's environmental awareness, including the proposed Children's Garden at Wellington Botanic Garden.

11.3.5 Taking action

Conserving our indigenous biodiversity is not the Council's job alone and it requires all sections of society to become involved at some level, taking "pro-nature" action in their daily lives. This applies whether they live in a central city apartment, out in the suburbs or on a rural lifestyle block. One role of the Council is to motivate and inspire communities to get more involved – to change behaviour and enable people to take action themselves. If we do this well people will understand why it's important to protect New Zealand flora and fauna, how their actions and choices impact biodiversity, and what they can do to help protect the natural environment.

Once people care for and value nature, including indigenous biodiversity, they are more likely to become engaged citizens taking action to protect what they value by participating in democratic processes. This includes taking the time to submit on notified resource consents, District Plan changes, and Long-term and Annual Plans. The Council involves the community in environmental decision-making through its Environmental Reference Group – an advisory group made up of non-elected members selected for their expertise or ability to represent a specific interest group.

Initiatives to support behaviour change should lead to people making "pro-nature" choices that impact positively on local and global ecosystems. This might include exercising responsible pet ownership, desisting from dumping green waste in reserves, and preventing pollution (such as car oil, paint and cement) from entering drains. Edible planting in people's backyards and public areas also plays an important role in connecting people to the natural environment. We can also promote broader behaviour change to help reduce impacts on global ecosystems and biodiversity – for example, by influencing consumer choices towards buying sustainable timber, and climate change related actions, such as reducing emissions from transport, and energy conservation.

We can also encourage and enable people to take action in their own backyard to protect biodiversity. The community needs to understand the impact of their actions (both positive and negative) on indigenous ecosystems and the measures needed to protect and restore them. Private backyards play a key role in achieving positive biodiversity outcomes. This can range from removing weeds and planting native plants to providing food and habitat for birds, lizards and invertebrates to trapping or baiting to reduce predator numbers. It can involve actions such as composting, growing their own food and not using pesticides in the

garden. All these actions are useful as participation can reconnect people to nature and can lead to increases in other environmentally responsible behaviours[27]. We cannot overstate the importance of private backyards in the bigger picture of Wellington's biodiversity.

11.3.6 Partnerships

Communities and iwi feel a deep sense of stewardship/kaitiakitanga towards their green spaces and natural places, and agencies such as DOC and GWRC have their own mandate-driven reasons. We believe that our goals will only be achieved by working towards a shared vision and in partnership with these allies. We will use our influence and local leadership to agree this common vision and coordinate the effort in our area. Our main partners fall into three categories and these require slightly different partnership strategies.

- Statutory agencies and national Non-Governmental Organisations (NGOs) with an interest in biodiversity. These include DOC, GWRC, neighbouring local authorities, Porirua and Hutt City Councils, Queen Elizabeth II National Trust (QEII), The National Office of the Royal Forest & Bird Preservation Society (F&B), Te Papa, WWF-New Zealand, Zealandia and Wellington Zoo;
- Iwi and mana whenua. The Council has a partnership with these groups under the Treaty of Waitangi. In Wellington the bodies that represent mana whenua interests are the Port Nicholson Block Settlement Trust, Te Runanga o Toa Rangatira and the wider Māori community;
- Local community-based conservation and restoration groups. This includes the Wellington Branch of Forest &Bird, Wellington Botanical Society, Friends of Taputeranga Marine reserve and many others ranging in size and formality.

We will work with the primary biodiversity management agencies (DOC and GWRC), mana whenua, NGOs and communities to develop a shared direction. This agreed direction will allow all organisations and groups to work to their strengths in a complementary way, creating the best outcome for biodiversity.

Community restoration groups

The community has an important role to play in the protection and restoration of Wellington's biodiversity and open spaces. Community support has grown considerably over the last 10 years, from 12 groups in 2002 to 114 in 2014. This is incredibly positive and demonstrates the high levels of passion and interest Wellingtonians have for their open spaces.

These groups are all involved in environmental protection, restoration, education and/or advocacy ranging from occasional restoration planting (with the support of native eco-sourced plants from the Council's Berhampore Nursery) to active biodiversity management. We also support groups which have a primary focus on other activities such as edible gardening or trail building, but play a part in furthering biodiversity. Groups range from two or three individuals working in a neighbourhood reserve to incorporated societies and trusts carrying out restoration and activities including pest animal and plant control and restoration planting over a number of years.

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[27] Foddy, M., Smithson, M., Schneider, S., Hogg, M. A. Resolving Social Dilemmas: Dynamic, Structural and Intergroup Aspects. Psychology Press. 2014.

In recognition of the important role played by community groups, the Council supports these groups through a number of programmes. This includes the Council supplying groups with an annual allocation of native plants grown at the Council's Berhampore Nursery, advice from Council technical staff, support from Park Rangers and training opportunities. Each group signs a Memorandum of Understanding with the Council to cover shared objectives, respective roles and responsibilities, the area they are working in and the activities they are carrying out. The Council will also work with each group, providing necessary plans and guidelines, to ensure they are following best practise with regards to restoration and pest control.

Wellington's community restoration groups are listed on the Council website or on Naturespace.org, New Zealand's ecological restoration portal.

Community involvement in open space areas is an integral and valuable part of managing of the land. However, the establishment of community groups does not always reflect the priority of the area in terms of ecological values and biodiversity. The Council is committed to supporting such groups and their projects regardless of site significance, as it is important that everyone has the ability to connect with a restoration project in their own way. We work with groups to integrate them within the overall management of open space areas, and ensure that the projects are sustainable. This may result in resources being applied to open space in recognition of the community interest ahead of biodiversity values, recognising the future potential of a site and the importance of engaging a large number of the community. The criteria by which community group support is assessed can be obtained on the Wellington City Council website.

The Council's Our Living City grant pool supports environmental projects, including ecological restoration, smart energy, community gardens and sustainable transport. The fund runs three rounds a year with an annual cap of $80,000, and applications are assessed by a panel comprising Council officers and elected members. Advice on applications is sought from relevant Council business units.

Ecological leadership

The Council will take a greater leadership role in determining ecological outcomes and restoration priorities for the city and will develop plant lists for specific zones or sites based on these priorities (based on the species that originally grew in these zones or sites). The plants we provide for restoration purposes in those zones will be based on those lists. The Council will also take a greater leadership role in working with and supporting community groups in terms of technical support and the provision of advice.

Pest animal and plant control

There is a growing interest from community groups in carrying out animal pest control. This brings benefits both in terms of increasing community engagement and creating opportunities to increase the area of land under active integrated pest control. Groups need intensive support and training when they start (including capital investment in traps and equipment), and there are ongoing monitoring and compliance costs to ensure groups are maintaining necessary levels of control to achieve desired biodiversity outcomes. There are also numerous health and safety issues that need to be identified and managed. There may be opportunities to strengthen networks of community groups allowing them to support each other and share experience and best practice.

Groups are also increasingly struggling with pest plant control, particularly within planted restoration sites. The Council needs to provide further assistance to groups regarding pest plant control, both technical advice and physical work. Groups need to be encouraged to monitor their sites for plant survival to ensure they are being managed in the optimal way.

Groups working collaboratively

In some areas there are a number of community groups working towards similar goals but not in a coordinated way. Resources can be allocated more efficiently and ecological outcomes achieved more effectively if groups working within a select geographic locality coordinate their activities.

One way this could be achieved is through catchment based umbrella groups. This would also help to facilitate the restoration of aquatic ecosystems, given their complicated nature. This approach has been successfully piloted in the Kaiwharawhara Stream catchment – with a forum being supported by the Council to improve coordination and communication between groups working there. The Council will promote greater sharing of resources, expertise and cooperation in catchments and may identify individuals or groups to take a lead role in a specific activity based on proven competence and approach. Groups working within a catchment will be supported to work together more closely and develop specific areas of expertise or combine their efforts by merging.

11.3.7 Guidelines

1. Native biodiversity will become a common experience through reintegrating it into both the city's open space network and the built environment.
2. To motivate a mainstream audience to take action for biodiversity, programmes will be long term and involve a range of actions and a wide array of partners.
3. Open spaces need to be preserved for values other than biodiversity including sports, recreation and landscape values and we will ensure that all Wellingtonians have some access to these areas.
4. Environmental groups will be consulted early in the policy development process to help Council officers develop policies based on good practice.
5. Community groups will be our partners when delivering biodiversity outcomes, guided by current agreements and Council's guidelines for community group support.
6. Where there are multiple groups in a single geographic area, groups will be encouraged to work together and coordinate their efforts in order to deliver better outcomes; and allocation of resources will be dependent on this collaboration.
7. A number of partners, including biodiversity management agencies and NGOs, carry out biodiversity projects and we will work with them to avoid duplication and share resources.
8. Any programme of pest control on open space must be supported by a longer-term strategy of community education and awareness raising and be in partnership with other organisations.
9. Mana whenua will always have the opportunity to be involved as partners in biodiversity initiatives.
10. Other Māori groups not connected to mana whenua interests will also be involved in exercising kaitiakitanga.
11. Native plant species will be highlighted in amenity planting in public spaces.

12. Urban designers will use representations of native species in street furniture and civic architecture where this fits with the design aesthetic.
13. Edible planting will be used as a way to initially engage people with the natural environment.

11.4 RESEARCH

11.4.2 Introduction

The knowledge of how urbanisation impacts upon our natural environment (and, most importantly, how we can reduce those effects) is essential to ensuring our environment remains healthy for future generations. Research and sharing information is crucial when it comes to increasing our ability to manage Wellington's indigenous biodiversity in innovative ways.

One of the challenges that we face is that we do not fully understand the complex interactions between the urban environment and the species that live around us. Much of the research on our indigenous biodiversity has occurred in large-scale natural environments and we are aware that species can behave differently within the complex mix of land uses and habitats that occur within our city.

There are many unknowns about the most efficient and effective ways of restoring Wellington's natural areas, including what may or may not be achievable. Focussed research, in parallel with the Council's monitoring programme, could help us to understand some of the ecological dynamics happening in and around our city, and where best to concentrate restoration efforts.

Because of the size and type of the land under its control, the Council has a valuable resource that can be made available for study by others or used by its own staff for research and investigation. As hands-on managers of open space, and an organisation that is connected to the wider community in numerous ways, the Council has the potential to research issues that are particularly significant locally, in the context of an urban environment.

However, research should not just be limited to Council managed open space. To understand the dynamics across an urban environment, research must be conducted across all land, regardless of use and ownership. The interactions of people – including recreational users, neighbouring property owners and restoration groups – with plants, animals, land and water are also an important and evolving part of the Wellington's ecology.

We need to develop new ways to make indigenous nature and biodiversity a part of Wellingtonians' daily lives. We can do this by increasing their knowledge and appreciation of urban nature. We must be able to fully understand our natural environment through research, and be able to explain it and present it in a way that makes sense to people. This will be strengthened if we can include people in the research through their personal observations and experience.

Innovative and specific research can be expensive and generally beyond the Council's resources. The Council can partner with research organisations to identify areas of study that have direct and practical application to open space management. Other agencies, such as Greater Wellington Regional Council (GWRC), the Department of Conservation (DOC), Landcare Research, and universities, also carry out or commission research that is relevant to the ecological management of the Council's open space.

11.4.3 Levels of research

When it comes to research and monitoring, our focus will be at three main levels. These three levels allow us to engage across the community and build the most complete picture of Wellington's ecological health. A consistent approach is needed so the data can be combined and compared across projects, and used to build understanding of Wellington's ecological integrity. Data analysis is essential, particularly when involving the community in data collection, to ensure that the research is meaningful.

Broadscale research

Using a crowdsourcing/citizen science method of data collection, you can source large amounts of data over a wide geographic area for little cost. This approach would be used to find broadscale information (widespread and simple) on things such as lizard distribution in Wellington, and anyone could get involved. Future areas involving citizen scientists include monitoring biodiversity in backyards, identifying predators from sensor camera images, and establishing the presence or absence of species across the city. Citizen science requires careful planning and management to ensure that the design allows for consistent methodologies for data collection and that relevant locations are well represented. This requires initial and ongoing collaboration between the Council, scientific organisations and the participants.

Research of managed places and species

This research focusses on delivering the detailed information needed to manage places and species effectively at an appropriate scale, so is more intensive than what can be achieved through broadscale projects. While the Council can undertake some research at this level, we can get a much clearer understanding by engaging our community in monitoring. This level of research includes looking at stream, forest and coastal health and recovery. This can help show what management works best, and can be used to improve the effectiveness of future management. It will also provide locally relevant information to share with the wider community.

Targeted research

On occasion, we need to answer specific questions that require a more detailed level of research and analysis. We may conduct this research ourselves as a Council, or for this form of research, we may work in partnership with local research institutions and/or relevant organisations. This research includes questions around the effect of aspects of the urban environment on specific species, questions around preferred microclimates for threatened species, and questions around the impact of pest species.

11.4.4 Monitoring

Without good information, it is difficult to evaluate the success and cost-effectiveness of the work being undertaken. Record keeping and monitoring has not always been undertaken consistently or systematically in the past, especially in relation to restoration plantings. Consequently, consistent information about plant survival rates, maintenance and the rate of canopy closure has not been available to inform future efforts.

By regularly sharing and reporting monitoring data and assessing its usefulness, the Council, researchers and community groups will be able to review and learn from successes and failures, adapt future on-the-ground work as required, and target future monitoring to ensure useful information is being gathered in relation to:

- the health of Wellington's ecosystems
- the results of pest control
- the results of specific restoration projects.

However, the cost implications of monitoring means that the choice of what is monitored and how needs to be carefully considered.

Until recently, monitoring has tended to focus on measuring aspects of operational performance (*output* monitoring), such as the amount of bait taken from bait stations. This remains an important part of monitoring; checking performance through regular audits of weed control and planting sites ensures targets are met, ensures sound financial management and use of resources.

What such figures do not tell us is how well our desired *outcomes* are being achieved. For example, a possum eradication programme may remove all possums, but if it allows rats to increase substantially, then the overall improvement in the environment may be far less than expected. So we need to ensure that our monitoring programmes are comprehensive, answer the essential questions and assist us in meeting our agreed outcomes.

We also need to ensure that monitoring aspects of Council business that impact on biodiversity is considered, such as the outcomes of resource consent decisions and evaluations of projects funded through Council grants.

Baseline monitoring was started in 2002 for the following indicators:

- the distribution and relative abundance of native forest bird species
- the structure and composition of forest and coastal plant communities
- the extent of vegetation types in natural areas managed by the Council
- the condition of forest vegetation sensitive to possum browse
- the condition of stream habitat in urban areas (using Stream Habitat Assessment Protocols).

By creating a strategic monitoring programme, then continually analysing the results, we will be able to continually adapt our biodiversity management and refine our techniques. This aim for continual improvement is an essential outcome of all monitoring programmes.

11.4.5 Sharing information

With research on urban ecology (including pest control and species interactions) being given increasing priority by institutions, new information is regularly available. Some of the information is directly relevant to Wellington City and some of indirect relevance, establishing context, principles and theory. Keeping up to date on research will assist in ensuring planning and implementation is in accordance with the latest information available. This information, as well as all information gathered by the Council, needs to be made widely available.
Reports and information gathered through monitoring and research need to be shared through public forums such as websites and enewsletters.

Many different groups of people and organisations could also benefit from the availability of open biodiversity data, including the Council. For example, by having the data freely available, everyone can see the locations of ecologically significant sites and assist with their protection.

With a variety of organisations collecting and generating a wide variety of biodiversity data and information, sharing this data has many advantages:

- More citizens will engage with the Council to support biodiversity initiatives if they can access all data, it allows for transparency and empowerment;
- Advocacy groups and researchers can analyse the data potentially producing new and better insights into the issues; In scientific research, the rate of discovery is accelerated by better access to data.
- New and existing businesses (such as nature tourism) can use the data, combined with information from other sources, to produce new services and products such as smart phone applications;
- Existing biodiversity management could be significantly improved as operational data becomes available to others, allowing recommendations for improved efficiency and effectiveness.
- If we can also share biodiversity data with that from other organisations, combined data sources and patterns in large data volumes can lead to new knowledge
- Sharing data widely helps ensure that the knowledge is preserved over time.

11.4.6 Key research questions

Protect

Managing plant and animal pests across a wide range of land types, such as large forested reserves, small suburban parks, thin corridors of vegetation and private backyards, creates a unique set of challenges and most ecological pest control research has been conducted in large forest tracts or an agricultural landscape.

In addition, because the mix of environments and pests is specific to Wellington, there is constant learning by those involved, leading to continual improvement of management strategies and control techniques. Encouragement of an open learning style leads to sharing of useful information in the field. There are new technologies for pest management that need to be scientifically trialled, as well as ongoing trials of biocontrol agents.

- How do pest species behave in urban environments?
- Which urban landscape is more likely to contain high levels of pest species?
- Does the urban landscape influence the population dynamics of pest species?
- Is pest abundance influenced by socio-economic variables?
- What is the impact of mammalian predators on our native species (including the impact of cats on lizards and which species of bird are particularly prone to predation by cats)?

To find solutions for minimising the impacts of stormwater runoff and land based effects on our aquatic ecosystems we need to better understand how the whole system operates.

We also need to better understand the utility and potential of small pockets of urban vegetation, such as road reserve, so we can better assess their value to the ecological network of Wellington. We also need to understand the effects of urban intensification on the importance of these remaining small vegetated areas.

- How can urban design help minimise pest problems?
- Do we understand the effects of edge effect, habitat corridors, and fragmentation in urban environments?
- What effect does the modification of land and waterways have on aquatic ecosystems?
- How can we increase the uptake of Water Sensitive Urban Design and increase knowledge of the connection between stormwater and streams?
- What native plants will work best as green infrastructure in urban design? This includes green roofs, water-sensitive urban design, and street trees.
- What is the threshold of impervious surfaces against stream health?
- What impact do street lights in Wellington have on our indigenous biodiversity?

Restore

Restoration has a number of effects on the environment that need to be further understood.

With the fragmentation of our forests and its gradual transition into a variety of states, we need to understand the processes that are occurring and where we need to intervene. It is important to have accurate knowledge of the requirements around enrichment planting and specific species' microhabitat needs, as well as propagation techniques – particularly of threatened species (national, regional and local).

Bird monitoring shows that kaka are spreading throughout the city and breeding throughout reserves. Other species known to have bred within the reserves network through monitoring programmes include kakariki, whitehead, saddleback and bellbird. Each of these species has a different set of characteristics that affects their vulnerability to urban predators. We don't yet know enough about the reasons why some species are managing to increase their numbers and some are failing. There are a number of cavity nesting species in Wellington, such as kaka, kakariki, saddleback, morepork and kingfisher. We don't know if the significant reduction of old growth forest is limiting these species, or if there are enough natural cavities within the reserve network.

We also know very little about the ecology of other significant groups of plants and animals within Wellington City (namely lizards, bats, invertebrates, and fungi) which makes the restoration of species within these groups challenging.

- What are the microhabitat requirements for the missing plant species we aim to reintroduce?
- What is the survival rate of Council restoration plantings and how can this be improved?
- What are the habitat requirements (including for nesting) for fauna already present in the city?
- What is the relationship between soil ecology and plant establishment?
- What species are required to provide critical food resources for bird species?
- What natural succession is happening in urban forests?
- How does bird dispersal in Wellington affect the distribution of podocarp seeds?
- What are the limiting factors for a population's expansion, eg food or nesting sites, and what are their powers of dispersal?
- When is each species vulnerable, eg is it while they are nesting or feeding?

- Where are vulnerable or significant populations of our lesser known fauna, such as bats, invertebrates and fungi?
- Are browsing animals limiting natural regeneration in Wellington reserves?

Connect

There is huge potential for social research, particularly the part that people play in urban ecology. Opportunities for researching these topics may be realised as a result of the research partnership established between the Council and Victoria University of Wellington in 2013. We need to carry out social research to better understand why the community engages with environmental projects, or the barriers to getting involved.

- What are the motivators and barriers to people using the reserve network and people engaging in various environmental restoration projects?
- How do we combat "nature deficit disorder" in Wellington?
- What are the health and wellbeing benefits of urban nature?
- How do we use effective community-based social marketing techniques?
- How do we engage people in citizen science projects?
- What are the impacts (social and ecological) of supplementary feeding on urban bird populations?
- What are the economic impacts of urban biodiversity?
- What are economic impacts of volunteer environmental restoration projects?
- What ecosystem services do Wellington's green spaces provide and what are the values of these?

11.4.7 Guidelines

Research

a. Crowdsourcing and citizen science approaches will be used where the requirement is to collect large amounts of geographically based information.
b. Community groups will be engaged in monitoring specific sites and species, and given the support and training required.
c. Targeted research will be conducted in partnership with relevant organisations.
d. Where possible, university students will be engaged to conduct research on our behalf to support a new generation of scientists.

Monitoring

e. Monitoring programmes will be established or maintained to measure changes in the condition of priority sites and to determine the effectiveness of animal and plant management being undertaken.
f. Work done will be regularly audited to ensure it is being performed to the required standard and in accordance with all relevant policies and procedures.
g. Monitoring will be used to establish the effects of our urban environment on our aquatic ecosystems.
h. All monitoring will be consistent with a local, regional and national picture.
i. Monitoring data will be used to analyse trends and make recommendations for adaptive management.

Sharing information

j. All work will be informed by current best practice and this information will be made available to staff and contractors.
k. All information gathered by the Council as part of research and monitoring programmes, particularly programmes that have included the community gathering the data, will be shared with interest groups and the general public.
l. Relevant information gathered by the Council as part of research and monitoring programmes will inform Council plans and policies such as reserve management plans and the District Plan.

12. GLOSSARY

Benthic: living on or under the substrate at the bottom of the ocean.
Biodiversity (biological diversity): all biological life, including fungi and micro-organisms, the genes they contain and the ecosystems of which they form a part. *The term biodiversity in this plan means indigenous biodiversity unless otherwise stated.*
Biosecurity: the protection of people and natural resources, including biodiversity, from unwanted organisms capable of causing harm.
Buffer zones: the zone around a core protected area that shields that area from possible disruptive external influences.
Catchment: a catchment is all the land from the mountains and hills to the sea, drained by a single stream and its tributaries.
Community: the collection of organisms found at a specific place and time.
Competitor release: the expansion of a species in the absence of a competitor.
Convention on Biological Diversity: an international agreement on biological diversity that came into force in December 1993 . The objectives of the Convention are: the conservation of biological diversity; the sustainable use of its components; and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources.
Core areas: interior areas of a patch that retain similar abiotic and biotic conditions to pre-fragmented conditions and do not experience strong influences from neighbouring patches.
Corridor: narrow strips of land that differ from the matrix on either side. Corridors may be isolated strips, but are usually attached to a patch of somewhat similar vegetation.
Daylighting: the redirection of a stream from a pipe into an above-ground channel to restore a stream of water to a more natural state.
Diadromous: diadromous fish migrate between freshwater and seawater.
Eco-domain: a domain representing a cluster of repeating biogeoclimatic patterns where within each domain there are a consistent, predictable response of ecosystems to impacts and changes.
Ecology: the study of the distribution and abundance of species and the relationship and interactions between the species and their environment.
Ecological integrity: an ecosystem is considered to be healthy and have "integrity" when it hosts all the native plants and animals typical of the area, and when ecological processes are functioning well.
Ecological region: an aggregate of adjacent ecological districts with very closely related characteristics.
Ecological significance: defined for an area by one or more of the following ecological features: representativeness of Wellington's indigenous biodiversity, high diversity of ecological and physical features, degree of natural character, relative size and shape, relative rarity and special features, buffering, connectivity and viability. These ecological features contribute to Wellington's indigenous biodiversity and include consideration of current and potential biodiversity values.
Ecological succession: a fundamental concept in ecology that refers to more-or-less predictable and orderly changes in the composition or structure of an ecological community. Succession may be initiated either by formation of new, unoccupied habitat (eg a severe landslide) or by some form of disturbance (eg fire, severe windthrow, logging) of an existing community.
Eco-sourcing: the propagation of naturally occurring (ie not introduced accidentally or deliberately by humans) plants from local areas and the planting of them back within the same region.

Ecosystem: a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.
Edge effects: the changes in population or community structures that occur at the boundary of two habitats.
Emergent trees: trees that are over 30 metres tall and tower above the forest canopy.
Endemic: an indigenous species that is restricted to a particular geographical region, ie it is found nowhere else in the world.
Exotic species: *see Introduced species.*
Ex-situ conservation: the conservation of species outside their natural habitat.
Feral species: a domesticated species that has become wild.
Habitat: the place or type of an area in which a living thing naturally occurs.
Inanga: the adult lifestage of the most abundant whitebait species, *Galaxias maculates.*
Indigenous: a plant or animal species that occurs naturally in Wellington
In-situ conservation: the conservation of species (and the ecosystems and habitats that support them) within their natural surroundings.
Introduced species: a plant or animal species that has been brought to the locality by humans.
Kaitiakitanga: implies guardianship, stewardship, protection, care and vigilance. It introduces the idea of an inter-generational responsibility and an obligation to protect the natural environment.
Key Native Ecosystem: an area that is actively managed by GWRC to protect and enhance indigenous biodiversity values.
Land environment: an area whose boundaries encompass similar environmental characteristics caused by environmental variables such as climate, landform and soil
Locally significant species: a species that has no national or regional threat status, but is important in Wellington for its cultural values
Meso-predator release: a situation in which populations of small and medium-sized predators rapidly increase after the removal of larger predators.
Native species: *see Indigenous species.*
Originally rare ecosystems: an ecosystem type that was present, and rare, when Māori arrived – and still exists today.
Outcome monitoring: monitoring the desired outcome of biodiversity activities, eg an increase in native birds.
Output monitoring: monitoring the outputs from activities required to reaching your desired outcome, eg a reduction in pest animal numbers.
Podocarps: trees or shrubs that have linear-like leaves and are usually dioecious. Eg totara, rimu, kahikatea, miro and matai.
Representativeness: the extent to which areas are capable of reflecting known biological diversity and ecological patterns and processes.
Regeneration: the natural process by which plants replace or re-establish themselves
Resilience: the capacity of a system to absorb disturbance while undergoing change so as to still retain essentially the same structure and functions
Restoration: intentional activity that initiates or accelerates the recovery of an ecosystem
Revegetation: the process of replanting and gaining vegetated cover on disturbed land
Riparian: the interface between land and a river or stream
Stepping stones: patches of discontinuous vegetation that can be used to link larger areas together.
Sustainable: conducting activities or using the components of biodiversity in a way and at a rate that does not lead to the long-term decline of biodiversity.

Threatened species: a species that is vulnerable, endangered or presumed extinct. Acutely and chronically threatened indigenous species are species that meet the specific criteria to be listed in one of these categories in the "New Zealand Threat Classification System Lists" (refer to doc.govt.nz for up-to-date lists).
Translocation: a deliberate and mediated movement of wild individuals or populations from one area to another.
Vascular plant: a plant having specialized tissues (xylem and phloem) that conduct water and synthesized foods, as any fern, gymnosperm, or angiosperm
Veteranisation: destructive pruning methods, which accelerates the ageing process of trees.
Weed: any unwanted plant organism that outcompetes, displaces and/or prevents natural succession of indigenous species.
Wellbeing: the state of being comfortable, healthy, or happy; both mentally and physically.

APPENDIX 1 – Policy Context

Wellington City Council has responsibilities under a range of different government acts, plans and policies.

Acts

The Council carries out and encourages biodiversity management in accordance with the wishes of its community, as expressed through the Community Outcomes in the Long-term Plan prepared under the **Local Government Act 2002**.

The **Conservation Act 1987** (Department of Conservation) is New Zealand's principal act concerning the conservation of indigenous biodiversity. The **Conservation Act** has the overriding principle of protection.

Under the **Conservation Act**, the Department of Conservation has responsibilities to prepare **Conservation Management Strategies** which cover the Wellington City area, particularly in relation to community advocacy and the protection of indigenous plants and animals.

The **Conservation Act** sits alongside the **Reserves Act 1977** (Department of Conservation), which provides for the management and administration of reserves and in particular, "Ensuring as far as possible, the survival of all indigenous species of flora and fauna, both rare and commonplace, in their natural communities and habitats, and the preservation of representative samples of all classes of natural ecosystems and landscape …"

The **Wildlife Act 1953** (Department of Conservation) deals with the protection and control of wild animals and the management of game species. The **Wild Animal Control Act 1977** (Department of Conservation) provides for the control of harmful species of introduced wild animals. The **Biosecurity Act 1993** (Ministry of Primary Industries), provides a legal basis for excluding, eradicating and effectively managing pests and unwanted organisms.

The purpose of the **Resource Management Act 1991** (Ministry for the Environment) is to promote sustainable management of natural and physical resources. This includes land, water, air, soil, minerals and energy, and all forms of plants and animals. Its purpose is also to avoid, remedy or mitigate any adverse effects of activities on the environment. The Act is given effect through the preparation and application of **National Policy Statements, Regional Policy Statements**, **Regional Plans** and **District Plans**.

Policies and plans

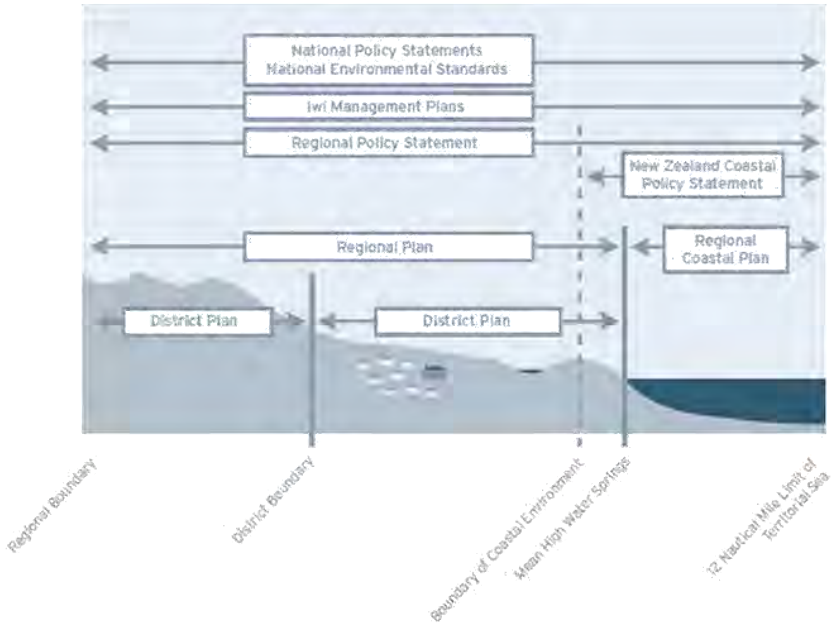
National Policy Statements (Ministry for the Environment) are instruments issued under section 52(2) of the **Resource Management Act** and state objectives and policies for matters of national significance. **Regional Policy Statements, Regional Plans** and **District Plans** must give effect to **National Policy Statements**.

The **Resource Management Act** requires every regional council to prepare a **Regional Policy Statement** which provides an overview of the resource management issues for the region, and states the policies and methods required to achieve the integrated management of the region's natural and physical resources.

The **Natural Resources Plan** (Greater Wellington Regional Council) sets out the objectives, policies and methods for people and organisations that use the region's natural resources (air, land, water and coast). This includes the control of the use of land; control of the use of water and the quantity and flow of water in any waterbody; control of the discharges of contaminants into or onto land, air, or water; control of the harvesting or enhancement of aquatic organisms and allocating our natural resources. **Regional Plans** must give effect to a **Regional Policy Statement** and any **National Policy Statement**.

Under the **Biosecurity Act 1993** Greater Wellington Regional Council (GWRC) takes primary responsibility for pest management and produces a **Regional Pest Management Plan**. Wellington City Council has a primary responsibility as a significant land manager under the **Regional Pest Management Plan.** Under this plan, GWRC has the ability to require landowners/occupiers to control certain pest species on private land.

Wellington City Council is charged with the recognition, protection and maintenance of indigenous biodiversity as part of their role under the **Resource Management Act**. Rules in the **District Plan** (Wellington City Council) control the use of land, including subdivision. **District Plans** must give effect to a **Regional Policy Statement** and any **National Policy Statements** and national environmental standards. The **District Plan** provides objectives, policies and rules relating to significant areas of Wellington's natural heritage (Conservation Sites), as well as for land valued for its natural character and provision of informal open space (Open Space B 'natural environment' and Open Space C 'inner town belt'). The **District Plan** also includes the Subdivision Design Guide, which lists criteria for using existing landscape, landform and vegetation. Subdivision applications are assessed against these criteria.



Marine environment

The marine environment becomes increasingly complex. As well as being covered by the various acts, policies and plans listed above, other agencies also have a role.

As well as their responsibilities under the **Biosecurity Act**, the Ministry for Primary Industries is responsible for fisheries management. The Department of Conservation is responsible for marine reserves and protecting marine species and Greater Wellington Regional Council is responsible for managing the territorial sea.

The Ministry for the Environment is responsible for the Environmental Protection Authority and administering the **Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012**.

The Ministry of Transport is responsible for New Zealand's Marine Protection Rules, which stop or control discharges of waste, including oil, chemicals and garbage and Maritime New Zealand is responsible for managing maritime transport and its effects, including preventing marine pollution caused by the dumping and disposal of waste in our Exclusive Economic Zone.

The Council's jurisdiction extends only as far as mean high water springs. However, there is no doubt that what happens on the land influences what our harbour and coastal ecosystems. Land management practices have flow-on effects down to the sea, especially via streams. The relationship with this plan and freshwater and marine environments is complex. Wellington City Council has jurisdiction up to the mean high water springs mark. The role of the Council is in advocacy for the marine environment, including supporting other organisation's education programmes around marine biodiversity and marine restoration, and minimising the impacts of land based effects on the marine environment and marine biodiversity. This includes minimising the impacts of infrastructure development within coastal environments, carrying out restoration of coastal habitats above mean high water springs, treating stormwater discharges and leachate from landfills and acknowledging the role that the Council plays in marine based recreation.

Other related strategies

There are also wider issues that affect biodiversity, these include new biosecurity threats, land development for infrastructure (including reclamation of land), rubble disposal in the event of an earthquake, and aquaculture. While these have an effect on biodiversity, they are all dealt with under other plans and policies, as are issues of city wide resilience.

Addressing these other issues are a number of statutes that sit alongside biodiversity strategies, in that their purpose can be interpreted as further supporting the sustainable management of biodiversity (e.g. the **Local Government Act**, the **Land Transport Management Act**), or have some other relationship with activities that will impact on biodiversity (e.g. the **Civil Defence Emergency Management Act** and the **Hazardous Substances and New Organisms Act**).

The New Zealand Government is also a signatory to the International Convention on Biological Diversity 1992. This convention, signed by 193 nations, recognises the global scale of the threats to biodiversity and provides targets for countries to achieve at a national scale. The New Zealand Biodiversity Strategy reflects New Zealand's commitment to the CBD. It sets out national goals and principles for managing New Zealand's biodiversity.

Alignment with other Council strategies

It can be complicated fitting different aims together, but these Council strategies are designed to interlink and to be both sensitive and clever about supporting the varying aims of each one. This plan needs to be read in conjunction with other Council strategies.

Wellington Towards 2040: Smart Capital 2011

The Council's vision for Wellington is focussed on the future development of the city over the next 30 years. It builds on Wellington's current strengths, acknowledges the challenges the city faces now and over the medium to long term, understands the changing role of cities, and is informed by Wellington's communities. The vision is supported by four community outcomes or long term goals, based on the city's competitive advantage. These are: eco-city; connected city; people-centred city; and dynamic central city.

2015-25 Long-term plan and annual plans

The goals of Wellington 2040 are central to the Council's Long-term Plan 2015–2025. As an Eco-city we can build on current environmental strengths to transition to a low carbon future. Wellington will achieve high standards of environmental performance, coupled with outstanding quality of life and an economy increasingly based on smart innovation.
As Our Natural Capital contains objectives, goals and actions to protect and restore indigenous biodiversity, it follows that the Plan will influence the contents of the Council's Annual Plan and Budget.

All activities proposed for the Council in this Plan will be subject to scrutiny through the Council's annual planning and budgetary process. It is this process which will confirm the priorities and time frames, as well as the affordability, of the methods. These decisions will be made within a framework of economic reality. We cannot do everything at once; many of the methods will need to be implemented progressively.

Our Capital Spaces 2013

Our Capital Spaces is an open space and recreation framework for managing and protecting our parks, reserves, and sport and recreation activities over the next 10 years. There are a range of initiatives that fall under four outcomes - getting everyone active and healthy; protecting our birds, nature, streams and landscapes; contributing to Wellington's outstanding quality of life; and doing it together.

Climate Change Action Plan 2013

This plan identifies cost-effective initiatives for Council operations and the community that will help the Council achieve its carbon neutral vision and promote sustainable behaviour. It also aims to enhance green infrastructure and biodiversity.

Wellington Urban Growth Plan 2015

The Wellington Urban Growth Plan is the Council's guide for directing investment and supporting development in growth areas. It provides a framework for sustainable development. It provides strategies to manage the city's future growth (including medium density housing and projects within the City's CBD) while protecting our environment and heritage, and builds on the things that make the city special.[28] The Natural Environment action area is about promoting and investing in actions to reduce the negative impacts of the city's growth and development on the environment.

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[28] DRAFT Wellington Urban Growth Plan 2014-2043

APPENDIX 2 - Ecological Significance Criteria

Sites of ecological significance are assessed in accordance with the following criteria. These criteria are aligned with regional policy direction as set out under Policy 32 in the RPS. Sites will be considered significant if they receive a high ranking through one or more of the following criteria:

Representativeness
The ecosystems or habitats that are typical and characteristic examples of the full range of the original or current natural diversity of ecosystem and habitat types in a district or in the region.

Rank	Criteria
High	○ Ecosystems or habitats that are no longer commonplace (less than about 30% remaining) ○ Are poorly represented in existing protected areas (less than about 20% legally protected)
Medium	○ Indigenous vegetation associated with land environments that have less than 30% remaining in indigenous cover nationally ○ Relatively good quality and relatively large examples of indigenous vegetation associated with sand dunes and wetlands ○ Only or one of the best examples of an ecosystem that was formerly more extensive in the ecodomain ○ Supports a large or exceptionally intact example of an ecosystem that was formerly more extensive in the ecological domain
Low	○ Similar to other areas that are reasonably well-represented elsewhere in the ecological domain

Rarity
The ecosystem or habitat has biological or physical features that are scarce or threatened in a local, regional or national context. This can include individual species, rare and distinctive biological communities and physical features that are unusual or rare.

Rank	Criteria
High	○ Contains a nationally/regionally acutely threatened species ○ Contains a species endemic to Wellington City ○ Contains a species at or near its national distributional limit
Medium	○ Contains a species nationally/regionally chronically threatened or at risk species ○ Contains a species uncommon in Wellington City
Low	○ No unusual or rare species

Diversity
The ecosystem or habitat has a natural diversity of ecological units, ecosystems, species and physical features within an area.

Rank	Criteria
High	○ High diversity of ecological and physical features ○ Supports an originally rare terrestrial ecosystem

	○ Contains a nationally uncommon biological community and/or physical feature
Medium	○ Moderate diversity of ecological and physical features ○ Contains a regionally or locally uncommon biological community and/or physical feature
Low	○ Low diversity of ecological and physical features ○ No unusual or rare biological communities or physical features

Ecological context of an area

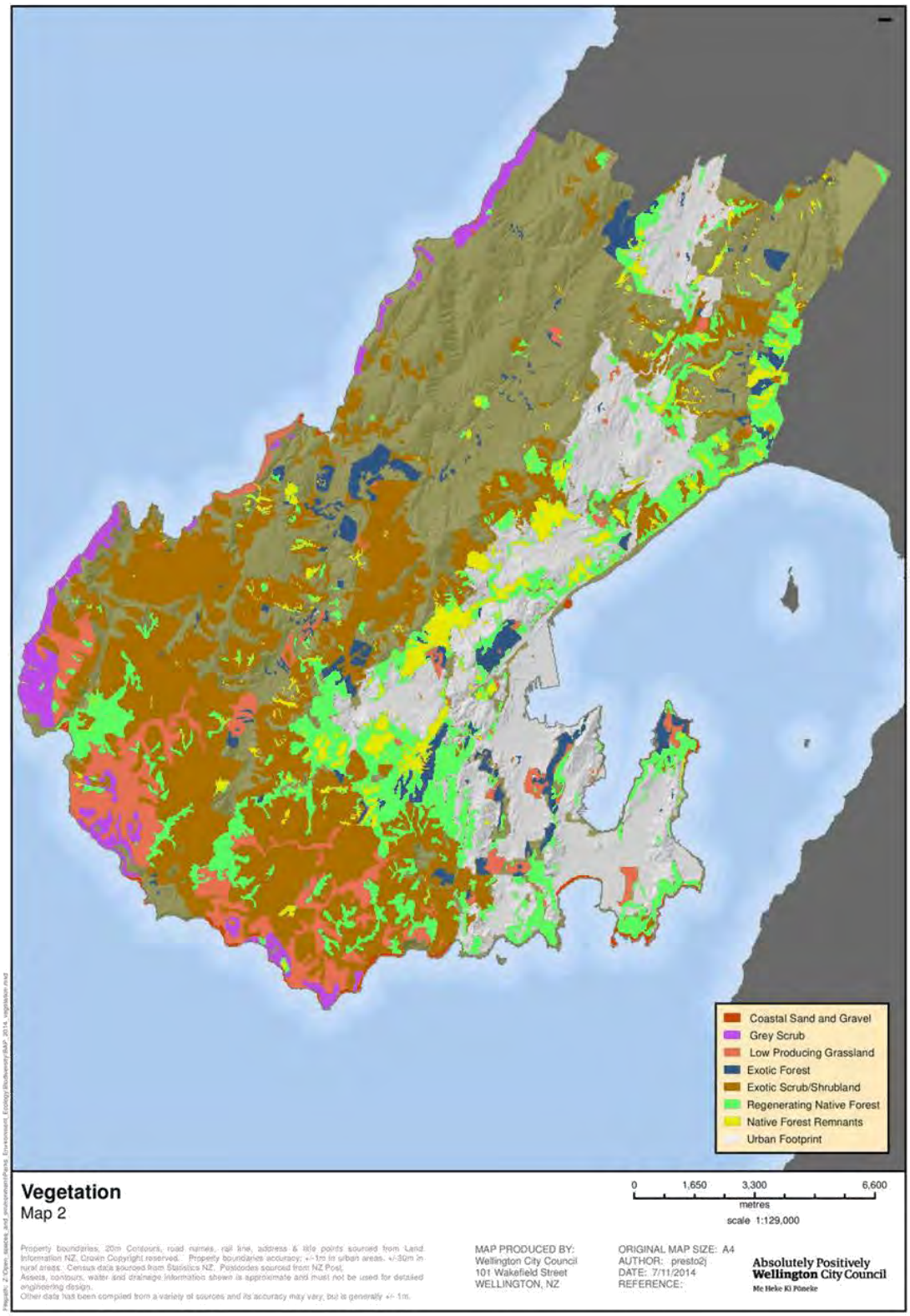
Provides connectivity between fragmented indigenous habitats, buffers or enhances ecological values of a specific site, or provides seasonal or core habitat for specific indigenous species.

Rank	Criteria
High	○ Enhances connectivity between representative, rare or diverse indigenous ecosystems and habitats ○ Buffers representative, rare or diverse indigenous ecosystems and habitats ○ Provides seasonal or core habitat for protected or threatened indigenous species
Medium	○ Contributes to the connectivity of now fragmented indigenous habitats ○ Partial buffering to a known site of ecological value ○ Provides critical seasonal or core habitat for a particular indigenous species
Low	○ No connectivity or buffering function ○ Similar to other areas that provide seasonal or core habitat for any particular indigenous species ○ Very isolated from other natural areas

Tangata whenua values

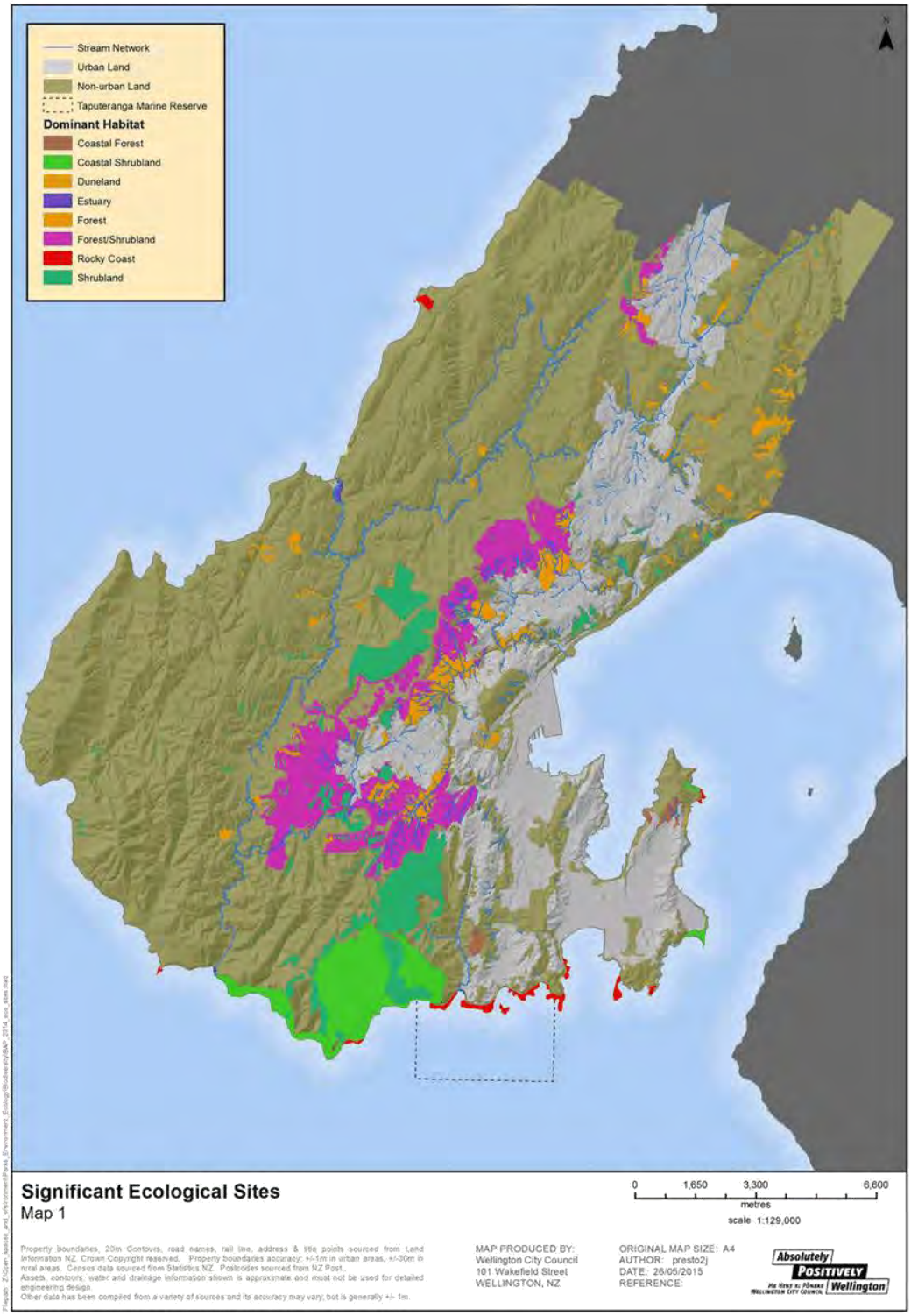
The ecosystem or habitat contains characteristics of special spiritual, historical or cultural significance to tangata whenua, identified in accordance with tikanga Maori.

APPENDIX 3 – Wellington's vegetation



APPENDIX 4 – Significant Ecological Sites

Please note, these sites are subject to change as priorities are refined and revised, and new information acquired. New sites may be added and others removed during the life of the plan. Current sites and further detail can be found on the Council website.



APPENDIX 5 - Nationally threatened, regionally threatened and locally significant species

The threat status of these species may change over time.

Nationally threatened and at risk species

Birds

Common name	Latin name	National threat status
Endemic		
Banded dotterel	*Charadrius bicinctus*	Threatened - Nationally Vulnera
Bush falcon	*Falco novaeseelandiae "bush"*	Threatened - Nationally Vulnera
Kakariki (Red-crowned	*Cyanoramphus novaezelandiae novaezelandiae*	At Risk - Relict
Long-tailed cuckoo	*Eudynamys taitensis*	At Risk - Naturally Uncommon
New Zealand pipit	*Anthus novaeseelandiae novaeseelandiae*	At Risk - Declining
North Island Kaka	*Nestor meridionalis septentrionalis*	Threatened - Nationally Vulnera
North Island Saddleback	*Philesturnus rufusater*	At Risk - Recovering
Stitchbird/Hihi	*Notiomystis cincta*	Threatened - Nationally Endang
Variable oystercatcher	*Haematopus unicolor*	At Risk - Recovering
Self-introduced		
Black shag	*Phalacrocorax carbo novaehollandiae*	At Risk - Naturally Uncommon
Caspian tern	*Hydroprogne caspia*	Threatened - Nationally Vulnera
Little black shag	*Phalacrocorax sulcirostris*	At Risk - Naturally Uncommon
Little penguin	*Eudyptula minor iredalei*	At Risk - Declining
Little shag	*Phalacrocorax melanoleucos brevirostris*	At Risk - Naturally Uncommon
Pied shag	*Phalacrocorax varius varius*	Threatened - Nationally Vulnera
Pied stilt	*Himantopus himantopus leucocephalus*	At Risk - Declining
Red-billed gull	*Larus novaehollandiae scopulinus*	Threatened - Nationally Vulnera
Royal spoonbill	*Platalea regia*	At Risk - Naturally Uncommon
White-fronted tern	*Sterna striata striata*	At Risk - Declining

Lizards

Common name	Latin name	National threat status
Barking gecko	*Naultinus punctatus*	At Risk - Declining
Ornate skink	*Oligosoma ornatum*	At Risk - Declining
Spotted skink	*Oligosoma lineoocellatum*	At Risk - Relict

Freshwater fish

Common name	Latin name	National threat status
Longfin eel	*Anguilla dieffenbachii*	At Risk - Declining
Giant kokopu	*Galaxias argenteus*	At Risk - Declining
Koaro	*Galaxias brevipinnis*	At Risk - Declining
Inanga	*Galaxias maculatus*	At Risk - Declining
Shortjaw kokopu	*Galaxias postvectis*	Threatened - Nationally Vulnerable
Bluegill bully	*Gobiomorphus hubbsi*	At Risk - Declining
Redfin bully	*Gobiomorphus huttoni*	At Risk - Declining

Plants

Common name	Latin name	National threat status
Gossamer grass	*Anemanthele lessoniana*	Threatened - Nationally Vulnerable
Jersey fern	*Anogramma leptophylla*	Threatened - Nationally Vulnerable

Buchanan's orache	*Atriplex buchananii*	Threatened - Nationally Vulnerable
Grey saltbush	*Atriplex cinerea*	Threatened - Nationally Critical
Holloway's crystalwort	*Atriplex hollowayi*	Threatened - Nationally Critical
Kohurangi	*Brachyglottis kirkii*	At Risk - Declining
Kirk's crassula	*Crassula kirkii*	At Risk - Naturally Uncommon
	Crassula mataikona	At Risk - Naturally Uncommon
	Crassula peduncularis	Threatened - Nationally Critical
	Crassula ruamahanga	At Risk - Naturally Uncommon
Little spotted moa orchid	*Drymoanthus flavus*	At Risk - Naturally Uncommon
Shore spurge	*Euphorbia glauca*	At Risk - Declining
Pingao	*Ficinia spiralis*	At Risk - Declining
Giant hypolepis	*Hypolepis dicksonioides*	At Risk - Naturally Uncommon
Leafless mistletoe	*Korthalsella salicornioides*	At Risk - Naturally Uncommon
Coastal cress	*Lepidium flexicaule*	Threatened - Nationally Endangered
Cooks scurvy grass	*Lepidium oleraceum*	Threatened - Nationally
Thick-leaved mahoe	*Melicytus crassifolius*	At Risk - Declining
	Melicytus obovatus	At Risk - Naturally Uncommon
Shrubby tororaro	*Muehlenbeckia astonii*	Threatened - Nationally Endangered
Leafless pohuehue	*Muehlenbeckia ephedroides*	At Risk - Declining
Lyttelton forget-me-not	*Myosotis lytteltonensis*	Threatened - Nationally Critical
Sand daphne	*Pimelea villosa*	At Risk - Declining
Sand tussock	*Poa billardierei*	At Risk - Declining
NZ milk tree	*Streblus banksii*	At Risk - Relict
NZ spinach	*Tetragonia tetragonioides*	At Risk - Naturally Uncommon
Green mistletoe	*Tupeia antarctica*	At Risk - Declining

Regionally threatened and locally significant species

Birds

Common name	Latin name
Bellbird	*Anthornis melanura melanura*
Kereru (Woodpigeon)	*Hemiphaga novaeseelandiae*
Morepork	*Ninox novaeseelandiae novaeseelandiae*
North Island Fantail	*Rhipidura fuliginosa placabilis*
North Island Robin	*Petroica longipes*
Tui	*Prosthemadera novaeseelandiae*

Lizards

Common name	Latin name
Copper skink	*Oligosoma aeneum*
Glossy brown skink	*Oligosoma zealandicum*
Minimac gecko	*Woodworthia 'Marlborough mini'*
Ngahere gecko	*Mokopirirakau aff. Granulatus 'Southern North*
Northern grass skink	*Oligosoma polychroma*
Raukawa gecko	*Woodworthia maculata*

Freshwater fish

Common name	Latin name
Shortfin eel	*Anguilla australis*
Banded kokopu	*Galaxias fasciatus*

Plants

Common name	Latin name
Ferns	
Miro	*Prumnopitys ferruginea*
Matai	*Prumnopitys taxifolia*
Rimu	*Dacrydium cupressinum*
Kahikatea	*Dacrycarpus dacrydioides*
Totara	*Podocarpus totara*
Rewarewa	*Knightea excelsa*
Kowhai	*Sophora microphylla*
Cabbage tree	*Cordyline australis*

APPENDIX 6 – Environmental pests

This list is subject to change as priorities are refined and revised. New species may be added and others removed during the life of the plan.

Pest Animals

Common name	Latin name
Argentine ant	*Linepithema humile*
Australian magpie	*Gymnorhina tibicen*
Brown bullhead catfish	*Ameiurensis nebulosis*
Cat	*Felis catus*
Eastern rosella	*Platycercus eximius*
European hedgehog	*Erinaceus europaeus occidentalis*
Feral deer	*Cervus elaphus, C nippon, Dama dama*
Feral goat	*Capra hircus*
Feral pig	*Sus scrofa*
Feral rabbit	*Oryctolagus cuniculus*
Ferret	*Mustela furo*
Hare	*Lepus europaeus occidentalis*
House mouse	*Mus musculus*
Koi carp	*Cyprinus carpio*
Mosquito fish	*Gambusia affinis*
Norway rat	*Rattus norvegicus*
Possum	*Trichosurus vulpecula*
Rainbow skink	*Lampropholis delicata*
Rudd	*Scardinius erythropthalmus*
Ship rat	*Rattus rattus*
Stoat	*Mustela erminea*
Sulphur crested cockatoo	*Cacatua galerita*
Tench	*Tinca tinca*
Wasp	*Vespula germanica; Vespula vulgaris*
Weasel	*Mustela nivalis*

Pest Plants

African club moss	*Selaginella kraussiana*
Agapanthus	*Agapanthus praecox*
Aluminium plant	*Galeobdolon luteum*
Artemesia	*Artemesia spp*
Artillery plant	*Galeobdolon luteum*
Arum lily	*Zantedeschia aethiopica*
Asiatic knotweed	*Reynoutria japonica*
Banana passionfruit	*Passiflora mixta,*
Barberry	*Berberis glaucocarpa*
Bear's Breeches	*Acanthus mollis*
Blackberry	*Rubus fruiticosus*
Blue morning glory	*Ipomoea indica*
Blue Passion Flower	*Passiflora caerulea*
Bomarea	*Bomarea caldasii and Bomarea multiflora*
Boneseed	*Chrysanthemoides monilifera*
Boxthorn	*Lycium ferocissimum*

Broom	*Cytisus scoparius*
Cape honey flower	*Melianthus major*
Cape ivy	*Senecio angulatus*
Cathedral bells	*Cobaea scandens*
Chilean flame creeper	*Tropaeolum speciosum*
Chinese and tree privet	*Ligustrum sinense; L. lucidum*
Climbing asparagus	*Asparagus scandens*
Climbing dock	*Rumex sagittatus*
Cotoneaster	*Cotoneaster franchetii, C. horizontalis*
Darwin's barberry	*Berberis darwinii*
Egeria	*Egeria densa*
English ivy	*Hedera helix*
Elaeagnus	*Elaeagnus x reflexa*
Everlasting pea	*Lathyrus latifolius*
Evergreen buckthorn	*Rhamnus alaternus*
Fairy Crassula	*Crassula multicava*
Gazania	*Gazania spp.*
German ivy	*Senecio mikanioides*
Ginger	*Hedychium flavescens, H. gardnerianum*
Great bindweed	*Calystegia silvatica*
Gorse	*Ulex europaeus*
Gunnera	*Gunnera tinctoria*
Himalayan balsam	*Impatiens glandulifera*
Himalayan honeysuckle	*Leycesteria formosa*
Horned poppy	*Glaucium flavum*
Indian doab	*Cynodon dactylon*
Japanese honeysuckle	*Lonicera japonica*
Japanese spindletree	*Euonymus japonicus*
Jasmine	*Jasminum polyanthum*
Kikuyu	*Pennisetum clandestinum*
Lagarosiphon	*Lagarosiphon major*
Marram grass	*Ammophila arenaria*
Mexican daisy	*Erigeron karvinskianus*
Mile-a-minute	*Dipogon lignosus*
Mistflower	*Ageratina riparia*
Montbretia	*Crocosmia x crocosmifolia*
Nasturtium	*Tropaeolum majus*
Old man's beard	*Clematis vitalba*
Pampas grass	*Cortaderia jubata; C. selloana*
Parrot's feather	*Myriophyllum aquaticum*
Periwinkle	*Vinca major*
Pigs ear	*Cotyledon orbiculata*
Plectranthus	*Plectranthus ciliatus*
Purple ragwort	*Senecio glastifolius*
Sea couch	*Elytrigia pycnantha*
Silver poplar	*Populus alba*
Smilax	*Asparagus asparagoides*

Spanish heath	*Erica lusitanica*
Stinking iris	*Iris foetidissima*
Tradescantia	*Tradescantia fluminensis*
Tree lupin	*Lupinus arboreus*
Tuber ladder fern	*Nephrolepis cordifolia*
Velvet groundsel	*Senecio petasitis*
Wild onion	*Allium triquetrum*

Pest trees

Brush wattle	*Paraserianthes lophantha*
Buddleia	*Buddleja davidii*
Cherry	*Prunus spp*
Cherry laurel	*Prunus laurocerasus*
Crack and pussy willow	*Salix fragili, S. cinerea*
Hawthorn	*Crataegus monogyna*
Holly	*Ilex aquifolium*
Karaka	*Corynocarpus laevigatus*
Karo	*Pittosporum crassifolium*
Monkey apple	*Acmena smithii*
Sycamore	*Acer pseudoplatanus*
Wilding conifers	*Larix decidua; Cupressus macrocarpa*
Wilding pines	*Pinus spp*

REPORT OF THE ECONOMIC GROWTH AND ARTS COMMITTEE MEETING OF 2 JUNE 2015

Members: Mayor Wade-Brown, Councillor Ahipene-Mercer, Councillor Coughlan (Chair), Councillor Eagle, Councillor Foster, Councillor Free, Councillor Lee, Councillor Lester, Councillor Marsh (Deputy Chair), Councillor Pannett, Councillor Peck, Councillor Ritchie, Councillor Sparrow, Councillor Woolf, Councillor Young.

The Committee recommends:

FINAL 2015/16 STATEMENTS OF INTENT FOR COUNCIL CONTROLLED ORGANISATIONS

Recommendations

That the Council:

1. Agree to approve the 2015/16 Statements of Intent for the Basin Reserve Trust, the Wellington Museums Trust and the Wellington Regional Stadium Trust.

Attachments

Nil

REPORT OF THE GOVERNANCE, FINANCE AND PLANNING COMMITTEE MEETING OF 11 JUNE 2015

Members: Mayor Wade-Brown, Councillor Ahipene-Mercer, Councillor Coughlan, Councillor Eagle, Councillor Foster, Councillor Free, Councillor Lee, Councillor Lester (Chair), Councillor Marsh, Councillor Pannett, Councillor Peck, Councillor Ritchie, Councillor Sparrow, Councillor Woolf, Councillor Young.

The Committee recommends:

PROPOSED DISPOSAL: ST JOHN'S HALL, 237 KARORI ROAD, KARORI

Recommendation

That the Council:

1. a. declares the property at the corner of Campbell Street and Karori Road, Karori being 1,020m2 (subject to survey) described as part of Lot 1 DP 335919 CFR147336 (the St John's Hall site) surplus to requirements;
   b. agrees to dispose of the site and authorises the Chief Executive Officer to dispose of the St John's Hall site;
   c. delegates authority to the Chief Executive Officer to carry out all necessary disposal actions; and
   d. revokes all earlier resolutions in relation to the disposal of St John's Hall site.

INSURANCE MANAGEMENT STRATEGY

Recommendation

That the Council:

1. Agree to adopt the Insurance Management Strategy included as Attachment 1.

MAYORAL UPDATE – 2015-2025 LONG-TERM PLAN

NOTE: No decision required as these decisions have been incorporated into the Report 2.1 Adoption of 2015-2025 Long-term Plan.

Attachments

Wellington City Council

Insurance Management Strategy

June 2015

Contents

Executive Summary

Through its assets, and the services they provide, the Council has responsibility to the community to provide a specified service level in a cost effective manner. We do this by appropriately planning, constructing, maintaining, and insuring these assets.

Wellington's topography, geology and urban layout, as well as natural hazards, such as earthquake, flood and tsunami, pose challenges for public assets, businesses and homes.

The Council's Risk Framework ensures an understanding of the risks the Council is managing and the mechanisms and tools used to establish the optimal balance between externally procured insurance, internal 'self-insurance', and uninsured risk retention. This strategy addresses insurance protection for catastrophe losses for Council owned assets and other risk transfer insurance policies.

The Insurance Management Strategy (IMS) outlines the Council's insurance and risk framework, approach to risk retention and transfer of risk through the procurement of insurance policies and sets out the implementation and monitoring requirements.

It also sets guidelines for material damage and business interruption insurance for asset related risk and liability policies for other risks.

The IMS will:

- help the community and Councillors understand our approach to risk retention and risk transfer through clear objectives;
- increase transparency in the insurable risk process and the potential financial implications of insurance decisions; and
- provide a framework for officers in the procurement of insurance.

An overview of the IMS is shown in the road map below.

Insurance Management Strategy – An Outline

This strategy addresses risk mitigation for general liability, professional liability, statutory liability, employee liability, trustee liability, motor vehicle and overseas travel insurance and material damage risk (including fire).However, the predominant outcome of the Council's IMS is to mitigate the impact of losses or damage caused by natural hazards such as earthquake, flood and tsunami through the procurement of insurance. The estimated loss due to these natural hazards is not a risk that the Council can adequately self fund. In the case where the level of financial risk is unacceptable, insurance is considered.

The loss modelling assumptions used to derive the Councils exposure is aligned to the earthquake loss return period adopted by the Reserve Bank of New Zealand (RBNZ). The 2011 Insurance Policy paper (amended in 2014) requires insurers and reinsurers to hold adequate capital to manage for a 1 – 1000 year return period event. The RBNZ 2014 amendment was updated to reflect the lessons learned from the Christchurch earthquakes. The Council considers it prudent to adopt the same 1 – 1000 return period to establish its earthquake loss estimate which in turn determines the level of insurance cover it is prudent to acquire.

The modelling of the loss estimates to Council assets in a 1 – 1000 return period was undertaken by GNS Science (a crown research institute). GNS estimated the loss to be $1.1 billion across the Council assets and is based on the replacement value of the assets. Councils insurance strategy assumes the funding of the estimated loss comprise a mix of externally procured insurance, internal 'self-insurance and central government funding.

The Council holds a $20 million maximum excess (risk retention) and settles claims that fall below this level from its own reserves. Claims above this limit will be funded by a mixture of externally procured insurance and by government contributions, up to $1.1 billion. The $20 million excess helps reduce the cost of premiums for the externally procured insurance. If the excess limit of $20 million was reduced this would pass more risk to insurers and have a direct impact on premiums paid by Council. Conversely, higher risk retention becomes a higher risk to Council in the event of more than a single natural disaster accuring. The $20 million retained excess is at a level that the Council considers optimal.

The Council builds the internal self-insurance reserve fund by an annual rates contribution which it uses to fund day-to-day insurance losses that fall below excess. The internal self-insurance reserves fund will also be used to partially offset higher than budget insurance increases. In addition, where the insurance increases are lower than budget the surplus will be used to top-up the self-insurance reserves. This will help mitigate price fluctuations to ratepayers over time.

In the event that the loss estimate exceeds $1.1 billion for a 1 -1 000 year event the Councils financial strategy includes approximately $200 million borrowing capacity to cope with any outstanding uninsured losses. In addition, Council would continue to qualify for government funding for road networks and underground storm, waste and water assets for losses above the $1.1 billion loss.

The IMS can adapt to the changing landscape in the event of rising premiums, internal risk retention levels and changing government contribution assumptions. The impact of this may increase our insurance premiums or our appetite to risk retention.

The Council has an on-going resilience work programme through its comprehensive asset management planning framework and an on-going earthquake prone building policy to mitigate and reduce the loss to its assets from natural events.

Introduction

Council has $6.6 billion dollars of assets, which includes land under roads, that it uses to provide services to the community.

Through its assets, and the services they provide, the Council has a responsibility to the community to provide a specified service level in a cost effective manner. It does this by appropriately planning, constructing, maintaining and insuring these assets.

Wellington's topography, geology and urban layout, as well as major natural hazards, such as earthquake, flood and tsunami, pose challenges for public assets, businesses and homes.

Following the Christchurch earthquakes, it was clear that many lessons could be learnt to ensure post-event recovery is as efficient and timely as possible.

To recover from a major catastrophe requires access to funds to rebuild the assets that have been damaged or lost. Without financial protection for the assets, we risk creating a significant future burden for ratepayers. If council assets are damaged and unable to provide services to the community any fees derived from these services or investments would also be lost for the duration of the time the asset is out of operation. It is therefore also prudent to have financial protection against this risk.

The Council understands that a risk adverse position needs to be adopted to ensure insurance arrangements are able to fully respond to events so that the Council can maintain and deliver services to businesses and the community.

The Council believes it is prudent to have autonomy and flexibility to use the proceeds of insurance following a major event to provide balance sheet protection to assist a post event recovery.

This IMS is integrated into the Council's Risk Framework. It will ensure an understanding of the risk that Council is managing and the mechanisms and tools used to establish the optimal balance between externally procured insurance, internal 'self-insurance' and uninsured risk retention.

In addition to material damage and business interruption policies, other risk transfer policies exist as part of the IMS. These risk transfer policies are procured where it is prudent and efficient to transfer the risk away from Council and where it is deemed that it is unacceptable for the Council to carry the risk. These are identified in the key risk section of the document and fulfils aspects of the mitigation strategy in the Council's Risk Framework.

Objective

The IMS will ensure the Council has the financial resources to recover from catastrophic and non-catastrophic events and fund unforeseen losses to assets and service operations from single events.

The Risk Management Framework

The Council's Insurance Management Strategy reduces identified risk in the Council's risk management framework to manage and mitigate both financial and non-financial risks. This integration ensures the IMS references and takes into account other council strategies to mitigate risk.

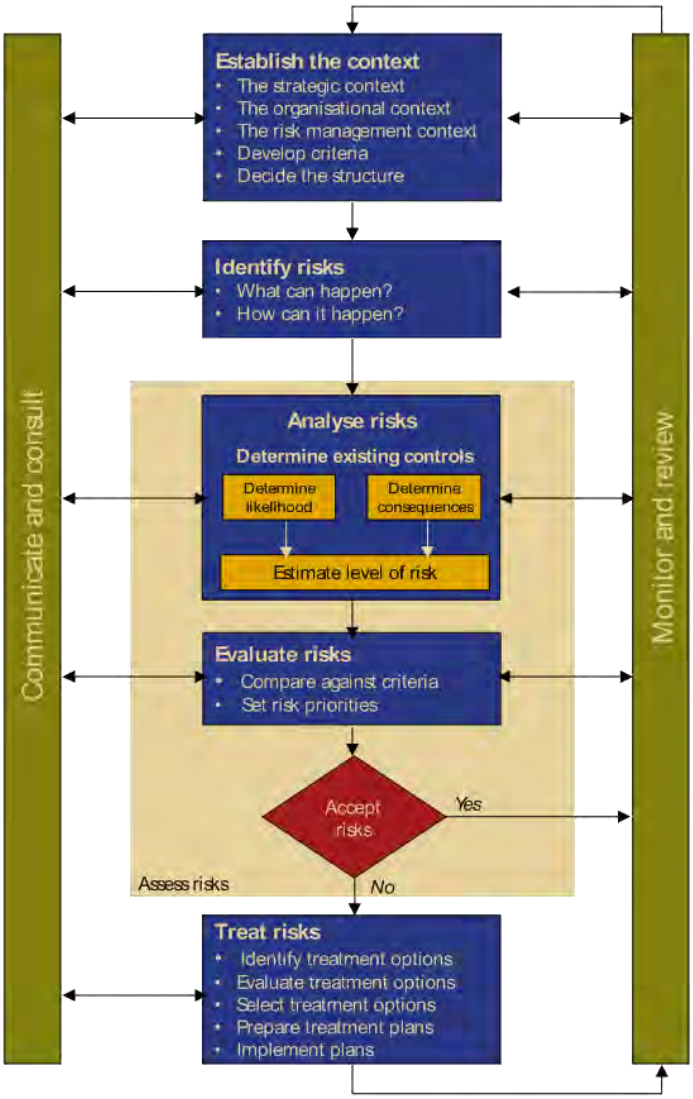


Figure 1: The risk management framework. Based on ISO 31000 Risk Management Principles and Guidelines.

With reference to the above risk management framework, if the residual risk is at a level that is unacceptable and no further mitigation can be implemented to reduce likelihood or consequence, insurance (transfer of risk) is considered.

Insurance Management Framework

The Council's IMS will ensure insurance proceeds can be used to support a return of Council assets and services to its pre event state.

This is achieved through having access to adequate levels of insurance based on a prudent approach to setting limits and scope of cover. The main attributes of the IMS are summarised as follows:

Principles, tools and techniques

The Council will implement the intent of the IMS by:

1. Having a robust, well designed insurance programme responding to the Councils insurable risks;
2. Clear risk tolerance and appetite guidelines to ensure retained risk is within the financial capability of the Council;
3. Insurance limits and cover which are cost effective and purchased based on sound advice and knowledge of asset values and their resilience to natural events;
4. Appointment of experienced advisors including an insurance broker to gain access to traditional and non-traditional risk transfer solutions both in New Zealand and overseas;
5. A strong governance regime to report, monitor and review the strategy to ensure it keeps pace with the change in risk profile of the Council asset, investments and business operation risks; and
6. Ensuring claims recoveries are well managed and processes are tested particularly after a major event.

To realise the objective of the IMS we will:

1. **Balance the Council's risk**

   Create appropriate relative mechanisms and tools to establish, inform and manage the optimal balance between externally procured insurance, internal "self-insurance" and risk retention as well as any other cost effective alternative risk transfer options to financially protect community assets.

2. **Safeguard assets**

   Safeguard Council assets by ensuring appropriate risk management and insurance strategies are in place to protect and minimise losses to Council's assets against future potential liabilities and provide assurance that the Council is well positioned to recover from any loss. The assets have an insured replacement value of $5.5 billion, excluding land.

3. **Transfer Risk**

   Be prudent when setting the Councils risk tolerance and appetite when transferring risk through its insurance arrangements. For any unacceptable risk, where no further risk mitigation strategy can be implemented, insurance cover will be considered.

4. **Leverage Government funding support**

   Continue to leverage and include in the Council's risk management assumptions the expected funding support from New Zealand Transport Agency (NZTA) and Central Government. This funding contributes to any loss to the Council's road network and underground assets. It is expected the Council would receive a funding value to 53 percent for road network losses and 60 percent for underground asset losses caused by a major catastrophe. This will be reflected in the levels of insurance cover purchased.

5. Consider Alternative Risk Transfer options

Consider the use of Alternative Risk Transfer instruments (ART) such as catastrophe bonds, which allow funds to be provided immediately without the need to prove a loss quantum or incur expense before claims payments can be made. These will be considered if they are efficient and would provide more financial certainty to the balance sheet. Such products are more expensive than traditional insurance. The use of ART instruments will be subject to annual review. The Council does not currently use this product.

6. Model Losses

Update the modelling of potential losses to the Councils above and below ground assets on a regular basis, including the earthquake risk assessment on our infrastructure and general buildings. This assists the Council to manage the risk of potential future catastrophes by better understanding how assets will perform in a major loss event. This modelling is used to make informed decisions on the limit of cover and future risk mitigation strategies. The current loss modelling has estimated $1.1 billion of damage to Council assets at levels representing losses expected for an event occurring in 1 - 1000 year return period.

7. Analyse Trends

Proactively manage and investigate trends resulting from both below and above excess claim settlements to improve the Council's overall risk management to reduce or eliminate future losses.

8. Review the Return Period assumptions

Procure asset insurance up to levels representing losses expected for an event occurring in 1 - 1000 year return period as prescribed for insurers by the Reserve Bank of New Zealand (RBNZ). This cover will be provided through a combination of directly procured insurance and central government contributions.

9. Set Risk retention levels

Set retention limits (commonly referred to as excesses) to levels that are financially sustainable but ensures insurance is purchased only for risks that the Council can prudently retain and fund within the Financial Strategy. These retention levels will be regularly reviewed having regard to improvements in managing risks and insurance market price and coverage conditions.

The Council holds a $20 million maximum excess (risk retention) and settles claims that fall below this level. The $20 million excess helps reduce the cost of premiums for the externally procured insurance. The excess limit of $20 million could be reduced which would have the impact of passing more risk to insurers and thereby having a direct impact on premiums. Conversely, higher risk retention becomes a higher risk to Council in the event of more than a single natural disaster within a short timeframe. The $20 million retained excess is at a level that the Council considers optimal.

10. Uninsure losses above a 1 – 1000 year event

Through the Councils financial strategy maintain approximately $200 million of borrowing capacity to cope with any outstanding uninsured losses above those expected in a 1 in 1000 year return period. In the event that the loss estimate exceeds a 1 -1 000 year event the Councils financial strategy includes approximately $200 million borrowing capacity to cope with any outstanding uninsured losses. In addition, Council would continue to qualify for government funding for road networks and underground storm, waste and water assets for losses above the estimated loss.

11. Secure funds

Ensure a minimum insurance company credit rating equivalent to a Standard & Poor's rating of A- to reduce risk of default and non-payment of claims particularly after a major event.

12. Review Business operations

Structure the strategy to respond to any material future change in the Councils business and strategies. This includes diversification of investments and change in government disaster funding arrangements that require coverage, limit and retention modifications to the insurance programme.

13. Fund 'self-insurance' for day-to-day losses

Adequately fund and maintain an insurance reserve "self-insurance" fund to pay for day to day losses that fall below individual insurance policy excesses. The Council builds the internal self-insurance reserve fund from an annual rates contribution. The Council's insurance reserve fund is currently at $10 million and is expected to increase to $15 - $20 million over time. The internal 'self-insurance' reserves fund will also be used to partially offset higher than budget insurance increases. Where the insurance increases are lower than budget the surplus budget savings will be used to top-up the internal 'self-insurance' reserves. This will help mitigate price fluctuations of future insurance premiums for catastrophe exposed assets.

14. Diversify Assets

Assess the impact of the diversification of assets and investments outside the Wellington region and how this would reduce the risk retained for these assets and the cost to insurance. The IMS will respond to this through the process of regularly modelling catastrophe exposure and analysing aggregate retained risk and policy limits.

15. Maintain Good Relationships

Maintain a long term relationship with both New Zealand and Overseas insurers underpinned by detailed information about the risk environment and ongoing risk reduction strategies undertaken to mitigate loss to Council asset.

16. Consider other Liability risk transfers

Consider the appropriate limit of the other insurance risk transfers policies held and ensure that the most efficient and appropriate approach is being undertaken.

17. Review Related party risk

Review the insurance programme, if necessary, to accommodate the Council shareholdings in other investments where current arrangements may need to be augmented or replaced.

18. Review Asset Resilience

Review the continued investment in our assets informed by Asset Management Plans for each asset class and the impact our work programme has on the continued resilience of the asset performance. By way of comparison the required seismic strength of built structures in Wellington is 33 percent stronger than that of Christchurch and over 200 percent than that of Auckland. This is due to the seismicity of the Wellington area.

19. Consider Climate Change

Consider the implications of climate change on the Councils assets.

With these elements present within the IMS, the Council will be able to provide transparency to ratepayers and businesses that the insurance arrangements will respond up to a 1 – 1000 year event to help restore services to the community post such events.

Risks

The key risks addressed by this strategy are:

Asset failure related risks

The approach to these risks is considered as part of the Material Damage and Business Interruption insurance to mitigate the following:

- Catastrophe losses to assets as a result of earthquake, fire, flood and tsunami;
- Insufficient funding to repair, renew and rebuild the Council assets after a major event;
- Economic uncertainty as a result of insufficient business interruption insurance, including cover for additional increased cost of working, gross profit protection and claims preparation costs.
- Future unaffordable debt and rates level rises through insufficient material damage, and business interruption insurance.

Key liability related risks

The Council has a number of other risks identified through the risk management framework and are addressed as part of this strategy, as listed below. Any unacceptable risk to Council is transferred through insurance.

- General Liability – Sums which Council becomes legally liable to pay in the event of injury to, or damage to the property of, a third party. This includes public liability and goods/products liability.
- Professional Indemnity – Claims which Council is legally liable to pay as damages which arise by reason of any negligent act, error or omission.
- Statutory Liability – Defence costs and liability for financial penalties arising out of alleged unintentional breaches of New Zealand statutes.
- Employers Liability – Liability arising out of claims made by employees for injuries outside the scope of accident compensation legislation. Legal expenses are covered.
- Trustee Liability – Provide protection to Trustees with regard to liability that may arise from their wrongful acts in performing their duties as Trustees of the Trust.
- Crime – Covers Council for direct financial loss sustained through theft, fraud, dishonesty or criminal act(s) of employees and/or third parties.
- Rotation Timber and Carbon – Covers standing timber and collective carbon stock against loss or damage for a defined event at the insured forest location.
- Motor vehicle – Loss or damage to owned and leased vehicles, where declared and only third party liability.
- Overseas travel – Covers baggage, medical costs and other travel related risks, while employees or persons authorised by Council are travelling outside New Zealand on Council business.

Risk Influencers

Our Assets and Infrastructure

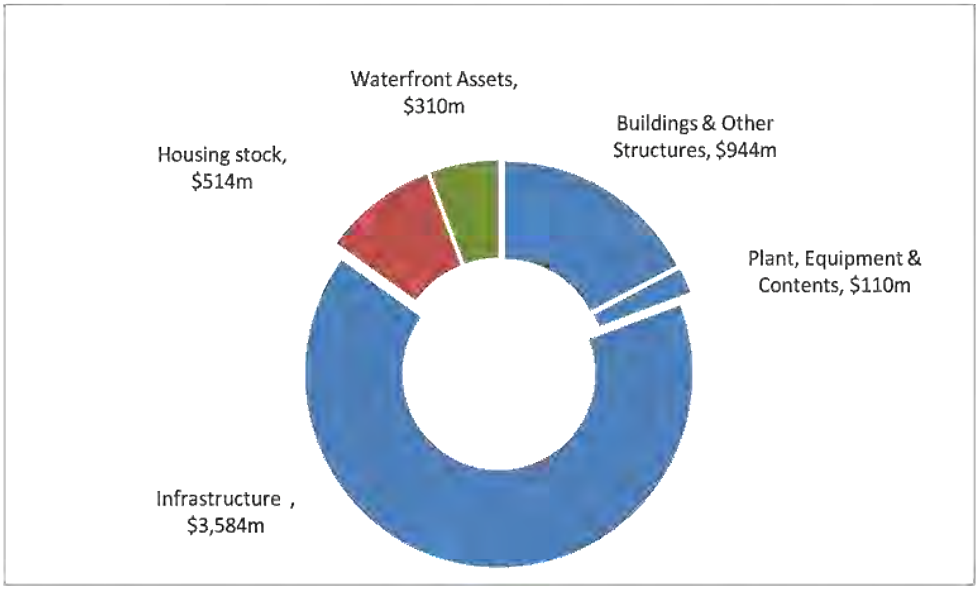
The Council's most significant insurance coverage protects against asset damage caused by various major events including earthquake, fire, flood and tsunami.

Assets valuation for insurance

For the purposes of insurance it is prudent for the Council to use asset replacement costs instead of the net book value valuation methodology. The total declared replacement cost for the Council's assets is $5,462 million, excluding land and land under roads (compared to $3,041 million net book value). In the event of a claim the Council will be in a position to reinstate the asset at its full replacement costs rather than the NBV which would be at a lower value.

The graph below shows the Council asset classes valued at replacement costs.

Council Asset replacement cost for insurance declaration



The Council covers its risk exposure on three asset classifications valued at either replacement or indemnity for insurance purposes, as depicted in the graph shown above.

- The Council core assets highlighted in blue valued at $4,638 million includes the road network, 3-Waters, buildings, other structures, plant and equipment;
- The Council Housing stock is highlighted in red, valued at $514 million; and
- Waterfront Assets highlighted in green, valued at $310 million.

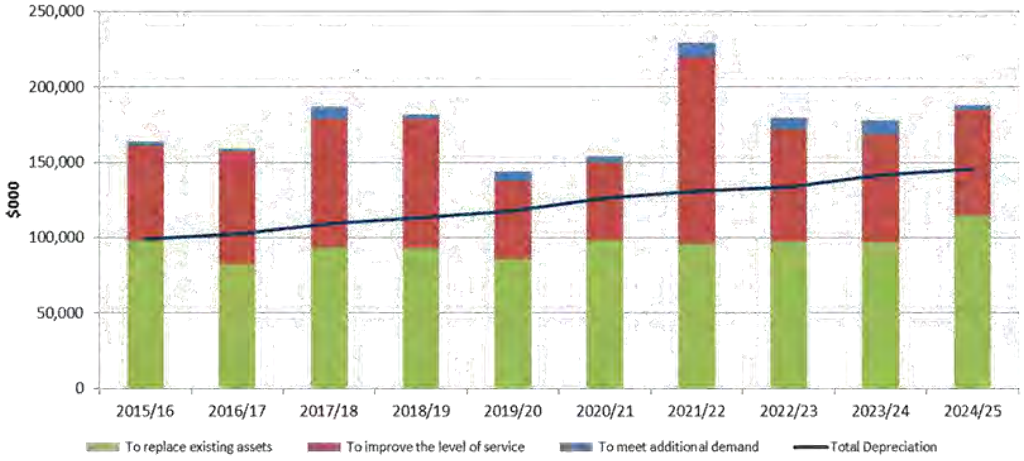
It excludes land, which is not insured.

The Council revalues assets on a three yearly rotation. By way of example, the Road and 3-Waters network asset was revalued in 2014 and will be revalued in 20174. The property asset class was revalued in 2013 and will be revalued again in 2016. Any material additions or asset retirements are accounted for each year for the purpose of insurance replacement cost.

Increasing Asset Values

The rate of asset values increases over time. As the Infrastructure Strategy 2015-2045 shows over the next 30 years there will be significant capital expenditure incurred by the Council for replacement of existing assets and the building of new assets. The diagram below summarises this forecast expenditure.

Capital Expenditure for Replacement and New Assets



The IMS will be able to accommodate this increased asset value through the process of modelling catastrophe exposure and to inform risk appetite and tolerance when setting insurance limits and by securing new insurer capacity from both New Zealand and Overseas.

Asset resilience

Property assets

There is a mandatory requirement for local authorities to have an earthquake-prone building policy. The Council has been assessing buildings and requiring building owners to strengthen or demolish buildings for over 25 years, under the provisions granted to it by previous legislation. As a result the Council owned buildings have been on a strengthening programme for over two decades.

As a general guidance, an earthquake-prone building will have strength that is 33 percent or less of the seismic loading standard. The Council looks to ensure that the strengthening undertaken on its buildings and structures is to at least 67 percent. An earthquake strengthening programme is included in the 2015 – 2025 Long-term plan.

Based on value, the percentage of the Council's buildings and structures that are no longer earthquake prone is currently 73 percent. The balance of the buildings and structures are either earthquake prone and will be strengthened over time, or are buildings yet to have an initial assessment.

Infrastructure assets

The Council has been making significant investment in the resilience and risk mitigation of its infrastructure assets. The Council has an Infrastructure Strategy which provides an overview of how we plan to manage our assets. The Infrastructure strategy is informed by Asset Management Plans. Asset Management Plans are in place for each major asset class and set out expectations about condition and capacity, how long assets are expected to last, and other factors such as quality standards and continuity of supply to guide decisions about maintenance, upgrades and renewals of assets. The list below provides examples of the impact of the ongoing work programme on the resilience of the assets in the infrastructure network.

- Code of Practice to ensure that the most earthquake resistant pipes are used when installing and replacing old cast iron and fibrous cement pipes with more resilient materials as part of its renewals programme.
- Approximately 45 percent of the underground water network now comprises earthquake resilient pipes;
- 66 percent of the water in the city is now stored in reservoirs that have been seismically strengthened;
- 95 percent of reservoirs have shut-off valves which stop the water reservoir from emptying if the pipe network is damaged;
- All new assets are built to comply with all codes;
- An on-going programme to earthquake strengthen bus and road tunnels;
- An on-going programme to earthquake strengthen bridges informed by schedule of bridge condition assessments;
- Renewals and upgrades of sea walls and retaining walls; and
- The on-going implications of climate change will be considered on our assets.

Topography

Assets in the Wellington region are exposed to natural hazards that include earthquake, flood and tsunami.

Wellington is on an earthquake fault line, which poses risk to a number of our infrastructure assets. This is based on their location and relative resilience to a major earthquake.

The insurance programme structure and limits have been developed primarily to accommodate the possible catastrophic losses resulting from an earthquake and resultant damage to Council assets.

In particular, underground infrastructure could suffer damage over a wide area. The insurance programme must accommodate potentially significant cumulative losses from such events. This will lessen the Council's financial uncertainty and assist with recovery of assets and services following an event.

Asset susceptibility to damage as a result of earthquake damage is not uniform, as the table below shows. With over 75 percent of assets subjected to average or moderate levels of impact and 17.5 percent of assets with a high susceptibility to liquefaction.

These factors are used in modelling losses from earthquake risk, to better inform the appropriate limit of insurance required based on the probability of loss or damage. In addition, insurance cover is sought for business interruption costs for loss or damage to assets including loss of income and additional costs to return the assets for use after the loss.

WCC percentage of Assets Impacted by Seismic Hazard based on Ground Classification (2014 Modelling).

Description	Expected Impact	Percentage
Rock	Grouped together, average shaking response, baseline damage level	48.6%
Shallow soil sites		18.2%
Deep or soft soil sites	Moderate amplification of shaking and damage	7.9%
Very soft soil sites	High amplification of shaking and damage	4.1%
High landslide susceptibility	High increase in damage	2.9%
Very high landslide susceptibility	Very High increase in damage	0.5%
High liquefaction susceptibility	High increase in damage	17.5%
Very high liquefaction susceptibility	Very High increase in damage	0.3%

Risk Appetite and Tolerance

Ensuring appropriate insurance policy limits and self-insured retentions are selected for the various insurances is a key outcome of the IMS. Assessing what level of risk Council is prepared to accept for both single and multiple losses over a typical 12 month insurance policy period is critical to understanding and measuring the Council risk appetite and tolerance.

For the Council, risk from natural hazards to assets is a key consideration in setting appetite and tolerance. It is also influenced by the scope and limits of cover available in the insurance market. In principle, the Council seeks to transfer the majority of the catastrophe risk for assets to the insurance market having regard to the cover and cost of insurance available.

Insurance Reserves "self insurance"

Risk tolerance is the level of risk Council is prepared to accept. The self-insured excess limit is funded by the Council in the event of a loss. Risk tolerance is also manifested by the risks not insured by council for which insurance is available, but is not cost effective to procure.

The ISO 31000 risk management standard refers to risk appetite as the *"Amount and type of risk that an organization is prepared to pursue, retain or take"*. This represents risks across a range of insurance policies aggregated over a typical 12 month period.

For the Council it means defining how much and what type of risk it is willing to accept based on a risk and reward evaluation.

The amount of risk retained by the Council is determined within the IMS by;

- Reviewing the Council's risk tolerance and appetite principles on how much self-insured losses the Council is prepared to retain for either a single loss or aggregate losses resulting from one or multiple events over a financial year;
- Analysing historical claims experience (refer to Appendix 2 – Claims History); and
- Reviewing the operational risk profiles of property and third party liability risks.

The setting and funding of self-insured retentions are informed by the Council's Financial and Infrastructure Strategies. Influences within these strategies determine the level and funding of risk retained by the Council.

Insurance Programme Cover, Limits and Self-Insured Retentions

Material Damage – Catastrophic loss (including Earthquake)

The Council IMS aims to achieve an adequate level of insurance with a balance of insurers from New Zealand and international insurance markets.

The Council purchases insurance cover informed by Geological and Nuclear Sciences (GNS) loss estimate curve for material damage (buildings, infrastructure assets and contents) and Business Interruption, covering an asset portfolio of $5,462 million (based on 2014/15 replacement values declared to insurers).

The current limits of insurance purchased for material damage is predominately determined by the impact of natural disasters on our assets, particularly an earthquake.

The loss modelling results take into account the Council's risk tolerance and appetite as well as the following factors:

- The estimated return periods for different types of events as an important determinant of the potential impacts of earthquakes. Generally the longer the return period the greater the financial loss impact;
- The basis of valuation of assets that are to be modelled. Replacement and indemnity values are used to ensure sufficient funds are available to replace assets to a utility no worse than what they were prior to the loss;
- Accurate and documented asset construction and location including important geological attributes such as soil, rock and topography conditions that influence the extent and susceptibility of asset damage; and
- Modelling of multiple events within conservative return periods to capture an accurate understanding of financial impact notwithstanding the inherent uncertainties of modelling natural disaster impacts.

To minimise any modelled uncertainties, the Council has taken a conservative approach to setting annual asset insurance limits for the insurance programme:

- Modelling is conducted at least every three years to take into account any material changes in values, construction and location of assets that could alter their susceptibility of damage over time.
- The Council has adopted the RBNZ standard prescribed for insurers where they are required, as a minimum, to purchase reinsurance protection (insurance cover for insurers) based on an earthquake event that has a return period of 1 - 1000 years.
- The Council's adoption of this was introduced knowing insurers insure diverse assets throughout New Zealand of varying asset construction, location and susceptibility to damage.

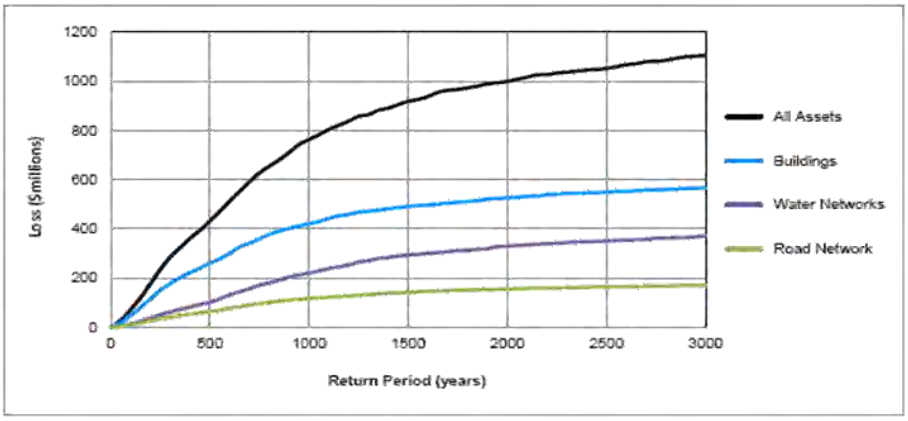
The Council also conducts risk surveys of large single location assets to determine their Possible Maximum Loss (PML) from non-catastrophe hazards such as fire, storm and flood.

The tables below provide a summary of the potential Loss Curve for the core assets of the

Council. It provides an estimated loss level and the return period at which the loss is likely to be equalled or exceeded.

The Loss Curve tables are the result of modelling 50,000 events and allowing all of the uncertain parameters, such as the magnitude of the earthquake and the severity of the ground motion, to vary within their respective limits.

Loss Estimates by Asset Class for core assets (Earthquake Risks)



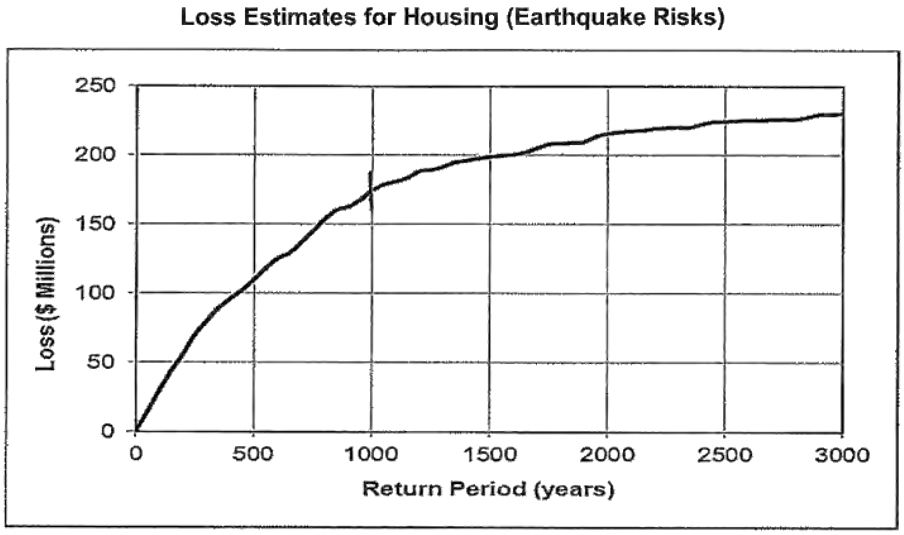
The table above includes the impact to Road network, 3-Waters, Buildings, other structures, plant and equipment valued at $4,638 million.

In 1 – 1000 return period event the Councils estimated loss to the above core assets has been estimated to be $760 million, prior to any third party contributions.

The table inserted below shows the breakdown loss estimates by class of asset, as shown in the graph above for a 1 – 1000 return period event. In addition, it identifies the anticipated funding source in the event of a claim.

Core Assets funding source for a 1 – 1000 year event

Asset Class	Millions
Buildings	$420
Road Network	$120
Water Network	$220
Total Loss	**$760**
Funding Source	
Insurance	$500
Central Government – Water Network	$132
NZTA - Road network	$65
Council retained excess	$20
Balance to be funded by debt	$43
Total funding	**$760**



The table above includes the impact to the Housing stock, valued at $514 million.

In 1 – 1000 return period event the Councils estimated loss to the above Housing assets has been estimated to be $178 million, prior to any third party contributions.

The table inserted below shows the breakdown loss estimates by class of asset, as shown in the graph above for a 1 – 1000 return period event. In addition, it identifies the anticipated funding source in the event of a claim.

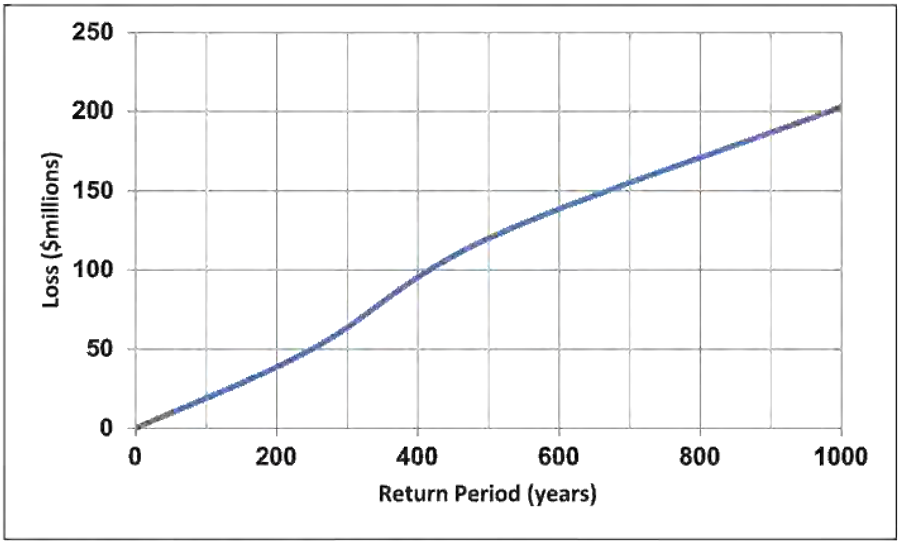
Housing Assets funding source for a 1 – 1000 year event

Asset Class	Millions
Buildings	$178
Total Loss	**$178**
Funding Source Insurance Earthquake commission Council retained excess	$178
Total funding	**$178**

The funding source for the Housing portfolio comprises of the following:

- The first $100,000 of loss / damage from an earthquake is from the Earthquake commission:
- The Council excess is between $1,000 - $25,000 per dwelling and dependant on the size of the dwelling i.e. single or multi-unit blocks; and
- The balance payable by our insurers.
- Non-earthquake claims will be funded by Council excess and insurers.

Loss Estimates for Wellington Waterfront (Earthquake Risks)



**Graph above based on Wellington fault scenario*

The table above includes the impact to the Waterfront Assets, valued at $307 million.

In 1 – 1000 return period event the Councils estimated loss to the above Waterfront assets has been estimated to be $203 million.

The table inserted below shows the breakdown loss estimates and identifies the anticipated funding source in the event of a claim.

Waterfront Assets funding source

Asset Class	Millions
Buildings	$11
Other structures	$146
Utility and infrastructure	$46
Total Loss	**$203**
Funding Source	
Insurance	$193
Waterfront retained excess	$10
Total funding	**$203**

Material Damage - Fire

Buildings and Other Structures Loss Estimates – Fire Risk Only (Based on 2014 Values)

Building	Value	PML	Percentage
Central Library	$104.5m	$59.9m	57%
Town Hall	$90.1m	$22.5m	25%
Michael Fowler Centre	$73.3m	$37.2m	51%
Regional Aquatic Centre	$60.4m	$31.3m	52%
ASB Sports Centre	$56.6m	$28.6m	51%
Municipal Office Building	$50.7m	$12.8m	25%
Civic Administration Bldg	$48.9m	$19.7m	40%
St James Theatre	$34.4m	$17.6m	51%
City Gallery	$28.7m	$14.5m	51%
Opera House	$16.9m	$13.6m	80%

The Council manages and implements the IMS principally through the arrangement of an insurance programme placed on an annual basis. The Council retains the services of an insurance broker and other technical specialists to assist in the implementation the IMS.

When setting or modifying policy limits and retentions the aim is to minimise the long term cost of insurance ensuring adequate insurance is affected to mitigate risks that might impact the achievement of the strategic objectives of the Council's 2015-25 Long-term Plan incorporating the Financial and Infrastructure Strategies.

Liability risks

In addition to material damage the Council has a number of liability related risk. Any unacceptable risk to Council is transferred through insurance. These insurance policies are subject to different levels of excess and listed below:

Policy	Risk retention (excess)	Limits
• General Liability –	$5,000	$50,000,000
• Professional Indemnity –	$50,000	$30,000,000
• Statutory Liability –	$25,000	$2,000,000
• Employers Liability –	$25,000	$1,000,000
• Trustee Liability –	$5,000	$10,000,000
• Crime –	$25,000	$1,000,000
• Rotation Timber and Carbon –	$7,500	$1,000,000
• Motor vehicle –	$10,000	$250,000
• Overseas travel –	$250*	$500,000*

*Various excesses and limits apply to overseas travel insurance the amounts shown above are the maximum limits.

Insurer and Insurance Broker Selection and Management

Insurers

The Councils insurance programme aims to respond to loss such as an earthquake and so the credit worthiness of insurers is an important consideration for the IMS.

For that reason the Council will require their insurance broker to take into account the following factors before recommending insurers. The selection criteria ensures that the credit risk is minimized as well as giving assurance that claims proceeds are received as soon as possible after the event. The factors are:

- For insurance policies covering the major natural hazards such as earthquake, tsunami and flood, the insurers will be spread between New Zealand and Overseas insurers with the percentage subject to market conditions;
- To reduce the risk of insurer default that may impair claims recoveries, the Council will prescribe that the insurance broker will only place insurance with insurers that have at the time of acceptance, a minimum insurer credit rating equivalent to a Standard & Poor's rating of A-; and
- The Council will rely on their insurance broker advice regarding the acceptable risk of concentration relating to the involvement of any one participating insurer on the insurance programme having regard to the insurance market conditions, pricing and cover offered by the insurance market.

Additional factors used by the Council to approve insurers so that the most cost effective insurance cover is purchased under the IMS include:

- Terms and conditions that meet the needs required to achieve best value procurement;
- Insurers that have, or seek to provide, long term support are recognised;
- The insurers history of meeting and exceeding claims payment obligations is an important attribute to maintain and extend the partnership with the Council; and
- Insurers demonstrating expertise and specialisation in offering their capacity to meet the changing needs of the Council.

A cancellation clause is to be included in all insurance contracts that provides the right to cancel the insurance without penalty in the event that the insurer's credit rating falls below the minimum rating.

The IMS has an important objective to ensure that when a major claims event occurs all claims collections are made promptly and to the full amount expected by the insurance coverage purchased.

The insurance broker will agree major claim protocols with insurers which will be documented in the Insurance Procedures Manual that will facilitate and streamline claims payments to ensure reinstatement of assets and infrastructure as soon as possible.

Insurance Brokers

The insurance broker is a critical service provider to assist with the implementation of the IMS. The procurement, selection and performance management of the insurance broker will be undertaken within the procurement guidelines of the Council and prescribed by the insurance broking services contract.

The selection criteria will cover areas of expertise and proven performance to manage arrangements that are required under this IMS. Some key selection criteria include:

- Proven expertise and experience placing insurance with New Zealand and overseas insurers especially procurement of the catastrophe insurance cover for events such earthquakes, tsunami and flood;
- Proven ability for proposed personnel to deliver all the elements of the IMS;
- Understanding of the risks and exposures of the Council and the local government sector in New Zealand having regard to the risks, particularly the natural hazards of the Wellington region.
- Proven record managing and collecting claims, especially property claims resulting from catastrophe events in New Zealand

The insurance broker will be responsible for delivering various services that include developing and executing the insurers marketing and placement strategies. The insurance broker will also provide recommendations on insurer selection and management of above excess claims recoveries. In addition, the insurance broker will also inform the Council of important insurers attributes required including:

- Which local and overseas markets have an appetite for the insurance covers required by the Council;
- Recommending terms from the lead insurers who provide the confidence for following insurers to support the insurance procurement so that the limits can be confidently purchased to 100 percent;
- When and where market briefings are required to inform New Zealand and Overseas insurers to deliver value for money procurement. This includes facilitating access to ART Financial Institutions when and where required to understand the alternative offerings available as part of the annual insurer marketing strategy;
- Ongoing movements in credit ratings of any existing or potential insurers; and
- Availability of insurers that meet the credit rating and other attributes detailed in the IMS to the satisfaction of the Council.

Other Advisors

The Council may appoint other advisors to assist with the implementation of the IMS that have specialist skills including:

- Catastrophe hazard modellers and engineers;
- Claim Adjustors to assist preparation of loss information to support claim recoveries.

Delegation, Monitoring, Reporting and Review

Delegation

Delegation to approve or amend the Risk Management Strategy is held by Council, on recommendation from Council's Audit and Risk Sub-Committee.

Through a Council delegation to the Chief Executive Officer (CEO), the CEO is responsible for the implementation of the IMS and approval of the annual insurance premiums.

Monitoring

The IMS is supported by the following documents:

- The annual Insurance Arrangements Statement (IAS) outlining the insurance programme detailing all coverage, retentions and limits and the basis on which those arrangements were chosen;
- Post Renewal Report prepared by the insurance broker outlining the results of the annual insurance renewal negotiations including insurer terms and recommendations to renew the insurance programme; and
- Insurance Procedures Manual which has been developed to include a summary of insurance and claims processes that include major claims protocols and processes that are documented and agreed by the lead insurers.

To ensure the annual insurance arrangements required by the IMS are met, the appointed insurance broker along with officers will monitor and report on:

- Compliance with the IMS;
- Ongoing claims experience and recoveries under the insurance policies; and
- Insurance premiums paid and how they compare with the budgeted costs.

In addition to minimise any insurer credit risks relating to payment of current or future claims, the broker will monitor the on-going creditworthiness of insurers. Should the broker become aware that any insurer's credit rating falls below the minimum rating required under the IMS, they will immediately inform officers and report on the actions to be taken to reduce any risk of non-payment of claim recoveries.

Reporting and Claims Management

Officers are responsible for reporting on the implementation of the IMS and the recovery of outstanding claims to the Councils Audit and Risk Subcommittee annually. The annual IAS and Insurance Procedures Manual are key documents that evidence implementation of the IMS. The annual report to Council will summarise the following information:

- Details of all insurance arrangements (premiums, covers, limits and self-insured retentions) and the basis on which those arrangements were decided;
- Evidence that all insurance placement documents and polices are in accordance with

the negotiated terms and conditions of the insurance covers purchased;

- Obtaining placement reports from the insurance broker confirming coverage has been placed in accordance with this IMS;
- Details of all insurers and the basis on which they were chosen; and
- Outstanding claims report detailing amounts outstanding including actions and timetable to settle these amounts.

The IAS will be updated after each insurance renewal or earlier where material changes to operations have occurred or where insurance arrangements have been discontinued or new arrangements entered into.

Review

To ensure the IMS keeps aligned to the Council's strategies, especially the Financial and Infrastructure Strategies and the Long Term Plan, the IMS will be subject to a full review on a triennial basis and linked to the LTP process. Council officers are responsible for the review.

The reviewed IMS and any recommendations will be presented to the Audit and Risk sub-committee for approval and recommendation to Council for adoption.

Notifying Council

The Audit and Risk sub-committee must be notified if an issue arises from the insurance arrangements or claims recovery that may materially and adversely affect the Council's financial position.

APPENDIX 1 - Strategic fit

1. **Long Term Plan 2015-2025**

   Focuses on growing Wellington's economic prosperity through sustainable infrastructure development. The IMS seeks to protect the Council from uncertain financial shocks due to major asset losses by providing funding from insurers to restore damaged assets in a timely manner.

2. **Infrastructure Strategy 2015-2045**

   The IMS addresses a major issue influencing the strategy by improving the resilience and financial protection for WCC for those assets exposed to risks of natural disasters

3. **Financial Strategy 2015-2025**

   The IMS supports the management of financial risks including efficient procurement of insurance and sustainable funding of below excess losses thus reducing the financial uncertainty and impact on future rate increases.

4. **Government and Industry Reviews**

   - The recommendations contained within the "New Zealand Local Government Insurance Market Review"; prepared for Local Government New Zealand by Craig Stobo, December 2013.
   - The recommendations contained within the "Insuring Public Assets "audit by the New Zealand Controller and Auditor General, June 2013.

   The IMS addresses common themes from recommendations contained in these reports suggesting the implementation of an "earned autonomy" framework by Government. This encourages councils to strengthen their risk profiling, risk mitigation and risk financing to be more self-reliance and resilient to losses from natural disasters.

   By implementing a robust IMS, the Council will gain greater independence and certainty to recover losses to assets and infrastructure and provide the New Zealand Government with assurance that the Council's insurance procurement is efficient and cost effective thus making assistance warranted if requested.

5. **Civil Defence Emergency Management Act 2002**

   Current Government disaster funding arrangements with the New Zealand Government is expected to fund approximately 60 percent of the losses incurred to underground assets and 53 percent of roads from natural disasters is taken into account when setting limits and retentions. The IMS is to have flexibility to react to any future change in government policy to fund infrastructure asset losses.

6. **Reserve Bank of New Zealand Insurance (Prudential Supervision) Act 2010**

   The Act prescribes that insurers must purchase property reinsurance limits that take into account losses represented by natural hazards events with a return period of 1 -

1000 years. Notwithstanding, the Council it is not required to comply with this policy, it has been conservative in adopting this standard to determine appropriate maximum limits for its asset material damage insurance programme.

7. National Civil Defence Emergency Management Plan Order 2005

The Guide sets out the arrangements and roles and responsibilities of agencies for the national management, or support to local management, of civil defence emergencies. The National CDEM Plan identifies core functions for national management of the consequences of civil defence emergencies. It may also address the management of consequences of other emergencies not otherwise able to be managed by a lead agency.

APPENDIX 2 – Claims History

The Council carries significant deductible levels, and internally funds day to day working losses for under deductible incidents from the reserve funds. In addition, Council has made no insurance claims against our material damage policy in over 12 years.

All claims are managed by our broker for both above and below excess claims. The claims are independently assessed by our brokers against strict criteria with valid insurance claims settled. Unsuccessful claims would be covered by the business unit.

The fund enables:

- A means of funding repairs to assets without affecting a Business Unit's operating budget;
- Information on overall loss expenditure trends which includes the claims cause, frequency and severity, allowing for better management of risks;
- Accurate assessment of under-deductible incidents; and
- Limits potential claims made to our insurers for material damage or business interruption.

Summary of the claims experience from 2003 to 28 February 2015

Policy Year 2003/04	
Total paid:	$453,637
Total number of claims:	277
Largest claim:	Storm - $61,546
Policy Year 2004/05	
Total paid:	$335,038
Total number of claims:	220
Largest claim:	Fire at Basin Reserve - $74,048 (includes recovery of $35,000 from third party)
Policy Year 2005/06	
Total paid:	$373,279
Total number of claims:	199
Largest claim:	Accidental damage to stage lift - $18,043
Policy Year 2006/07	
Total paid:	$360,635
Total number of claims:	278
Largest claim:	Vehicle impact - $36,172
Policy Year 2007/08	
Total paid:	$386,312
Total number of claims:	230
Largest claim:	Theft of Park & Display meters - $32,624
Policy Year 2008/09 (from 31 December 2008 to 31 May 2010)	
Total paid:	$862,733
Total number of claims:	632
Largest paid claim:	Arson - $80,671
Policy Year 2010/11	
Total paid:	$559,513
Total number of claims:	415
Largest claim:	Arson - $22,742

Policy Year 2011/12	
Total paid:	$721,943
Total number of claims:	527
Largest paid claim:	Arson - $36,322
Policy Year 2012/13	
Total paid:	$445,137
Total number of claims:	383
Largest paid claim:	Water damage - $9,470
Policy Year 2013/14	
Total paid:	$722,017
Total outstanding:	over $4,500,000
Total number of claims:	428
Largest claim:	Storm damage to various assets mainly roading infrastructure*
Policy Year 2014/15 (up to 28 February 2015)	
Total paid:	$91,832
Total outstanding:	$277,910
Total number of claims:	219
Largest paid claim:	Storm damage - $3,725
Largest outstanding claim:	Damage to Zephyrometer sculpture - $150,000

Policy year 2013/14

In 2013 the Wellington region experienced a severe storm and three earthquakes. This resulted in claims against the Councils self-insurance reserve with details listed below.

Earthquake claims

The impact of the earthquakes in 2013 and 2014 resulted in claims against the insurance reserve of approximately $350k. The resilience of the Council's buildings is demonstrated by the minimal damage suffered by the buildings during the earthquake events.

- The magnitude 6.5 Cook Strait earthquake, which occurred on 21 July 2013, was centred in Cook Strait about 50km south-west of Wellington. The earthquake resulted in zero to minor damage to the Council's buildings.
- The magnitude 6.6 Lake Grassmere earthquake on 16 August 2013 was centred close to the town of Seddon, and about 70km south-west of Wellington. The earthquake caused moderate to heavy damage to buildings in Seddon, but zero to light damage to the Council's buildings.
- The magnitude 6.2 Eketahuna earthquake which struck on 20 January 2014 was centred 15km east of Eketahuna, Wairarapa and was felt strongly on both islands. The earthquake resulted in zero to minor damage to the Council's buildings.

Storm Damage

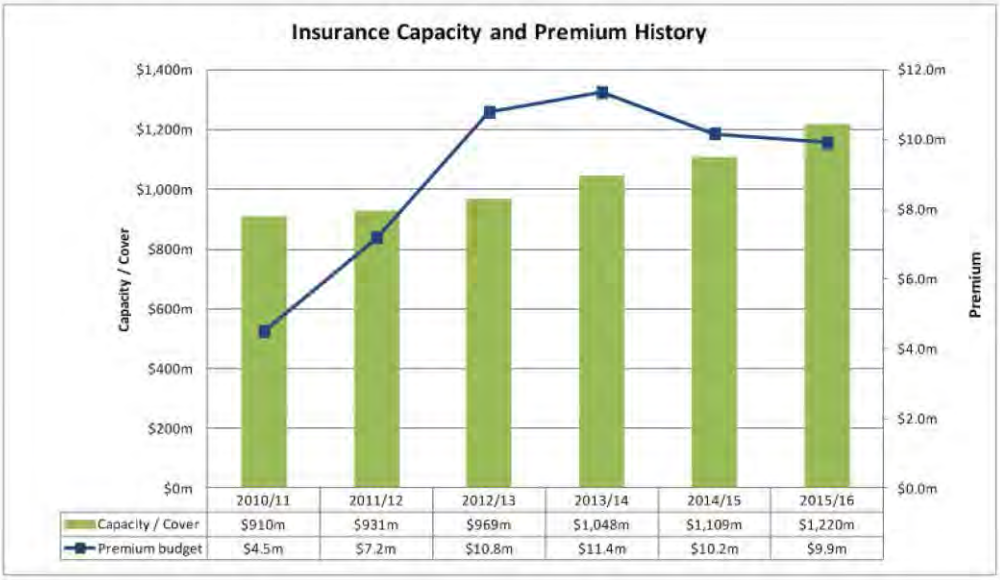
A severe storm affected New Zealand on 20 June 2013. The damage affected seawalls, carriageways, footpaths and support walls, and included the collapse of a large section of the 350-metre seawall in Island Bay.

The total repair cost is estimated at $5.4 million, and with WCC expecting a subsidy from NZTA towards repair of the roading infrastructure. The net claim is estimated at $4.3 million. This fell below our insurance excess and was funded from the Council insurance reserves.

APPENDIX 3 – Insurance history

The Council has over time increased the level of insurance cover held for assets in response to the refinement of the GNS loss and risk assessment.

The graph below depicts the material damage and business interruption cover held in the last six years. The premium budget increases in 2012/13 – 2013/14 reflects the increase in the global insurance market reinsurance. This was in response to significant claims worldwide depleting the capital held by investors and the associated risk appetite changes. The global insurance market conditions have softened in the last two years as a result of a reduction in global catastrophes and an increase in capital investors. This has supported the reduction in budgeted premiums.



	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Capacity / Cover	$910m	$931m	$969m	$1,048m	$1,109m	$1,220m
Premium budget	$4.5m	$7.2m	$10.8m	$11.4m	$10.2m	$9.9m

Note:

1. The above premium budget shown in the above graph includes a mix of insurance premium and the top-up of the insurance reserve.
2. Capacity / cover include risks assumed to be covered by NZTA and the New Zealand Government.
3. Insurance capacity includes Council's general policy and specific policies relating to Wellington Waterfront and the Council's Housing portfolio.

4. Public Excluded

Resolution to Exclude the Public:

THAT the Council :

Pursuant to the provisions of the Local Government Official Information and Meetings Act 1987, exclude the public from the following part of the proceedings of this meeting namely:

General subject of the matter to be considered	Reasons for passing this resolution in relation to each matter	Ground(s) under section 48(1) for the passing of this resolution
4.1 Appointments to Council Controlled Organisations	7(2)(a) The withholding of the information is necessary to protect the privacy of natural persons, including that of a deceased person.	s48(1)(a) That the public conduct of this item would be likely to result in the disclosure of information for which good reason for withholding would exist under Section 7.