



### Q1 2018 RLB Crane Index® Highlights

- A total of 125 long-term cranes have been sighted across New Zealand (83 in Auckland, 13 in Christchurch and 9 in Wellington)
- RLB Crane Index® has risen to 164 up from 162
- Work put in place increased year-on-year 13% for 12 months ending September 2017
- Residential crane index value fell to 415, down from a record high of 431
- Non-residential crane index value rose to 113, up from 106 six months ago
- 48 new cranes added since last index, 46 were removed from sites across New Zealand
- Auckland and Tauranga increased crane activity
- Christchurch and Wellington decreased crane activity

### Q1 2018 RLB CRANE INDEX® SUMMARY

CITIES	KEY SECTORS
AUCKLAND	COMMERCIAL  CIVIC
CHRISTCHURCH	RESIDENTIAL  HOTEL
DUNEDIN	HEALTH  CIVIL
HAMILTON	EDUCATION  OTHER/MIXED
QUEENSTOWN	RETAIL
TAURANGA	
WELLINGTON	

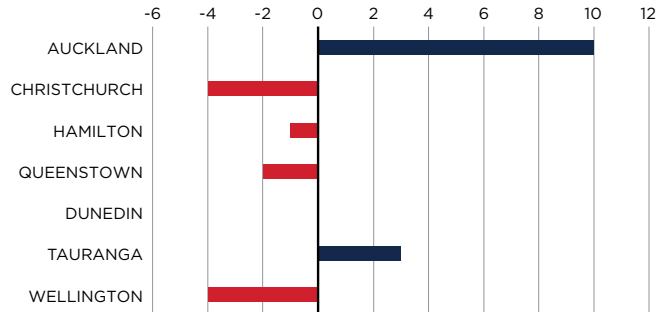
**LEGEND**

INCREASE IN NUMBER OF CRANES    DECREASE IN NUMBER OF CRANES    CRANE NUMBERS STEADY

## NEW ZEALAND

### NEW ZEALAND NET CRANE MOVEMENT BY CITY

NUMBER OF CRANES REMOVED / ADDED

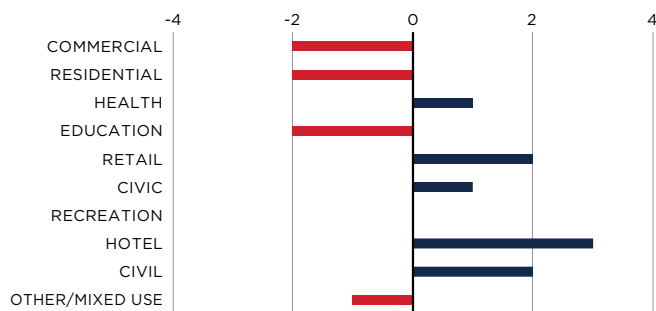


### CRANE ACTIVITY - NEW ZEALAND

	OPENING COUNT		MOVEMENT			CLOSING COUNT	
	Q4 2017	%	+	-	NET	Q1 2018	%
AUCKLAND	73	59.3%	33	-23	10	83	66.4%
CHRISTCHURCH	17	13.8%	6	-10	-4	13	10.4%
DUNEDIN	2	1.6%	0	0	0	2	1.6%
HAMILTON	3	2.4%	0	-1	-1	2	1.6%
QUEENSTOWN	11	8.9%	2	-4	-2	9	7.2%
TAURANGA	4	3.3%	5	-2	3	7	5.6%
WELLINGTON	13	10.6%	2	-6	-4	9	7.2%
<b>TOTAL</b>	<b>123</b>	<b>100.0%</b>	<b>48</b>	<b>-46</b>	<b>2</b>	<b>125</b>	<b>100.0%</b>

### NEW ZEALAND NET CRANE MOVEMENT BY SECTOR

NUMBER OF CRANES REMOVED / ADDED



### CRANE ACTIVITY - NEW ZEALAND BY SECTOR

	OPENING COUNT		MOVEMENT			CLOSING COUNT	
	Q4 2017	%	+	-	NET	Q1 2018	%
COMMERCIAL	27	22.0%	10	-12	-2	25	20.0%
RESIDENTIAL	56	45.5%	16	-18	-2	54	43.2%
HEALTH	3	2.4%	2	-1	1	4	3.2%
EDUCATION	8	6.5%	1	-3	-2	6	4.8%
RETAIL	4	3.3%	4	-2	2	6	4.8%
CIVIC	7	5.7%	3	-2	1	8	6.4%
RECREATION	0	0.0%	0	0	0	0	0.0%
HOTEL	4	3.3%	4	-1	3	7	5.6%
CIVIL	9	7.3%	7	-5	2	11	8.8%
OTHER/MIXED	5	4.1%	1	-2	-1	4	3.2%
<b>TOTAL</b>	<b>123</b>	<b>100.0%</b>	<b>48</b>	<b>-46</b>	<b>2</b>	<b>125</b>	<b>100.0%</b>

The Ninth edition (Q1 2018) of the RLB Crane Index® highlights the continuing growth in building work put in place across New Zealand. New Zealand's work put in place grew by 13% over 12 months to September 2017, totalling just under \$17 billion. The hotel and education sectors had the largest increases, with 48% and 22% respectively.

These increases are reflected with the current crane conditions within New Zealand, with the number of long-term cranes increasing by two for the period.

Auckland continues to dominate New Zealand skies with 83 cranes erected, accounting for 66% of all cranes counted. 33 new cranes have been erected in the Auckland area, and 23 removed from projects that are nearing completion.

Auckland's crane count increase was driven by net increases in the hotel and civil sectors of four cranes each, the commercial and civic sectors of two cranes and the mixed use sector of one crane.

Christchurch and Wellington saw net decreases in cranes of four, bringing their total counts to 13 and 9 respectively.

While Hamilton and Queenstown also experienced net crane decreases of one and two respectively.

Tauranga had a net increase in cranes of three.

Auckland remained the main driver of the crane count, increasing by ten cranes since the last index.

## NEW ZEALAND

The number of new building consents in New Zealand have been steadily increasing since 2012, with an average growth year-on-year of 10%. Between CY 16 and CY 17, the pace of growth has slowed with the number of building consents at 4%.

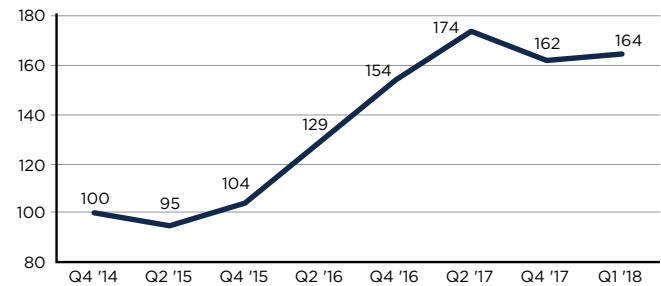
Over the past two years, the New Zealand Index has increased from 129 to the current 164 (+27%). Significant Index rises have seen Auckland rise by 76% to 319 and Tauranga by 250%. Offsetting these rises has been the fall in Christchurch's Index from 97 to 42, a 56% drop. This corresponds with the completion of a number of the key Christchurch rebuild projects.

Across New Zealand, residential is still the dominant sector with 54 cranes, representing 43% of all cranes counted in Q1 2018. Commercial cranes accounted for 20% of projects with 25, down from 27. Net increases were counted in the hotel sector with three cranes, civil and retail sectors with two cranes, and health and civic sectors with one crane. The residential, commercial and education sectors saw net cranes fall by two, while mixed use had one crane removed.

A key contributor within the current crane count is Fletcher Construction which currently have 11 tower cranes within Auckland, however they have since announced that they are pulling out of the Building and Interiors sector due to losses faced on current large projects. While the Auckland crane count is on the rise, we are yet to predict the impact Fletcher's announcement will have on the crane count moving forward and across the future large projects in Auckland and across New Zealand.

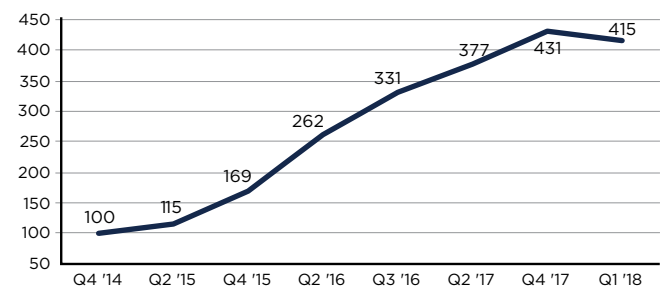
### RLB CRANE INDEX® - NEW ZEALAND

BASE = Q4 2014 = 100



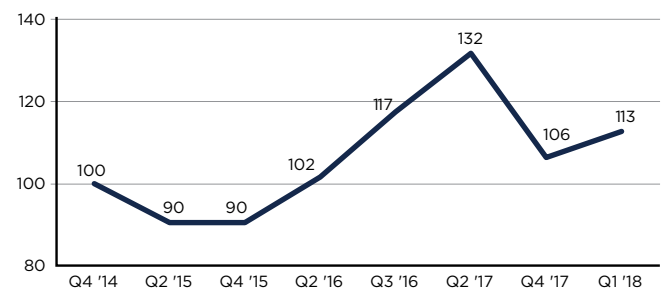
### NEW ZEALAND - RESIDENTIAL CRANE INDEX

BASE = Q4 2014 = 100



### NEW ZEALAND - NON-RESIDENTIAL SECTORS CRANE INDEX

BASE = Q4 2014 = 100



### RLB CRANE INDEX® COMPARATIVE DATA

INDEX: SECOND EDITION Q4 2014 = 100

	4TH EDITION Q4 '15	5TH EDITION Q1 '16	6TH EDITION Q3 '16	7TH EDITION Q1 '17	8TH EDITION Q4 '17	9TH EDITION Q1 '18	Q1 '18 VS. Q4 '17
AUCKLAND	127	181	246	277	281	319	14%
CHRISTCHURCH	100	97	81	81	55	42	-24%
DUNEDIN	100	100	-	300	200	200	0%
HAMILTON	29	71	86	114	43	29	-33%
QUEENSTOWN	75	100	175	250	275	225	-18%
TAURANGA	-	200	400	400	400	700	75%
WELLINGTON	150	150	183	167	217	150	-31%
<b>NEW ZEALAND</b>	<b>104</b>	<b>129</b>	<b>154</b>	<b>174</b>	<b>162</b>	<b>164</b>	<b>2%</b>

Note: This table does not represent crane numbers but rather the RLB Crane Index. Refer to last page for more details of the calculation of the RLB Crane Index.

## AUCKLAND

The RLB Crane Index® reflects Auckland's continuing growth in building activity.

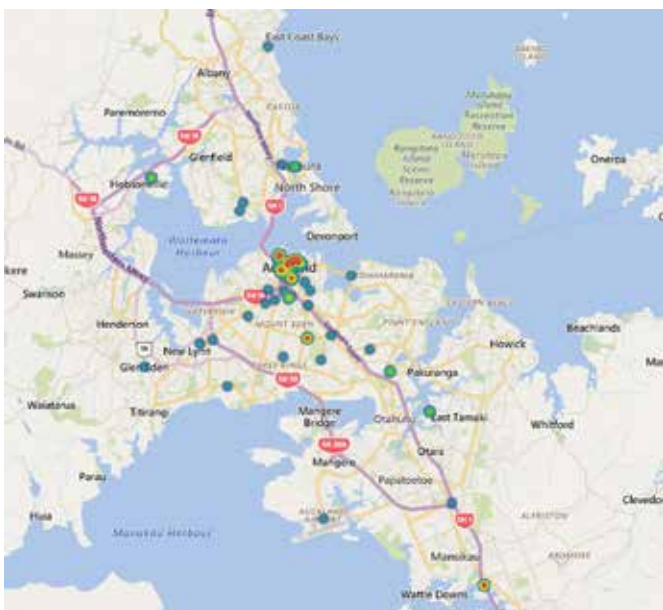
Auckland's crane index has risen from 100 in Q4 2014 (2nd edition) to 319. The current RLB Crane Index® showcases a 14% increase in the number of cranes within the Auckland region since our last count in Q4 2017 and is the highest index for Auckland since commencement.

33 new long-term cranes have been put in place on projects with 23 removed from projects nearing completion, resulting in a growth of 10 cranes in total.

Building work put in place increased 21% y-o-y to September 2017. The residential sector increased 18% and the non-residential sector increased 28%, both significant increases in a busy market. Building work does not look to be slowing down in the near future, with the number of new building consents 7% higher for CY 17 than CY 16. Building consents in Auckland have almost tripled since 2011, from 4,470 to 11,628 with residential consents the largest contributor at 10,867.

The residential sector continued to contribute the largest amount of the crane count, with 48 (57%), but recording a slight net decrease of two cranes. Residential cranes that were removed include: Victoria Residences, Conrad's, Queens Square Residences Stage 2, Poynton Terrace Apartments and Rawhiti Age Care.

Auckland's residential sector cranes accounted for 89% of all the residential cranes in New Zealand and 38% of all cranes nationally.



### KEY SECTORS

COMMERCIAL	
RESIDENTIAL	
EDUCATION	
CIVIC	
HOTEL	
CIVIL	
OTHER/MIXED	

### OVERALL STATUS



### LEGEND

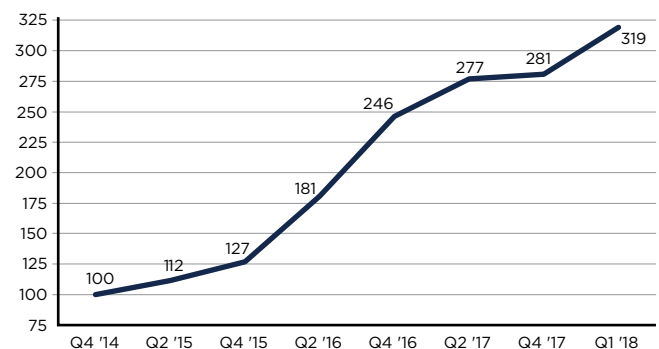
	INCREASE IN NUMBER OF CRANES		DECREASE IN NUMBER OF CRANES		CRANE NUMBERS STEADY
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### CRANE ACTIVITY - AUCKLAND

	OPENING COUNT		MOVEMENT			CLOSING COUNT	
	Q4 2017	%	+	-	NET	Q1 2018	%
COMMERCIAL	10	13.7%	5	-3	2	12	14.5%
RESIDENTIAL	50	68.5%	15	-17	-2	48	57.8%
HEALTH	0	0.0%	0	0	0	0	0.0%
EDUCATION	3	4.1%	1	-2	-1	2	2.4%
RETAIL	0	0.0%	0	0	0	0	0.0%
CIVIC	4	5.5%	2	0	2	6	7.2%
RECREATION	0	0.0%	0	0	0	0	0.0%
HOTEL	3	4.1%	4	0	4	7	8.4%
CIVIL	2	2.7%	5	-1	4	6	7.2%
OTHER/MIXED	1	1.4%	1	0	1	2	2.4%
<b>TOTAL</b>	<b>73</b>	<b>100.0%</b>	<b>33</b>	<b>-23</b>	<b>10</b>	<b>83</b>	<b>100.0%</b>

### RLB CRANE INDEX® - AUCKLAND

BASE = Q4 2014 = 100



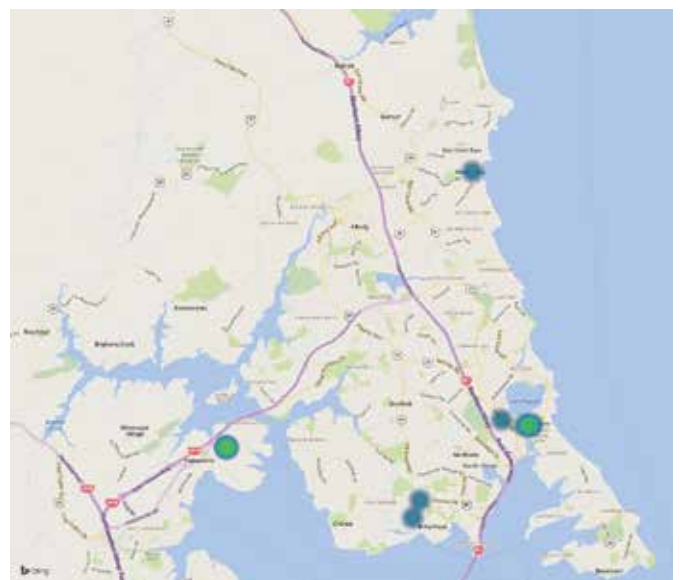
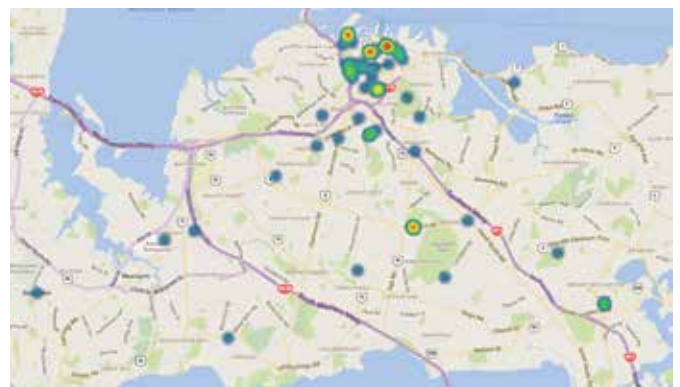
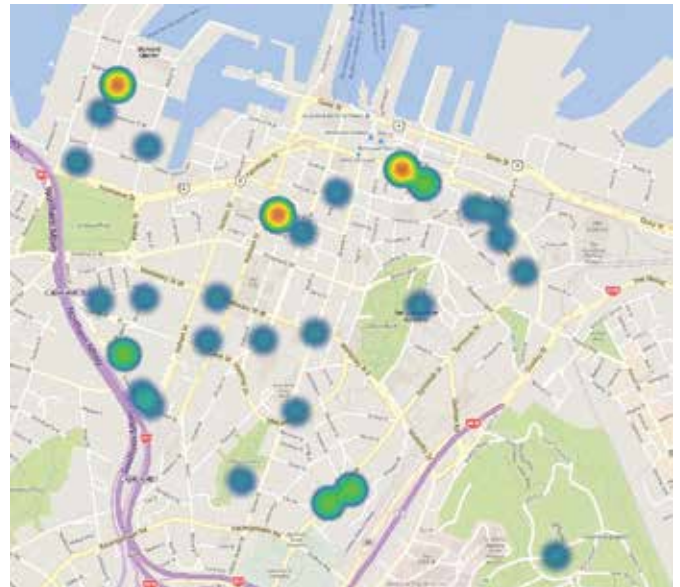
## AUCKLAND

The civil and hotel sectors saw the addition of four cranes each while the commercial and civic sectors added two cranes each and mixed use erected one. The education sector was the only other sector besides residential to have a fall in new cranes, with one removed.

Four cranes remained on site for the Downtown/ Commercial Bay project, five cranes remained on Sky City's NZICC Convention Centre and Hotel, and Alexandra Park project, while four new cranes were erected for the State Highway 1 widening.

Additional new long-term cranes were observed on the following projects around Auckland:

- Waiparuru Hall for the University of Auckland
- Crest Apartments, Grey Lynn
- Ted Manson's Foundation Glen Eden Apartments
- Lynfield Residential
- Lakewood Plaza, Manukau
- Library 27 for Eaglestone
- The International, Princess St
- Mills Lane Apartments
- Auckland Museum
- City Rail Link Contract 1 + 2
- 4 Points Sheraton Hotel, Queen St
- Ryman Browns Bay Aged Care Apartments
- ONE55 office, Fanshawe st
- Wynyard Common Pump Station
- Les Mills Carpark Building
- Maritime Apartments
- Mount Eden Prison
- Sylvia Park Carpark
- Three Kings Quarry Apartments
- State Highway 1 widening, South Auckland
- Wiri Industrial Units





## CHRISTCHURCH

With the stability in construction work put in place, Christchurch has seen 10 cranes removed from sites with an additional six being commissioned on new sites since our last edition. Christchurch's RLB Crane Index® continues to fall for Q1 2018, down 24% from the 8th edition to 42.

Building activity fell 11% y-o-y to September 2017, with building work put in place valuing \$3.4 billion. The residential sector saw a fall of 11% and the non-residential sector a decrease of 12%.

Commercial cranes saw a slight fall in the overall contribution to Christchurch's cranes, from seven (41%) in Q4 2017 to five in Q1 2018. Health sector cranes however, saw a rise jumping from three to four.

Four commercial cranes were removed from commercial projects at 655 Colombo Street, Hoyts Entx Development and at 308 Saint Asaph Street.

Other cranes removed from projects include: Christchurch Central Library, 52 Manchester Street and the Atlas Quarter.

Five new cranes were added on the following projects; Christchurch Convention Centre, Christchurch Hospital Laboratory Stairs, East Frame, Knight Frank House and 54 Salisbury Street.

### KEY SECTORS

COMMERCIAL	
RESIDENTIAL	
HEALTH	
EDUCATION	
RETAIL	
CIVIC	

### OVERALL STATUS

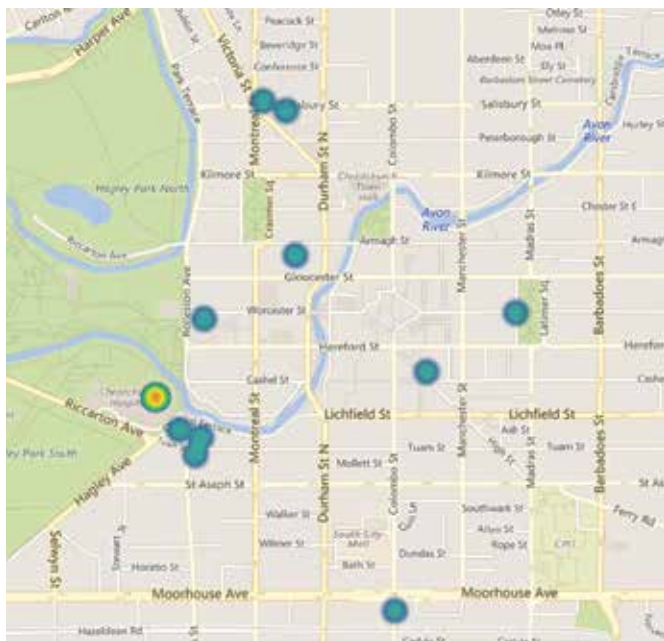


### LEGEND

	INCREASE IN NUMBER OF CRANES		DECREASE IN NUMBER OF CRANES		CRANE NUMBERS STEADY
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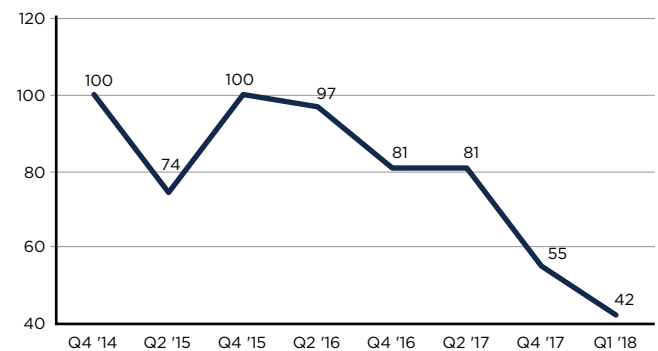
### CRANE ACTIVITY - CHRISTCHURCH

	OPENING COUNT		MOVEMENT			CLOSING COUNT	
	Q4 2017	%	+	-	NET	Q1 2018	%
COMMERCIAL	7	41.2%	2	-4	-2	5	38.5%
RESIDENTIAL	1	5.9%	1	-1	0	1	7.7%
HEALTH	3	17.6%	2	-1	1	4	30.8%
EDUCATION	1	5.9%	0	0	0	1	7.7%
RETAIL	2	11.8%	0	-2	-2	0	0.0%
CIVIC	3	17.6%	1	-2	-1	2	15.4%
RECREATION	0	0.0%	0	0	0	0	0.0%
HOTEL	0	0.0%	0	0	0	0	0.0%
CIVIL	0	0.0%	0	0	0	0	0.0%
OTHER/MIXED	0	0.0%	0	0	0	0	0.0%
<b>TOTAL</b>	<b>17</b>	<b>100.0%</b>	<b>6</b>	<b>-10</b>	<b>-4</b>	<b>13</b>	<b>100.0%</b>



### RLB CRANE INDEX® - CHRISTCHURCH

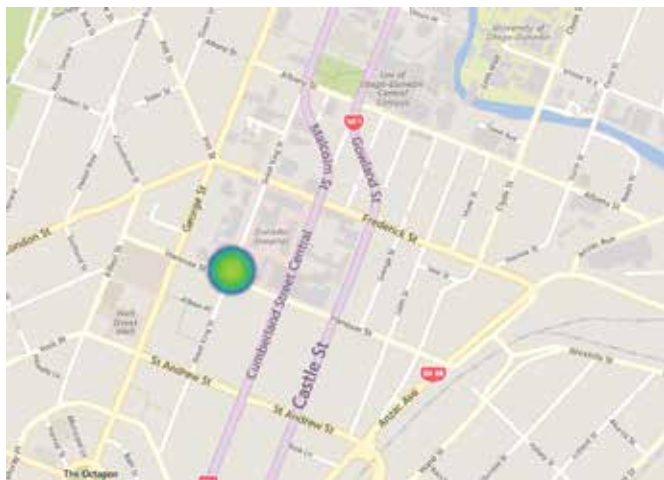
BASE = Q4 2014 = 100



## DUNEDIN

Dunedin's crane count remained constant at two cranes. Both cranes are in the education sector and were spotted in the previous edition, leaving Dunedin's RLB crane Index® at 200.

Both cranes are now tower cranes and are on the University of Otago projects, one on the new Research Support Facility building and the 'Reachie McClaw' crane on the new Dental School.



### KEY SECTORS

EDUCATION



### OVERALL STATUS



### LEGEND



INCREASE  
IN NUMBER  
OF CRANES



DECREASE  
IN NUMBER  
OF CRANES



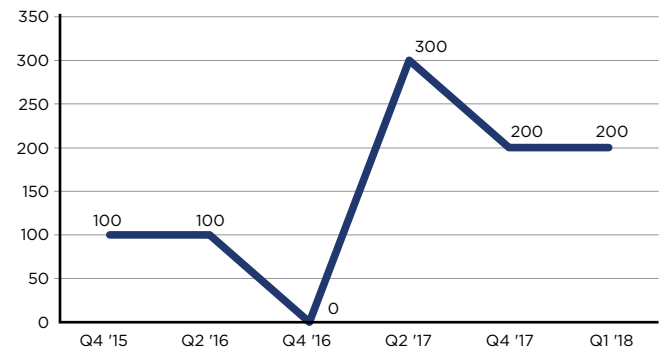
CRANE  
NUMBERS  
STEADY

### CRANE ACTIVITY - DUNEDIN

	OPENING COUNT		MOVEMENT			CLOSING COUNT	
	Q4 2017	%	+	-	NET	Q1 2018	%
COMMERCIAL	0	0.0%	0	0	0	0	0.0%
RESIDENTIAL	0	0.0%	0	0	0	0	0.0%
HEALTH	0	0.0%	0	0	0	0	0.0%
EDUCATION	2	100.0%	0	0	0	2	100.0%
RETAIL	0	0.0%	0	0	0	0	0.0%
CIVIC	0	0.0%	0	0	0	0	0.0%
RECREATION	0	0.0%	0	0	0	0	0.0%
HOTEL	0	0.0%	0	0	0	0	0.0%
CIVIL	0	0.0%	0	0	0	0	0.0%
OTHER/MIXED	0	0.0%	0	0	0	0	0.0%
<b>TOTAL</b>	<b>2</b>	<b>100.0%</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>100.0%</b>

### RLB CRANE INDEX® - DUNEDIN

BASE = Q1 2015 = 100



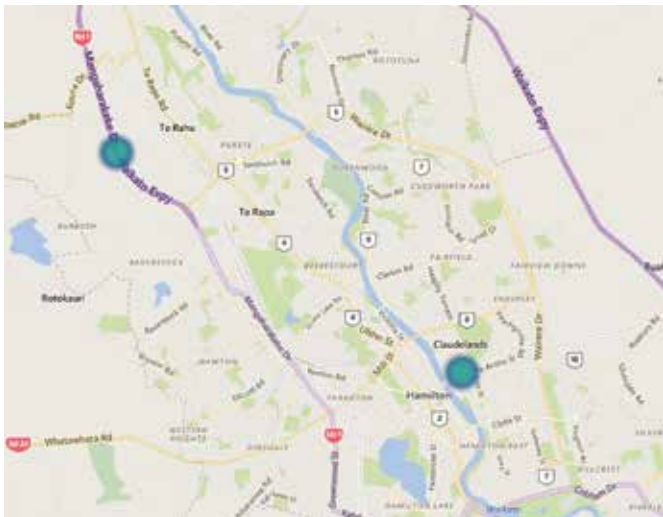
## HAMILTON

Hamilton's crane count dropped one for the current period, bringing the total crane count to two. Since our last edition, Hamilton's RLB Crane Index® has fallen 33%.

Building growth within the Waikato region remains strong, increasing 10% y-o-y to September 2017 and increasing 47% between 2015 and 2017. Residential work was increased 14% y-o-y to September 2017 while non-residential work was unchanged.

Both cranes were from the civil sector and were from existing projects observed in the previous count, these were: Hamilton Expressway and Ruakura Bridge.

The Hamilton Expressway removed one long-term crawler crane in the current period, bringing the total from two to one.



### KEY SECTORS

CIVIL



### OVERALL STATUS



### LEGEND



INCREASE  
IN NUMBER  
OF CRANES



DECREASE  
IN NUMBER  
OF CRANES



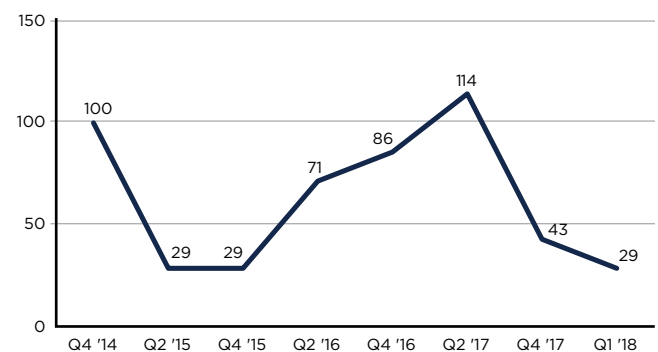
CRANE  
NUMBERS  
STEADY

### CRANE ACTIVITY - HAMILTON

	OPENING COUNT		MOVEMENT			CLOSING COUNT	
	Q4 2017	%	+	-	NET	Q1 2018	%
COMMERCIAL	0	0.0%	0	0	0	0	0.0%
RESIDENTIAL	0	0.0%	0	0	0	0	0.0%
HEALTH	0	0.0%	0	0	0	0	0.0%
EDUCATION	0	0.0%	0	0	0	0	0.0%
RETAIL	0	0.0%	0	0	0	0	0.0%
CIVIC	0	0.0%	0	0	0	0	0.0%
RECREATION	0	0.0%	0	0	0	0	0.0%
HOTEL	0	0.0%	0	0	0	0	0.0%
CIVIL	3	100.0%	0	-1	-1	2	100.0%
OTHER/MIXED	0	0.0%	0	0	0	0	0.0%
<b>TOTAL</b>	<b>3</b>	<b>100.0%</b>	<b>0</b>	<b>-1</b>	<b>-1</b>	<b>2</b>	<b>100.0%</b>

### RLB CRANE INDEX® - HAMILTON

BASE = Q1 2015 = 100





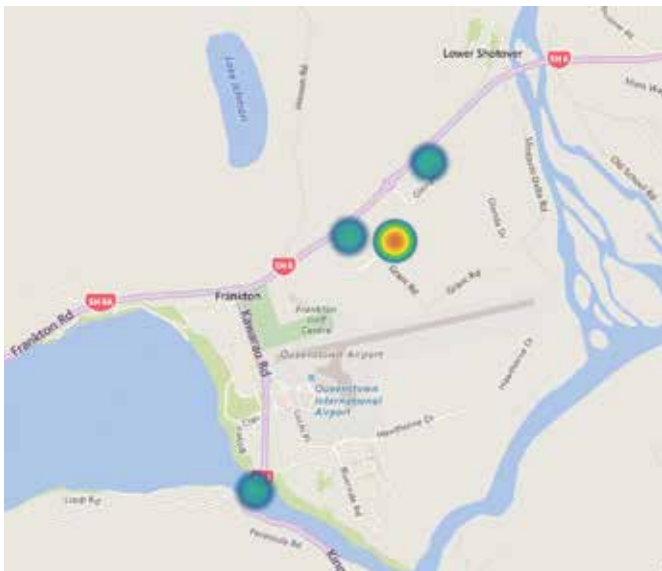
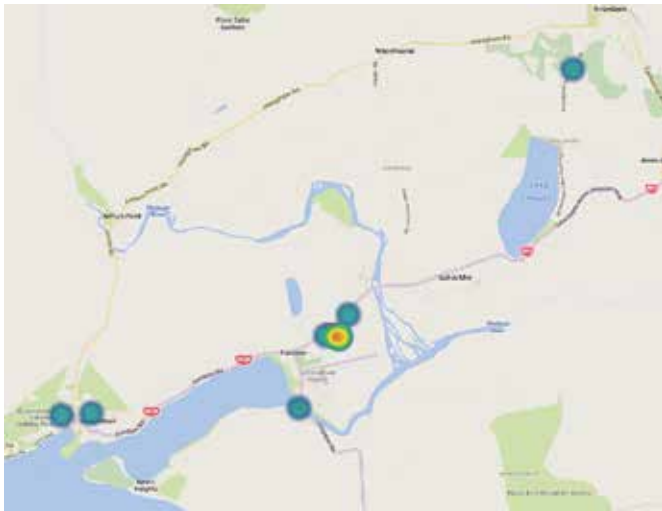
## QUEENSTOWN

Queenstown's RLB Crane Index® fell 18% from its peak in Q4 2017. Crane numbers fell from their double digit peak last period with two new cranes erected and four cranes removed during the period, resulting in a net crane loss of two.

One crane was removed from the Jucy Hotel project, while one crane was added at the Five Mile Stage 3 project.

An additional crane was erected at the Queenstown Central Retail development and three cranes were removed from the Glenda Drive Light Industrial Precinct and Kawarau bridge works, leaving the current crane count on both projects at one each.

Commercial and retail remain strong, but the hotel and residential sector projects in design and planning are slow to translate into line construction projects and the crane numbers reflect this.



**KEY SECTORS**

COMMERCIAL	
RESIDENTIAL	
RETAIL	
HOTEL	
CIVIL	
OTHER/MIXED	

**OVERALL STATUS**



**LEGEND**

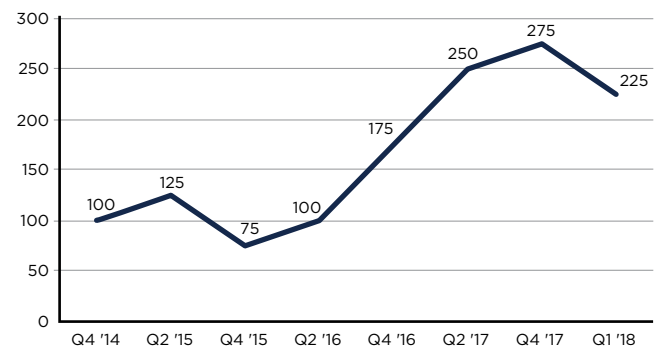
- INCREASE IN NUMBER OF CRANES
- DECREASE IN NUMBER OF CRANES
- CRANE NUMBERS STEADY

**CRANE ACTIVITY - QUEENSTOWN**

	OPENING COUNT		MOVEMENT			CLOSING COUNT	
	Q4 2017	%	+	-	NET	Q1 2018	%
COMMERCIAL	1	9.1%	1	0	1	2	22.2%
RESIDENTIAL	2	18.2%	0	0	0	2	22.2%
HEALTH	0	0.0%	0	0	0	0	0.0%
EDUCATION	0	0.0%	0	0	0	0	0.0%
RETAIL	2	18.2%	1	0	1	3	33.3%
CIVIC	0	0.0%	0	0	0	0	0.0%
RECREATION	0	0.0%	0	0	0	0	0.0%
HOTEL	1	9.1%	0	-1	-1	0	0.0%
CIVIL	2	18.2%	0	-1	-1	1	11.1%
OTHER/MIXED	3	27.3%	0	-2	-2	1	11.1%
<b>TOTAL</b>	<b>11</b>	<b>100.0%</b>	<b>2</b>	<b>-4</b>	<b>-2</b>	<b>9</b>	<b>100.0%</b>

**RLB CRANE INDEX® - QUEENSTOWN**

BASE = Q4 2014 = 100



## TAURANGA

Tauranga's crane count has almost doubled for this period, from four to seven, which has seen their RLB Crane Index® increase by 75%, to reach an index value of 700.

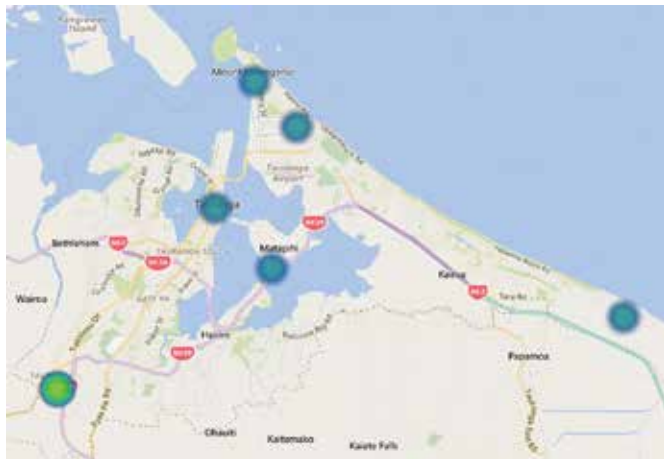
Five new long-term cranes were put in place, while two were removed leaving a net increase of three cranes.

The retail sector saw the largest increase in cranes with the addition of three new cranes. These were associated with the Tauranga Crossing Stage 2, Excelsa Shopping Centre and Tauranga Crossing- the Depot.

The other two new cranes were within the civil sector and associated with the Maungatapu Tunnel Underpass and the Mount North Stormwater Upgrade.

Two cranes were removed from civil projects at Kennedy Bridge and the Southern Pipeline Harbour Crossing.

North Island building work put in place (excluding major regions) grew by 18% y-o-y to September 2017, with residential activity surging 26% and non-residential work dropping 1%.



### KEY SECTORS

COMMERCIAL	
EDUCATION	
CIVIL	

### OVERALL STATUS



### LEGEND

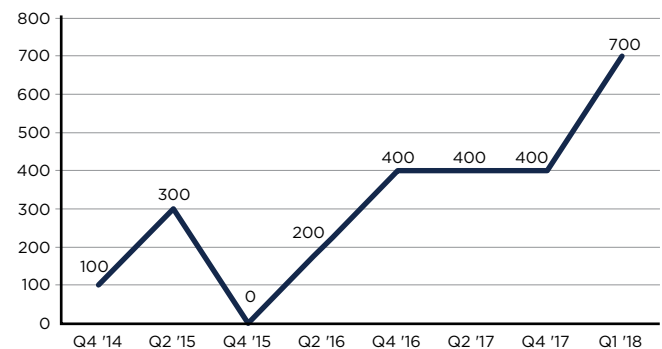
	INCREASE IN NUMBER OF CRANES		DECREASE IN NUMBER OF CRANES		CRANE NUMBERS STEADY
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### CRANE ACTIVITY - TAURANGA

	OPENING COUNT		MOVEMENT			CLOSING COUNT	
	Q4 2017	%	+	-	NET	Q1 2018	%
COMMERCIAL	1	25.0%	0	0	0	1	14.3%
RESIDENTIAL	0	0.0%	0	0	0	0	0.0%
HEALTH	0	0.0%	0	0	0	0	0.0%
EDUCATION	1	25.0%	0	0	0	1	14.3%
RETAIL	0	0.0%	3	0	3	3	42.9%
CIVIC	0	0.0%	0	0	0	0	0.0%
RECREATION	0	0.0%	0	0	0	0	0.0%
HOTEL	0	0.0%	0	0	0	0	0.0%
CIVIL	2	50.0%	2	-2	0	2	28.6%
OTHER/MIXED	0	0.0%	0	0	0	0	0.0%
<b>TOTAL</b>	<b>4</b>	<b>100.0%</b>	<b>5</b>	<b>-2</b>	<b>3</b>	<b>7</b>	<b>100.0%</b>

### RLB CRANE INDEX® - TAURANGA

BASE = Q4 2014 = 100



## WELLINGTON

Wellington's RLB Crane Index® fell 31% from its peak last edition. Total cranes now number nine, down from 13. Six cranes have been removed from sites and two new cranes have commenced.

Building work put in place for Wellington has seen a 39% increase y-o-y to September 2017. Residential work increased by 36% and non-residential work was up 44%.

Commercial cranes saw the largest fall, with a net decrease of three cranes. Two new cranes were erected at Lambton Quay and Wellington Airport Hotel within the commercial sector, while five cranes were removed from Waterloo Quay, Jervois Quay, Wellington Airport Carpark Building and at the Corner of High Street & Waterloo Road.

One other crane was removed from Newtown School.

All cranes within the residential and mixed use sectors continued from the previous count.

### KEY SECTORS

COMMERCIAL	
RESIDENTIAL	
EDUCATION	
OTHER/MIXED	

### OVERALL STATUS

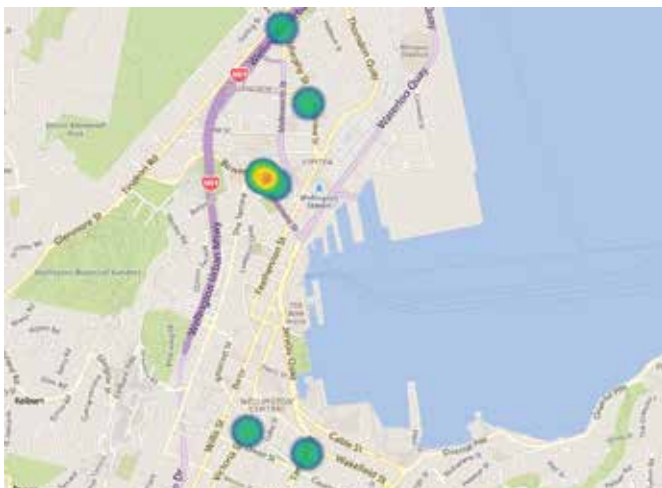
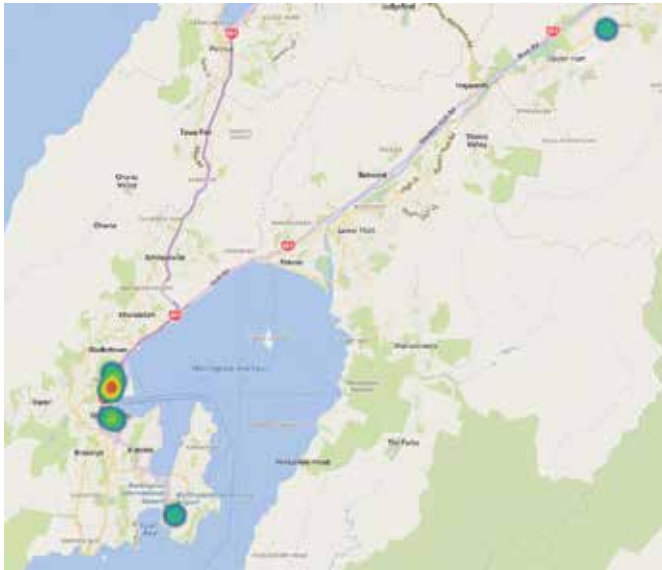


### LEGEND

	INCREASE IN NUMBER OF CRANES		DECREASE IN NUMBER OF CRANES		CRANE NUMBERS STEADY
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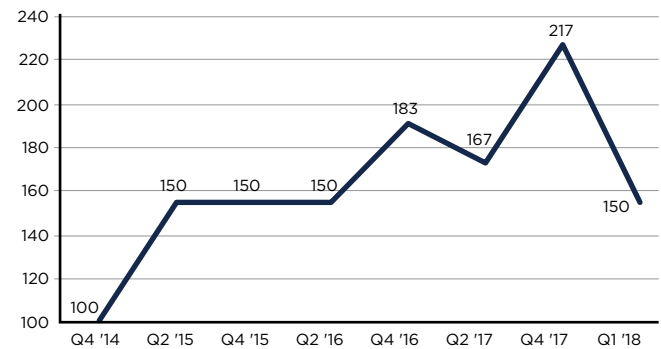
### CRANE ACTIVITY - WELLINGTON

	OPENING COUNT		MOVEMENT			CLOSING COUNT	
	Q4 2017	%	+	-	NET	Q1 2018	%
COMMERCIAL	8	61.5%	2	-5	-3	5	55.6%
RESIDENTIAL	3	23.1%	0	0	0	3	33.3%
HEALTH	0	0.0%	0	0	0	0	0.0%
EDUCATION	1	7.7%	0	-1	-1	0	0.0%
RETAIL	0	0.0%	0	0	0	0	0.0%
CIVIC	0	0.0%	0	0	0	0	0.0%
RECREATION	0	0.0%	0	0	0	0	0.0%
HOTEL	0	0.0%	0	0	0	0	0.0%
CIVIL	0	0.0%	0	0	0	0	0.0%
OTHER/MIXED	1	7.7%	0	0	0	1	11.1%
<b>TOTAL</b>	<b>13</b>	<b>100.0%</b>	<b>2</b>	<b>-6</b>	<b>-4</b>	<b>9</b>	<b>100.0%</b>



### RLB CRANE INDEX® - WELLINGTON

BASE = Q4 2014 = 100



## ABOUT THE RLB CRANE INDEX®

The RLB Crane Index® is published by Rider Levett Bucknall biannually in Australia, New Zealand, USA, Gulf States and Southern Africa. The New Zealand RLB Crane Index® tracks the numbers of cranes in the key cities within New Zealand.

The RLB Crane Index® gives a simplified measure of the current state of the construction industry's workload in each of these locations.

Each RLB office physically counts all fixed cranes on each city's skyline twice yearly which provides the base information for the index. This information is then applied to a base date (2nd edition Q4 2014), which enables the RLB Crane Index® to be calculated highlighting the relative movement of crane data over time for each city.

Subsequent movements in crane numbers were applied to the base RLB Crane Index® to highlight the crane movements in each city over time based on the relative count in Q4 2014.

Using the RLB Crane Index® table data makes for quick comparisons in determining city by city crane activity. For example, when comparing Auckland cranes for the base period of Q4 2014, against the count in Q3 2016, the following formula can be used to determine the percentage increase (or decrease).

$$\text{PERCENTAGE CHANGE} = \left[ \frac{\text{CRANE INDEX}_{\text{CP}} - \text{CRANE INDEX}_{\text{PP}}}{\text{CRANE INDEX}_{\text{PP}}} \right] \times 100$$

where Crane Index<sub>cp</sub> is the RLB Crane Index® for the current period and Crane Index<sub>pp</sub> is the RLB Crane Index® for the previous period.

## HEATMAPS

The RLB Crane Index® hotspot maps offer a pictorial representation of the collected data for each city using a heatmap indicator to indicate the level of crane activity. The size of hotspot is relative to the scale of the map and is not an indication of the crane count in that position. The heatmap uses blue to indicate a lower crane activity, and the brighter red insert to indicate higher crane activity.

The location of the hotspots are indicative only and have been positioned to convey the general spread of cranes within a city.

The levels of intensity are calculated on a map by map basis and should not be compared between different cities.

## CONTACT DETAILS

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