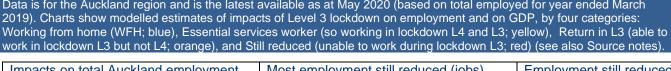
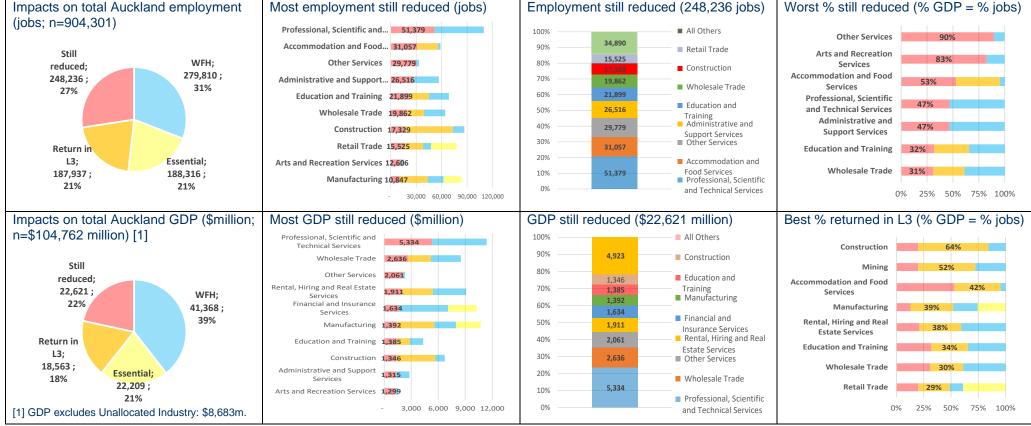
Auckland Economic Update - Industries at Level 3 in May Estimated impacts of Covid-19 lockdown L3 on employment and GDP

Data is for the Auckland region and is the latest available as at May 2020 (based on total employed for year ended March 2019). Charts show modelled estimates of impacts of Level 3 lockdown on employment and on GDP, by four categories:

Research and Evaluation Unit RIMU Research and







Primary contact:

Ross Wilson - Analyst Research and Evaluation Unit (RIMU)

Ross.Wilson@aucklandcouncil.govt.nz **2** 021 706 822

Other contacts:

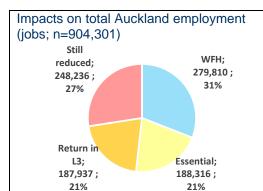
David Norman - Chief Economist Chief Economist Unit

David.Norman@aucklandcouncil.govt.nz

2 021 516 103

Sources and methodology:

RIMU analysis of by-industry data and analysis from ATEED, Infometrics, MBIE and Statistics New Zealand, as follows: (1) Original (pre-Covid-19) total employees from Infometrics Regional Economic Profile of 2019; apply percentages to them: ((2) Industry-level percentage impacts Working from home (WFH)/essential services/return in L3/neither (still reduced in L3) from Infometrics (unpublished analyses April/May 2020) drawing on MBIE and Business Operations Survey (Statistics NZ). (3) WFH that are essential services are in WFH not in Essential; Return in L3 is share of employment that can work during lockdown L3 but not L4; Still reduced during L3 may be temporary. Changes may be in jobs or hours/week within jobs. (4) For each industry, impacts for Auckland are assumed to be same as Infometrics estimates, which are for New Zealand. (5) For each industry, GDP impacts assumed to be same as employment (so differences based on industry productivities) (6) All estimates are ceilings, eg Return in L3 assumes job "survived"; GDP ignores productivity effects of distancing rules. NOTE: analysis is based on early estimates April/May 2020; actual impacts will differ; Lockdown L4 may include some L3.



In Auckland, for total employment in all industries (904,301 filled jobs) the impact of Covid-19 lockdown during level 3 is estimated as:

- Working from home (WFH) 280,000, or 31% of employment
- Essential services 188,000 or 21%
- Able to return to work in L3 (not L4) 188,000 or 21%
- Unable to work (Still reduced) in L3 248,000 or 27%

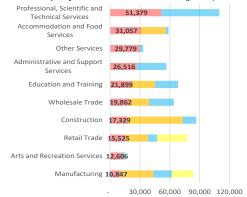
The overall proportion of Auckland employment "Still reduced" in L3 (27%) is similar to the rest of New Zealand (26%), albeit with a different mix of industries.

NOTES: Impacts are modelled estimates. The percentage impacts on each industry are assumed to be the same for Auckland as the rest of New Zealand, and are ceilings, eg Return in L3 assumes the job "survived". Ignores productivity effects of distancing rules. Employment impact can be changes in jobs or hours/week within jobs.

Reductions may be temporary or permanent. Essential services that are WFH are just counted as WFH.

Source: RIMU calculations; Infometrics unpublished data; Regional Economic Profile.





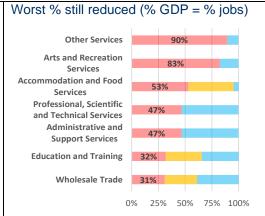
In Auckland, the ten industries with the greatest number of jobs "Still reduced" in L3, had reductions (red) as shown in the above graph; numbers able to return in L3 (orange), WFH (blue) and essential services (yellow) are also shown.

- Professional, Scientific and Technical Services, Auckland's largest employer pre-Covid-19, has the most jobs still reduced, with none returning in L3.
- Accommodation and Food Services still has major reductions, although only half as many as under L4.
- Other Services (eg auto repairs and hairdressing) and also Administrative and Support Services had no returns in L3 and now have the third and fourth most jobs still reduced.
- Education and Training, Wholesale Trade, and especially Construction were all helped by returns in L3.
- Retail Trade and also Manufacturing still have significant jiob reductions, but also have major returns to work in L3 and substantial essential services as well as modest WFH.

Source: RIMU calculations; Infometrics unpublished data; Regional Economic Profile.

Employment still reduced (248,236 jobs)





In Auckland, of the total jobs still reduced in L3, two thirds (65%) are in the following five industries:

- Professional, Scientific and Technical Services; 50,379; 21% of total (all industries' jobs that are still reduced)
- Accommodation and Food Services; 31.057: 13%
- Other Services; 29,779; 12%
- Administrative and Support Services; 26.516; 11%
- Education and Training; 21,899; 9%

The remainder of still reduced jobs are in:

- Wholesale Trade; 19.862; 8%
- Construction; 17,329; 7%
- Retail 15,525; 6%
- All others; 34,890; 14%.

In Auckland, the worst hit industries in terms of % still reduced employment and GDP in L3 (red) are:

- Other Services (eg repairs): 90%
- Arts and Recreation Services: 83%
- Accommodation and Food Services: 53%
- Professional, Scientific and Technical Services: 47%
- Administrative and Support Services: 47%
- Education and Training: 32%
- Wholesale Trade: 31%

Seven other industries still suffer reductions of around 20% or less, namely:

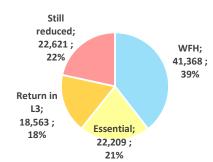
- Rental, Hiring and Real Estate: 21%
- Mining: 20%
- Construction: 20%
- Retail: 20%
- Financial and Insurance: 16%
- Manufacturing: 13%
- Agriculture: 5%.

The remaining five industries already suffered no reductions during L4.

Source: RIMU calculations; Infometrics unpublished data; Regional Economic Profile.

Source: RIMU calculations; Infometrics unpublished data; Regional Economic Profile.





In Auckland, for total GDP in all industries (\$104.8 billion) the impact of Covid-19 lockdown during level 3 is estimated as:

- Working from home (WFH) \$41.4 billion, or 39% of GDP
- Essential services \$22.2 billion or 21%
- Able to return to work in L3 (not L4) \$18.6 billion or 18%
- Unable to work (Still reduced) in L3 \$22.6 billion or 22%

The overall proportion of Auckland "Still reduced" in L3 (22%) is less than the proportion of employment (27%), because reductions tend to be greater in industries with lower productivity (GDP/employee).

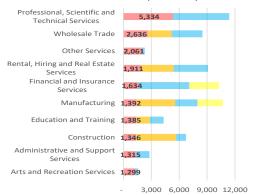
NOTES: Impacts are modelled estimates. The percentage impacts on each industry are assumed to be the same for Auckland as the rest of New Zealand, and the same for GDP as for employment, and are ceilings, eg Return in L3 assumes the job "survived".

Ignores productivity effects of distancing rules. Essential services that are WFH are just counted as WFH.

Reductions may be temporary or permanent.

Source: RIMU calculations; Infometrics unpublished data; Regional Economic Profile.

Most GDP still reduced (\$million)

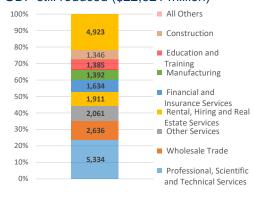


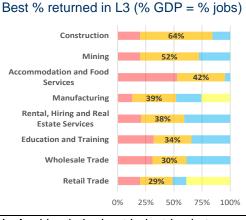
In Auckland, the ten industries with the most GDP "Still reduced" even in L3. have reductions (red) as shown in the above graph; numbers able to return in L3 (orange), WFH (blue) and essential services (yellow) are also shown.

- Professional, Scientific and Technical Services has easily the most GDP still reduced, due to a combination of high job reductions and above-average sector productivity.
- Wholesale Trade and also Rental, Hiring and Real Estate have major WFH and return in L3 components, but also high GDP still reduced.
- Other Services (eg repairs) has high GDP reduced due to inability to work.
- Financial and Insurance mostly even worked during L4, but the reduced jobs have high productivity and GDP.
- Manufacturing and also Construction had major returns in L3, but also high productivity and GDP reductions.
- Education and Training and also Administrative and Support have lower productivity but reduced GDP.

Source: RIMU calculations: Infometrics unpublished data; Regional Economic Profile.

GDP still reduced (\$22,621 million)





In Auckland, of the total GDP that is still reduced in L3, over half (60%) is in the following five industries:

- Professional, Scientific and Technical Services: \$5.334million: 24% of total all industries' still reduced GDP
- Wholesale Trade: \$2,636m; 12%
- Other Services; \$2,061m; 9%
- Rental, Hiring and Real Estate Services \$1,911m; 8%
- Financial and Insurance Services: \$1,634m; 7%.

The remainder of still reduced GDP is in:

- Manufacturing; \$1,392m; 6%
- Education and Training; 41,385m; 6%
- Construction; \$1,346m; 6%
- All others; \$4,923m; 22%.

In Auckland, the best industries in terms of % able to return to work (and GDP) in L3 (orange) were:

- Construction: 64% of its employees (and GDP) able to return to work in L3
- Mining: 52%
- Accommodation and Food Services: 42%
- Manufacturing: 39%
- Rental, Hiring and Real Estate: 38%
- Education and Training: 34%
- Wholesale Trade: 30%
- Retail Trade: 29%

The other industry with employees (and GDP) able to return to work in L3 was Agriculture (17%).

The remaining ten industries had nobody able to return to work (and GDP) in L3 who wasn't already able to work in L4.

Source: RIMU calculations: Infometrics

Source: RIMU calculations: Infometrics unpublished data; Regional Economic Profile.

unpublished data; Regional Economic Profile.