

**BEFORE THE QUEENSTOWN LAKES  
DISTRICT COUNCIL**

**UNDER** the Resource Management Act  
1991

**IN THE MATTER** of an application for resource  
consent by Foodstuffs (South  
Island) Properties Limited  
(RM130524)

**AND**

**IN THE MATTER** of an application for resource  
consent by Cross Road Properties  
Limited (RM130521)

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**STATEMENT OF EVIDENCE FOR FRASER JAMES COLEGRAVE**

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## **1. Introduction**

1.1 My full name is Fraser James Colegrave. I reside in Auckland.

## **2. Qualifications and Experience**

2.1 I hold a first-class honours degree in economics from the University of Auckland. I am a member of the New Zealand Association of Economists and the Resource Management Law Association.

2.2 I have 20 years' commercial experience, the last 12 of which I was a founding director of Covec Limited, an economics consultancy based in Auckland. Three months ago, I formed a new consultancy called Insight Economics, of which I am the managing director.

2.3 During my time at Covec, I successfully led and completed over 150 consulting projects. My main field of expertise is land-use economics. I have worked extensively in this area for many of the largest property developers in New Zealand, including Auckland Airport, Argosy, the Neil Group, and Todd Property. I regularly provide expert evidence for council hearings and Environment Court hearings.

2.4 I have analysed the economic effects of many supermarket developments across New Zealand, and understand their role and function within the wider economy.

2.5 I have also worked on a number of development projects in the Queenstown Lakes District. Recent experience includes providing economic evidence on Plan Change 24 (Affordable Housing), and providing retail/economic evidence on Plan Change 16 (Three Parks).

2.6 I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Consolidated Practice Note 2011 and agree to comply with it. In that regard, I confirm that this evidence is written within my area of expertise, except where otherwise stated, and that that I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

### 3. Scope of Evidence

- 3.1 My evidence focuses on the methodology and results of the 2006 *Commercial Land Needs Study (CLNA)* – a key document that underpinned and informed proposed Plan Change 19 to the District Plan.
- 3.2 Specifically, my evidence is structured as follows:
- a. First, I explore the economic rationale for protecting and fostering yard-based and transport activities within the district – a key objective of the CLNA.
  - b. Second, I carefully examine the CLNA’s projections of future commercial land requirements.
  - c. Third, I provide independent estimates of future land needs using the same methodologies as the CLNA, and
  - d. Fourth, I summarise the implications of my analysis for the two applications that form the subject of these proceedings.
  - e. Finally, I offer some concluding remarks.

### 4. Rationale for Protecting Yard-Based & Transport Industries

- 4.1 One of the key stated objectives of the CLNA is to provide dedicated land to foster the growth of yard-based and transport-related industries. Apparently, this is because at the time the CLNA was prepared, such industries were identified as being “essential to the continued growth of the Queenstown and Wanaka areas.”<sup>1</sup>
- 4.2 Page 1 of the CLNA describes the situation in 2006 as follows:

*“It is apparent that the District does not have an industrial base, and that most activities seek a town centre or mixed business location...Within this overall picture, there are a range of transport and yard-based activities that service the local economy and which are likely to be “squeezed out” over time by rising land values should the current approach continue. While these activities could be located in Cromwell, their absence from the district is likely to harm the functioning of the local economy.”*

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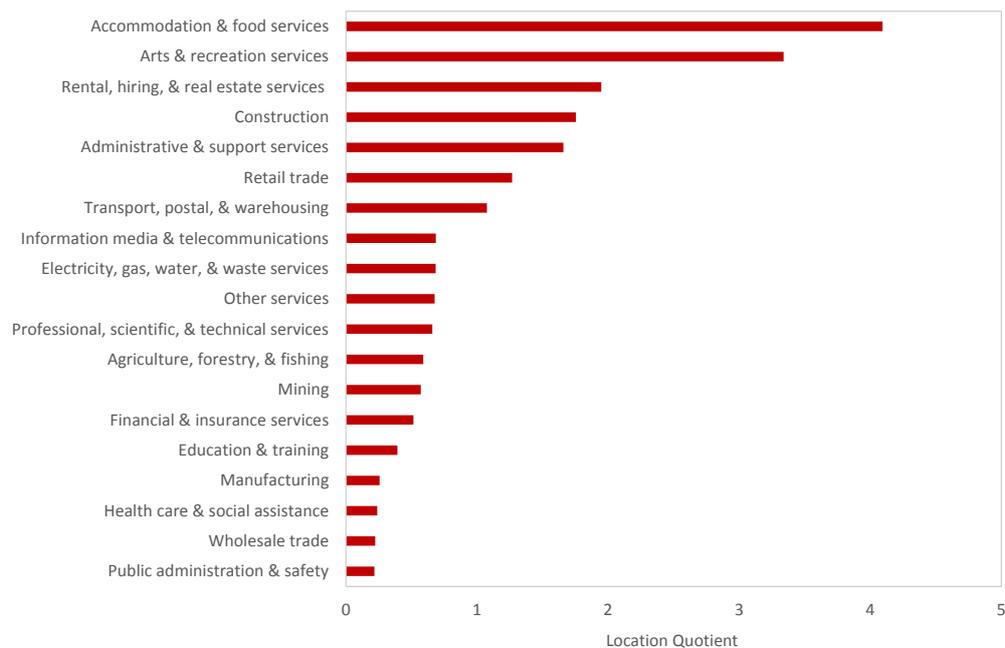
<sup>1</sup> Para 3.3.1, on page 22 of the CLNA

- 4.3 Given the report's unwavering emphasis on this issue and its recommendation to solve it by providing dedicated land, I expected to find a detailed explanation in the body text. However, to my surprise, the alleged importance of these industries and the risks of losing them is never discussed. Rather, it appears to be stated as fact without supporting explanation.
- 4.4 Given this glaring omission, I figured the issue must have already been addressed comprehensively in a supporting strategy or report (which the CLNA had inadvertently forgotten to reference). However, again, neither I nor anybody else on my project team could find any reports or analyses that established the importance of these sectors to the local economy and the need to protect them.
- 4.5 In fact, at the time of the CLNA, the Queenstown Lakes District did not even have an economic development strategy, so it is difficult to understand the origins of these deeply-held concerns. At this point, I had no option but to do my own independent research.
- 4.6 Before trying to establish the importance of these sectors, I first looked for evidence that they were at risk of being squeezed out of the district. Specifically, I used the industry classifications in the appendix of the CLNA to identify the composition of yard-based and transport industries, and then overlaid detailed employment and business demographic data to see how they had evolved during the five or six years prior to the CLNA.
- 4.7 Interestingly, the data showed that these sectors had flourished between 2000 and 2006. In fact, the Queenstown Lakes district experienced 80% growth in this employment category over that period – the second growth highest rate of all territorial authorities and nearly four times the national average of 21%. The CLNA's concerns about this sector being squeezed out therefore are not supported by official employment data.
- 4.8 Ignoring this important finding momentarily, I then sought to determine the importance of yard-based and transport industries to the local economy. To begin, I used a technique called location quotients. These compare the structure of an economy's employment to the national average. Specifically, the location quotient for each sector is calculated by dividing its share of district employment by the

corresponding share of national employment. For instance, if a sector represents 20% of district employment but only 10% of national employment, the location quotient for that sector is  $20\%/10\% = 2$ .

4.9 Thus, location quotients greater than one represent sectors that are more important to the local economy than the national average, and vice versa. With this definition in mind, the following graph shows the district's location quotients as at 2006.

**Figure 1: Queenstown Lakes Location Quotients (2006)**



4.10 Figure 1 shows that, in 2006, Queenstown's economy was strongest in three key industries, namely:

- a. Accommodation and food services
- b. Arts and recreation services, and
- c. Rental, hiring and real estate services

4.11 Along with retail trade, these industries comprise the 'tourism sector'. Thus, it is actually tourism-related industries that are critical to the local economy, not yard-based and transport industries. Indeed, the closest proxies for yard-based and industrial activities in the chart above are construction, manufacturing and wholesale trade, the average location quotient for which was 0.75. In other words, this sector is less important to Queenstown than the national average.

- 4.12 While the location quotients above show that yard-based and transport industries are not particularly important to the local economy in their own right, they may be important suppliers to the tourism industry, and this may explain the CLNA's desire to protect them. To investigate that possibility, I used a regional input-output table to identify the key suppliers to tourism-related industries.
- 4.13 An input-output table shows the interrelationships between the various industries that comprise an economy. Specifically, it shows the mix of inputs that each industry requires to produce its own outputs. Using this table, I examined the inputs that are most important to the region's tourism-related businesses. I found that very few of the industries defined as yard-based and transport by the CLNA were important suppliers to the tourism industry.
- 4.14 To summarise the discussion to this point: the CLNA argues that yard based and transport industries are important to the local economy and are being squeezed out by higher value land users. However, to the contrary, my investigations have revealed that:
- There is no evidence that these industries are being pushed out of the district. In fact, according to official employment statistics, Queenstown Lakes experienced rampant growth over the six years immediately preceding the CLNA.
  - Further, there is no evidence to support the claim that these industries are important to the local economy in the first place.
- 4.15 At this point, it is useful to provide a qualitative analysis of the issue using some basic economic concepts. To begin, we must first recognise that – according to economic theory – markets generally perform best when left to their own devices so that the forces of supply and demand determine market outcomes. Occasionally, however, “market failures” may cause markets to reach outcomes that are not in the best interests of society. This appears to be the line of reasoning upon which the CLNA's desire to protect these industries rests.
- 4.16 Market failures may occur for a number of reasons, namely:
- a. Externalities – where the act of producing or consuming a good or service affects third parties.

- b. Information asymmetries – where one party to a transaction has an information advantage over the other.
  - c. Public goods – where people cannot be excluded from accessing a good or service, and where one person’s use of the good or service does not affect anybody else’s use of it.
  - d. Natural monopolies – where fixed costs are so high that they form a natural barrier to entry, and only one firm emerges.
  - e. Principal–agent problems – where incentive misalignments cause conflict between parties meant to be collaborating.
- 4.17 In my view, there is no clear evidence that any of these sources of market failure was present in the district’s commercial land market in 2006, and hence there is no obvious rationale to protect yard-based and transport industries via intervention (as the CLNA recommends).
- 4.18 In fact, not only does this recommendation lack economic rationale, but implementing it would also likely reduce economic efficiency, not improve it. The reason is that, in a freely-operating land market, each land parcel is generally allocated to the entity that values it the most. Since resources are scarce relative to demands, this is the most efficient outcome, and anything that distorts this natural mechanism will erode economic efficiency.
- 4.19 Further, it is important to realise that markets are often self-correcting. For example, if a shortage of land causes prices to rise sharply over time, they will eventually reach the point where further rezoning is commercially attractive. As further land is rezoned, supply will increase and prices will (eventually) fall.<sup>2</sup>
- 4.20 Notwithstanding the strength of these conclusions, for the sake of completeness, I now go on in the following section of my evidence to assume that yard-based and transport industries are important to the local economy and are being squeezed out. Then I consider the possible implications of them being forced to relocate outside the district, say to Cromwell, as a result.

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<sup>2</sup> This self-correcting behaviour is one of the reasons markets are best left to their own devices.

- 4.21 The most obvious impact is that these businesses would be able to secure much cheaper land, and hence their total operating costs would fall. For instance, according to the CLNA, industrial land was about \$600/m<sup>2</sup> at Glenda drive in 2006 compared to only \$140/m<sup>2</sup> in Cromwell. Thus, a company looking for (say) a hectare of land could save \$4.6 million in land costs.
- 4.22 On the flipside, displacement from the district could result in higher transport costs, but that depends on the location of each firm's customers and suppliers. Further, any increase in transport costs would usually be passed on, and are unlikely to be significant in the scheme of things anyway.
- 4.23 Another potential impact would be a loss of district employment. However, most yard-based and transport businesses are capital-intensive and have minimal labour requirements. Consequently, the employment impacts would likely also be minor.
- 4.24 Given the discussion above, I believe that the loss of some yard based and transport businesses to Cromwell would not have any real impact on the functioning of the local economy, and hence the CLNA's desire to insulate them from natural competitive pressures (in the land market) cannot be justified. If anything, doing so may cause economic efficiency to fall by preventing higher value uses from occupying "protected" land. Moreover, there is no evidence to suggest that these industries are important to the local economy, or that they are being squeezed out of the district in the first place. To be frank, the CLNA's desire to protect these industries appears to lack any clear reasoning or economic logic.

## **5. Review of CLNA Demand Projection Methodologies**

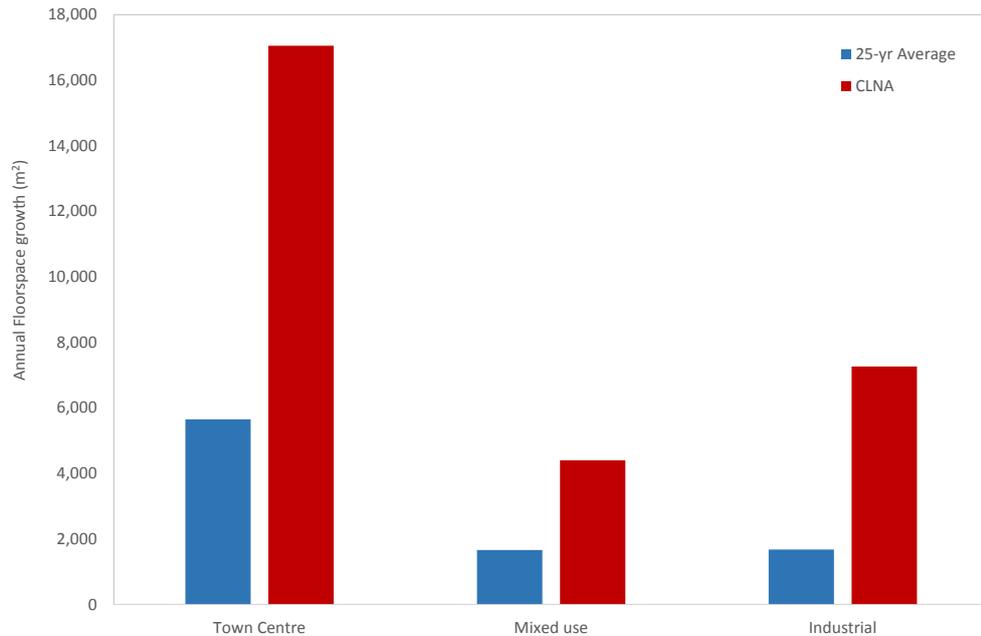
- 5.1 Having examined the CLNA's rationale (or lack thereof) for protecting yard based and transport businesses, I now turn my attention to its projections of future land requirements. Before doing so, I would like to highlight a number of general issues with the analysis. These include:
- a. That the forecasts are 7 years old and woefully out-of-date. A lot has occurred since the CLNA was prepared, and the forecasts should be updated to reflect that.

- b. The forecasts attempt to project 20-year land needs off only 5 years of base data. This is highly unusual and causes the forecasts to incorrectly extrapolate the boom period from 2000 to 2005 without fully accounting for the peaks and troughs of each business cycles. As a result, the CLNA significantly overstates future land requirements.
  - c. The report fails to test the sensitivity of its results to changes in key assumptions, and consequently imparts a false sense of precision. In practice, the projections are sensitive to a number of assumptions, but this is never properly addressed.
  - d. Finally, the projections fail to account for likely market responses, including the possibility that further land may be rezoned beyond existing urban limits to accommodate perceived land shortages.
- 5.2 Having addressed these general concerns, I now analyse the specific methods used by the CLNA to estimate future land requirements. There are three methods, namely:
- a. Land supply approach
  - b. Floorspace approach, and
  - c. Employment approach
- 5.3 However, since the first approach projects land requirements simply on the basis of population growth – while ignoring all other factors – I consider it overly-simplistic and therefore do not discuss it any further in my evidence. Instead, I focus on the CLNA’s implementation of the remaining two approaches, both of which I have used before to project future land requirements in other areas of New Zealand. I start with the floorspace approach.

#### *Analysis of the CLNA Floorspace Approach*

- 5.4 To begin, it is important to clarify how this approach works. To that end, following are the key steps in the CLNA floorspace approach:
- 1. Estimate future floorspace demand by business area
    - a. Estimate floorspace growth for each business area over the next 20 years.

- b. Add current floorspace demand to predict total future demand for each area.
  2. Estimate future floorspace capacity by business area
    - a. Identify the current developed area for each business area
    - b. Determine the potential floorspace ratio (FAR) for each business area
    - c. Multiply the current developed area by the future FAR to estimate future capacity
  3. Reconcile supply and demand to determine future land requirements
    - a. Assign each business area to a centre type (town centre, mixed use, industrial)
    - b. Aggregate demand and capacity by centre types using the labels assigned above.
    - c. Subtract demand from capacity by centre type.
    - d. Where demand exceeds capacity, divide the shortfall by an assumed FAR to determine future land requirements by centre type.
- 5.5 At first glance, this approach seems reasonable. It incorporates all the information normally found in this sort of analysis. However, the report's implementation of this method introduces a number of unrealistic assumptions, logical errors and numerical inconsistencies. I discuss these further below.
- 5.6 The first problem with the CLNA's floorspace-based estimates of future land requirements are its assumed rates of floorspace growth. To illustrate, the following graph compares these to the annual average rates of growth over the preceding 25 year period (from 1980 to 2005).

**Figure 2: Assumed Floorspace Growth versus 25-year Average**

- 5.7 As shown above, the CLNA's floorspace assumptions are highly aggressive. In fact, the assumed rate of industrial floorspace growth is four times the long-run average, the rate of town centre growth is triple the long run average, and the rate for mixed use growth is 2.5 times the long run average.
- 5.8 Although future floorspace growth can be expected to exceed the historic long run average – because it is working off a higher base – I consider these growth rates highly unrealistic. Looking through appendix one of the CLNA, it appears the authors have simply assumed that the boom period of 2000 to 2005 would continue unabated for the next 20 years. Clearly, this is incorrect, as recent history has since proven. Somewhat oddly, the introductory sections<sup>3</sup> of the CLNA acknowledge that development follows business cycles, and hence that a sustained 20-year boom is unlikely, but this logic has not followed through to the estimates of future land requirements.
- 5.9 In addition, the projections appear to assume that there will be no redevelopment of existing sites, so that total future demand equals current floorspace plus 100% of estimated growth. In reality, however, some proportion of future growth will represent the replacement or

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<sup>3</sup> See page 18 of the CLNA

redevelopment of existing space, and the estimate of total future demand should reflect this.

- 5.10 Looking now at the capacity estimates, a number of further issues arise. First, the assumed capacity of existing business areas appears to be based on their *currently developed* areas, not their *developable* areas. That is to say, the assumed capacity of existing areas appears to ignore currently vacant land. In some cases, this leads to significant underestimates of future capacity. For instance, the capacity of Glenda drive increases by 30% when its vacant land is properly accounted for.
- 5.11 In addition to this basic error of logic, the capacity estimates appear to also suffer numerical inconsistencies. For instance, the Frankton commercial area is assumed to have a total floorspace capacity of 4,600m<sup>2</sup> even though the demand calculations incorporate a current floorspace figure of 23,568m<sup>2</sup> (sourced from page 68 of the CLNA). Thus, the assumed capacity of this area is only 20% of current demand, which is obviously impossible.
- 5.12 The process of labelling each business area (as either a town centre, mixed use area or industrial area) and then reconciling the resulting supply and demand aggregates does not appear to raise any issues, except that the assumed FAR for each centre type is not explained. According to our calculations, the FAR used to calculate industrial land requirements is too low, but this is not a serious issue.
- 5.13 In summary: when implemented properly, this approach (of projecting land requirements on the basis of expected floorspace growth) can prove reliable. However, the CLNA's implementation of it causes demand to be overstated and capacity understated, leading future land requirements to be grossly exaggerated. I return to this in section 6, where I populate this method with my own inputs and assumptions to provide independent estimates of future land requirements.

#### *Analysis of the CLNA Employment Approach*

- 5.14 I now turn my attention to the remaining projection method used in the CLNA – the employment demand approach. Following are the key steps:

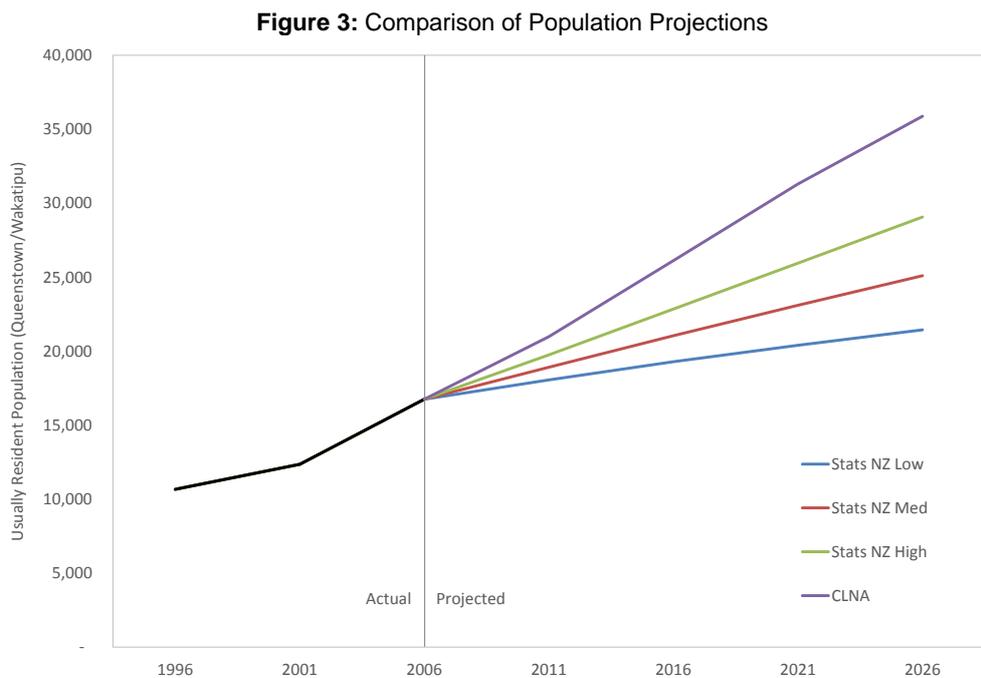
1. Identify three centre types - town centre, mixed use, or industrial

2. Estimate future employment demand for each centre type
    - a. Project future population numbers
    - b. Estimate the ratio of employment to population
    - c. Combine the previous two steps to estimate future employment numbers
    - d. Estimate the proportion of future employment that will work in centres
    - e. Estimate the distribution of future centre employment across industry sectors
    - f. Project the centre types in which each sector's centre-based employment will occur
  3. Estimate future employment capacity for each business area
    - a. Identify future developable area
    - b. Estimate the future employment density
    - c. Multiply the developable area by the assumed density to yield employment capacity
    - d. Assign each business area to a centre type
    - e. Aggregate employment capacities across centre types
  2. Reconcile employment demand and capacity to determine future land requirements
    - a. Subtract future demand from capacity for each centre type
    - b. Where demand exceeds capacity, divide the shortfall by an assumed employment density to determine future land requirements
- 5.15 Like the floorspace approach, this approach is also broadly sensible (if not a little convoluted). However, serious issues arise in the way that the CLNA implements it, again causing future land requirements be grossly overstated.
- 5.16 To understand the nature of my concerns, it is first helpful to note that this particular method is driven by six key inputs, namely:
1. Population projections
  2. The ratio of employment to population
  3. The share of employment within centres
  4. Shares of centre employment across sectors
  5. The assumed location of employment by sector, and

6. The employment density capacity of each centre

5.17 With so many inputs, it is essential that sensible assumptions are made otherwise the results of the exercise are meaningless. Unfortunately, while some of the inputs used in the CLNA seem fine, others significantly overstate future land requirements. I discuss these further below.

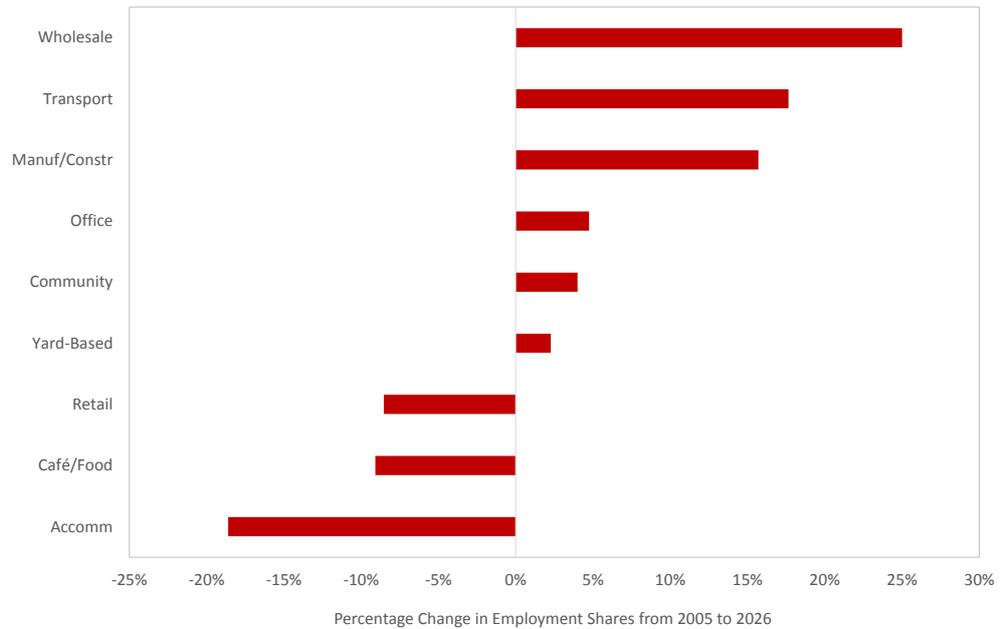
5.18 The first significant problem is the CLNA's assumed population projections. These are compared to the latest official projections by Statistics New Zealand in the chart below.



5.19 As shown in the figure above, the CLNA's population growth assumptions are aggressive. In fact, the predicted growth between 2006 and 2026 is 129% higher than the Stats NZ medium projection, and 55% higher than Stats NZ's high projection.

5.20 The next significant issue is the assumed composition of future employment. While some degree of change can be expected, the CLNA assumes (unexplained) wholesale changes in the district's economic structure. These are illustrated in the chart below, which shows percentage changes in each sector's share of employment between 2006 and 2026

**Figure 4:** Assumed Percentage Changes in Employment Shares



5.21 As shown above, the CLNA’s employment method assumes significant increases in industrial employment (such as wholesale trade, transport, manufacturing and construction) and large corresponding decreases in tourist-based industries, such as accommodation.

5.22 In my view, such major economic restructuring is unrealistic, particularly over a 20 year timeframe. The obvious effect is to overstate future industrial land requirements, while understating the land required to support other sectors.

5.23 The final significant issue is the assumed location of each sector’s employment. These are set out in the three tables below, which show the share of each sector’s employment that is assumed to locate in industrial, mixed use or town centre business areas by 2026.

**Table 1: Shares of Employment in Town Centres**

<b>Sectors</b>	<b>2005 Actual</b>	<b>2026 CLNA</b>	<b>% Change</b>
Yard Based	18%	5%	-72%
Transport	14%	10%	-28%
Manuf/Const	24%	10%	-58%
Wholesale	14%	10%	-29%
Office	78%	70%	-10%
Community	70%	60%	-15%
Café/Food	92%	80%	-13%
Retail	85%	60%	-29%
Accomm	89%	85%	-4%

**Table 2: Shares of Employment in Mixed Use Areas**

<b>Sectors</b>	<b>2005 Actual</b>	<b>2026 CLNA</b>	<b>% Change</b>
Yard Based	55%	40%	-27%
Transport	56%	40%	-28%
Manuf/Const	37%	40%	8%
Wholesale	75%	60%	-20%
Office	16%	20%	23%
Community	29%	30%	5%
Café/Food	4%	15%	317%
Retail	14%	30%	112%
Accomm	11%	15%	31%

**Table 3: Shares of Employment in Industrial Areas**

<b>Sectors</b>	<b>2005 Actual</b>	<b>2026 CLNA</b>	<b>% Change</b>
Yard Based	27%	55%	102%
Transport	31%	50%	64%
Manuf/Const	39%	50%	28%
Wholesale	11%	30%	168%
Office	6%	10%	78%
Community	1%	10%	799%
Café/Food	4%	5%	14%
Retail	1%	10%	1080%
Accomm	0%	0%	n/a

5.24 To clarify: the first row in Table 1 states that 18% of yard based employment was located in town centres in 2005, but this is predicted to fall to only 5% by 2026 (a reduction of 72%). The same interpretation applies to all other rows in the tables above.

5.25 Looking at the tables above, some clear trends emerge. Notably, the CLNA predicts (without any proper explanation or analysis) that:

- a. The share of employment in town centres will fall for every sector, even those for which town centres are the only real option. For instance, the CLNA assumes that the share of retail in town centres will fall by nearly 30%, a significant shift indeed.
  - b. The share of employment in mixed use areas will fall for one third of the sectors, but increase dramatically for one or two of them (namely café/food and retail).
  - c. The share of employment in industrial areas will increase for every sector, even those for which industrial areas are fairly undesirable. For instance, the CLNA assumes that the share of retail employment in industrial areas will increase tenfold.
- 5.26 It should be clear that these assumptions represent an extreme and incredibly-unlikely scenario. Absent a clear and detailed justification, I fail to see how they can be used to predict future land requirements.
- 5.27 It should hopefully also be clear that these assumptions have direct impacts on future land requirements. Specifically, they cause industrial land requirements to be grossly overstated, and town centre requirements to be grossly understated. In section 6, I show the effects of altering these assumptions to better align with reality.
- 5.28 To summarise: the CLNA's employment methodology is widely-accepted and commonly used, but the specific inputs and assumptions used in the CLNA are extremely unrealistic. As a result, so too are its estimates of future land requirements.

## **6. Independent Projections of Future Land Requirements**

- 6.1 Having analysed the inputs and assumptions used in the CLNA for the floorspace and employment projection approaches, I now provide independent estimates of future land requirements by populating the same two methodologies with more realistic inputs and assumptions.
- 6.2 For each method, I provide low, medium and high scenarios, and compare the results to the CLNA. I start with the floorspace method.
- 6.3 The following table shows the key inputs and assumptions used in my floorspace projections along with those used in the CLNA.

**Table 4:** Assumptions Used in the Floorspace Projections

<b>Assumptions</b>	<b>Low</b>	<b>Med</b>	<b>High</b>	<b>CLNA</b>
Floorspace growth (relative to 25-yr avg.)				
- town centres	+ 50%	+ 100%	+ 150%	+ 202%
- mixed use	+ 40%	+ 80%	+ 120%	+ 165%
- industrial	+ 50%	+ 100%	+ 150%	+ 333%
Treatment of currently vacant land	included	included	included	ignored
Future FARs by business area	CLNA	CLNA	CLNA	CLNA

- 6.4 Following are the results of applying the floorspace demand method to the inputs and assumptions above. Please note that the CLNA does not disaggregate its overall estimate of 93 hectares under the floorspace approach, but the appendix shows how I reached the disaggregated CLNA figures reported below
- 6.5 Please also note that, in the remainder of this analysis, I use the term industrial in the broadest possible sense. That is to say, I am not confining my attention to just transport and yard-based industries, but all land uses deemed industrial in the CLNA.

**Table 5:** Estimated Land Requirements from Floorspace Approach (ha)

<b>Centre Type</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>CLNA</b>
Town Centre	-	-	4	13
Mixed use	3	7	10	14
Industrial	14	22	31	66
<b>Total</b>	<b>17</b>	<b>29</b>	<b>45</b>	<b>93</b>

- 6.6 Comparing the estimates of industrial land demand – which form the focus of this evidence – shows that the CLNA’s estimate (of 66ha) is exactly three times higher than my medium scenario.
- 6.7 Next, I estimate future land requirements using the employment based method. The table below shows the assumptions used. The values assigned to four of the six parameters equal those of the CLNA, with differences arising only in the population projections and assumed locations of each sector’s employment. For each scenario, the latter has been set equal to the average of (i) the actual distribution of locations in 2005 and (ii) the distributions assumed in the CLNA.<sup>4</sup>

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<sup>4</sup> If anything, this is likely to overstate industrial land requirements. However, it has been used to try and minimise differences with the CLNA and focus on the impacts of other key

Finally, the population projections have been pegged to the official projections provided by Statistics New Zealand.

**Table 6:** Assumptions Used in the Employment-Based Projections

<b>Assumptions</b>	<b>Low</b>	<b>Med</b>	<b>High</b>	<b>CLNA</b>
Population Projections	Stats Med	Stats High	Stats High +10%	CLNA
Sector Employment Locations	Avg 2005/CLNA	Avg 2005/CLNA	Avg 2005/CLNA	CLNA
Employee/Population Ratio	CLNA	CLNA	CLNA	CLNA
Sector Employment Shares	CLNA	CLNA	CLNA	CLNA
Density Capacity of Business Areas	CLNA	CLNA	CLNA	CLNA
In-Centre Employment %	CLNA	CLNA	CLNA	CLNA

6.8 Following are the results of applying the employment method to the inputs and assumptions above.

**Table 7:** Estimated Land Requirements from Employment Approach (ha)

<b>Centre Type</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>CLNA</b>
Town Centre	-	-	-	-
Mixed use	17	24	30	45
Industrial	17	24	29	54
<b>Total</b>	<b>34</b>	<b>48</b>	<b>59</b>	<b>99</b>

6.9 Again, comparing my estimates of industrial land demand with those of the CLNA reveals just how unrealistic the latter are. For instance, even under my high scenario, the resulting industrial land requirements are about half those estimated by the CLNA.

6.10 To summarise: when the methods used in the CLNA are populated with more plausible assumptions, industrial land requirements are roughly half those stated in the CLNA. Clearly, then, the CLNA should not be used as a basis for planning future district land requirements.

## **7. Implications for the Applications at Hand**

7.1 As shown in the preceding section, the CLNA’s estimates of future industrial land requirements grossly exaggerate actual future requirements. For instance, my medium estimates of industrial land

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assumptions, notably population projections. For the sake of clarity: inserting more realistic assumptions about the location of each sector’s employment would cause my estimates of industrial land to fall even further, and those for other uses to rise.

requirements over the 20 year period to 2026 are between 22 and 24 hectares, compared to at least 54 hectares under the CLNA. In other words, the district's actual future requirements are likely to be at least 30 hectares less than previously thought

- 7.2 In my view, it is difficult to see how the loss of some industrial land as a result of these applications could possibly be considered a material resource management issue given the much lower future requirements facing the district. Indeed continuing to debate the specific percentages of industrial land that would be foregone seems a futile and unnecessary exercise given the significant headroom that exists when more realistic demand projections are used.
- 7.3 Accordingly, I submit that any adverse effects associated with the loss of industrial land caused by these applications is no more than minor, and certainly not a valid reason to deny resource consent.

## **8. Conclusion**

- 8.1 This evidence has carefully examined the CLNA's recommendation to foster and protect yard-based and transport industries. In addition, it has critically reviewed the CLNA's estimates of future land requirements. In both cases, the CLNA has been found seriously wanting. Indeed, not only does it fail to explain why yard based and transport industries should be protected, but there is no evidence of their importance to the local economy or that they are being squeezed out of the district.
- 8.2 With respect to the CLNA's estimates of future land requirements, this evidence has shown that they reflect highly unrealistic assumptions, which grossly exaggerate future demands, particularly for industrial land. When more realistic inputs and assumptions are used, future industrial land requirements fall dramatically.
- 8.3 Accordingly, I recommend that the CLNA no longer be used as a basis for future planning. Further, I submit that any adverse effects associated with the loss of industrial land caused by these applications is no more than minor and certainly not a valid reason to deny consent.

**Fraser James Colegrave**

**Dated: 20 January 2014**

**9. Appendix: Yard Based and Transport Activities (as defined in the CLNA)**

- Short Distance Bus Transport (including Tramway)
- Long Distance Bus Transport
- Automotive Fuel Retailing
- Building Supplies Wholesaling (not elsewhere classified)
- Timber Wholesaling
- Road Freight Transport
- Concrete Slurry Manufacturing
- Plant Hiring or Leasing
- Motor Vehicle Hiring
- Garden Supplies Retailing
- Storage (not elsewhere classified)
- Waste Disposal Services
- Motor Vehicle New Part Dealing
- Motor Vehicle Dismantling and Used Part Dealing
- Automotive Electrical Services
- Smash Repairing
- Tyre Retailing
- Automotive Repair and Services (not elsewhere classified)

## 10. Appendix: Disaggregating the CLNA's Floorspace-Based Estimates of Future Land Requirements

10.1 Table 5 in paragraph 6.4 above shows the CLNA's floorspace-based estimates of future land requirements disaggregated by location type. These figures are not actually reported in the CLNA, but can be derived from the information provided in table 21 of the CLNA, and the three paragraphs that follow table 21.

10.2 The following table shows my calculations:

**Figure 5:** Calculation of Disaggregated CLNA Floorspace-based Estimates

Centre Type	Demand	Supply	Excess GFA	Avg FAR	Extra Land
Town Centre	504,879	339,900	164,979	1.25	13.2
Mixed use	137,035	81,400	55,635	0.40	13.9
Industrial	187,323	51,000	136,323	0.21	66.2
<b>Total</b>					<b>93.3</b>

10.3 The demand figures in the table above equal the total floor area demands at the bottom of page 39 of the CLNA (i.e. in table 21) plus another 10 years growth for the period from 2016 to 2026.

a. The growth over the second 10 year period (from 2016 to 2026) equals the 10-year demand from 2006 to 2016 (shown in table 21 of the CLNA) scaled by 1.2 (as described on page 40 of the CLNA).

b. For example, the town centre demand to 2026 (shown as 504,879 above) equals total demand to 2016 (318,879) +  $1.2 \times 155,000 = 318,879 + 186,000 = 504,879$

10.4 The supply figures match those at the top of page 40 in the CLNA, and

10.5 The average FARs were inferred from the calculations in table 21 of the CLNA and from the FARs reported elsewhere in that report.