

BEFORE THE ENVIRONMENT COURT - AUCKLAND

IN THE MATTER of appeals pursuant to Clause 14 of the
First Schedule of the Resource
Management Act 1991

AND

IN THE MATTER of proposed Policy Change 13 to the
Auckland Regional Policy Statement and
proposed Plan Change 14 to the
Operative Manukau District Plan

BY **ERNEST ELLETT RYEGRASS TRUST
& ORS**

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ENV-2010-AKL-000027

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APPELLANTS

AND

AUCKLAND COUNCIL

RESPONDENT

STATEMENT OF EVIDENCE OF FRASER JAMES COLEGRAVE

ECONOMIST

INTRODUCTION

1. My name is Fraser James Colegrave. I am a founding director of Covec Limited – an economics consultancy based in Auckland. I hold a first-class honours degree in economics from the University of Auckland, and am a member of the New Zealand Association of Economists.
2. I have worked as an economics consultant for 12 years. My main areas of expertise are land-use economics and infrastructure funding, particularly as they apply to Local Government. I have worked extensively on these issues for a number of Councils and developers.
3. I am familiar with the land that forms the subject of these appeals and, having recently worked with the airport on a range of development-related matters, am also familiar with its immediate environs. During the completion of this evidence, I also made a number of site visits to clarify any remaining issues.

EXPERT WITNESS CODE OF CONDUCT

4. I have read the Code of Conduct for Expert Witnesses prepared as a Practice Note for the Environment Court and agree to comply with it in the preparation of this evidence and in my appearance before the Hearings Committee. This evidence is within my area of expertise, except where I state that I rely on information provided by a third party. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

STRUCTURE OF THIS EVIDENCE

5. The remainder of this evidence is structured as follows.
 - First, I briefly review the economic rationale for Auckland’s Metropolitan Urban Limit (MUL), and consider its unintended consequences, particularly its impacts on land prices.
 - Next, I consider the case for including the land that forms the subject of these appeals (the subject land) within the MUL to help address Auckland’s business land crisis.
 - Then, I perform a formal cost benefit analysis of including the land in the MUL and rezoning it for future urban use.

- Next, I consider the economic rationale for the notice of requirement (NoR) issued for parcels within the subject land.
- Finally, I offer my views on an appropriate zone for the subject land once included within the MUL.

ECONOMIC REVIEW OF THE MUL AND ITS EFFECTS

6. The desire to contain urban land use in Auckland dates back 50 years to the *Urban Development Plan for Auckland 1951*, which introduced an “urban fence”. The fence has since evolved to what we know today as the Metropolitan Urban Limit (MUL). While this evidence does not seek to provide a detailed critique of the MUL and its effects, a brief discussion provides important context for other parts of my evidence. I therefore take this opportunity to briefly provide an economic review of the MUL.
7. According to economic theory, markets perform best when left to their own devices, so that the forces of supply and demand determine market outcomes. Occasionally, however, market imperfections may cause markets to fail to reach socially-optimal outcomes. These so-called ‘market failures’ provide the rationale for government intervention, either at the local or central level.
8. Perhaps the most common form of market failure is externalities. These are said to arise when the production or consumption of a good or service has impacts on parties external to the transaction. For example, second-hand smoke is a negative externality of tobacco consumption.
9. When externalities exist, the parties to a transaction may fail to account for the wider effects of their actions, and thus engage in levels of production or consumption detrimental to society. To avoid such outcomes, Government may attempt to alter market prices (via taxes or subsidies), or impose regulatory constraints, to align market outcomes with social ideals. The MUL is one such regulatory constraint.
10. To be more specific, the economic literature suggests that the MUL may be justified by four types of externality related to urban sprawl. Namely, the MUL may be justified by the belief that urban sprawl:
 - increases the cost of publicly-provided infrastructure,
 - leads to excess consumption of open space,
 - causes increased traffic congestion, and
 - reduces agglomeration.

11. At face value, these seem like compelling reasons to contain urban growth. However, many of these reasons are of limited relevance in the Auckland context and/or their effects are much less harmful than the unintended effects of the MUL. Let us now consider each of the externalities in turn.
12. As noted above, the first possible justification for the MUL is that sprawl results in increased infrastructure costs that are not borne by the causers of sprawl. While this argument makes sense in overseas jurisdictions that do not charge for local infrastructure, it is of limited relevance in Auckland. This is because the entire region is covered by development contributions (DCs), which are levied under the Local Government Act 2002 to recover the costs of growth-related infrastructure from property developers.
13. Not only is the entire region covered by DCs, but the charges themselves vary by area to reflect differences in the cost of service provision. This means that the region already has an efficient charging system to signal the infrastructure costs of different locations. Accordingly, the first justification for the MUL holds little weight in the regional context.¹
14. The second concern, that sprawl leads to an excess consumption of open space, is also not particularly relevant in Auckland because Council plays an active role in maintaining the amount of open space. Specifically, Council sets a target level of service for open space – often expressed as a certain number of hectares per 1000 people – which it actively maintains by purchasing and developing reserves in line with population growth. This means that urban sprawl will not lead to an inadequate provision of open space.
15. The third issue, traffic congestion, is more complex. While sprawl is likely to lead to greater levels of traffic congestion, MULs are an inefficient way to address them. Indeed, the location of the MUL was never designed to restrict development in areas that have the most harmful congestion effects. Thus, describing them as a solution to congestion is a considerable stretch of the imagination.
16. By far, the most efficient way to address traffic congestion is via road pricing. This was highlighted in a 2005 article in *Regional Science and Urban Economics*, which stated that:²

“We juxtapose congestion tolls, favoured by economists, and urban boundaries, favoured by planners, as two alternative policies for eliminating this excess [congestion]. To curb the excess, the planner's boundary must be

¹ Even in jurisdictions without these sorts of charges, infrastructure costs can be contained through other means. For instance, by encouraging greater communication with the development community so that the size, scope and timing of infrastructure supply is better aligned with its uptake.

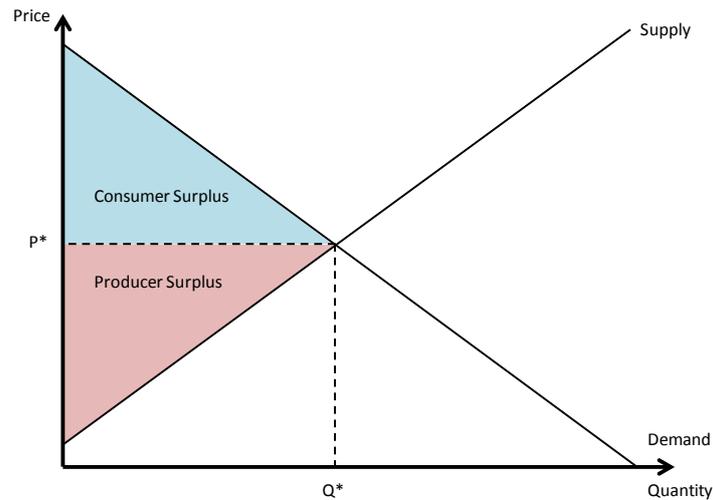
² A. Anas and H. Rhee (2005), Curbing excess sprawl with congestion tolls and urban boundaries, *Regional Science and Urban Economics*

very stringent causing large distortions in land, labour and product markets while leaving the congestion unpriced.”

17. The authors go on to state that urban boundaries are many times less efficient than congestion pricing for addressing excess traffic. While this point may seem academic in Auckland, where congestion pricing does not exist, a recent Auckland Council paper notes that some form of road pricing is expected to be introduced during the life of the Auckland Plan.³ Thus, not only is the MUL a very inefficient way to manage congestion, but better means are on the way.
18. The final potential economic justification for urban containment is that sprawl reduces agglomeration. Agglomeration benefits are said to occur when firms experience lower costs and/or higher productivity from co-locating with one another. Based on this definition, it seems logical that sprawl could reduce its value. However, this can be refuted on several grounds.
19. First, firms will willingly co-locate with one another, irrespective of opportunities to disperse, if doing so is beneficial. Second, the rapid evolution of information technology means that some agglomeration benefits – namely the sharing of information and ideas – can be realized remotely without the need to co-locate.
20. As the above discussion hopefully demonstrates, the economic rationale for the MUL is unclear. To complicate things further, the unintended consequences of the MUL are highly acute. The problem lies in its distortionary effect on the land market.
21. In simple terms, the MUL restricts the supply of land, and increases its price. As the price increases, some consumers are “priced out of the market”, and the quantity of land traded diminishes. As the quantity traded falls, so too do the gains from trade. These, in turn, represent direct losses of economic efficiency.
22. To see how this works, consider the following supply and demand diagram, which portrays a freely-operating land market in equilibrium.

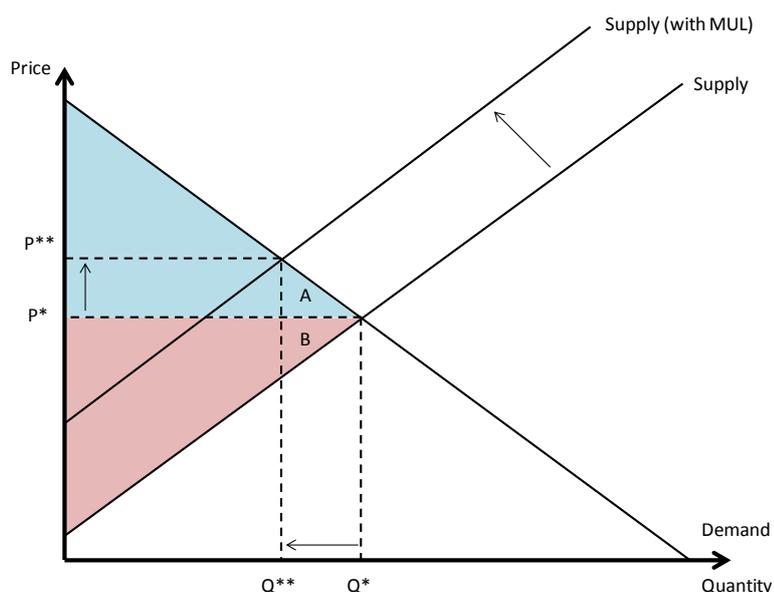
³<http://www.aucklandcouncil.govt.nz/SiteCollectionDocuments/aboutcouncil/planspoliciespublications/theaucklandplan/aptd-preferredurbanformpart1.pdf>

Figure 1: Gains from Land Trade in a Freely-Operating Market



23. In Figure 1, the demand curve shows the maximum amount that consumers are willing to pay for given quantities of land, while the supply curve shows the minimum amount that sellers are willing to receive. In this example, the market is free of excess constraints (such as the MUL), and the resulting equilibrium – where supply and demand intersect – produces a market price of P^* and a market quantity of Q^* .
24. Of particular interest in Figure 1 are the two shaded triangles, labeled consumer surplus and producer surplus. Consumer surplus represents the difference between what consumers would have been willing to pay for the market quantity (Q^*) and what they actually paid (P^*). Conversely, producer surplus represents the difference between what sellers would have been willing to receive for Q^* and what they actually received (P^*). Together, consumer and producer surplus indicate the gains of trade, and are direct measures of economic efficiency.
25. Consider now the effects of an excessive supply constraint, such as the MUL. This is portrayed in the figure below. The immediate effect is to reduce market supply. In other words, the quantity that sellers are willing to supply is lower at any given price than it was before.
26. In Figure 2, the MUL-induced supply contraction causes market quantity to fall from Q^* to Q^{**} , and market price to increase from P^* to P^{**} . As the market price and quantity adjust, some previous gains from trade are lost. These are represented by the two small triangles – A and B.
27. Triangle A represents a loss of consumer surplus resulting from the MUL, and triangle B a loss of producer surplus. Together, these equal the ‘deadweight losses’ of the MUL, and represent direct losses of economic efficiency.

Figure 2: Losses of Economic Efficiency due to the MUL



28. Some readers may consider such efficiency losses a minor concession to ensure that sprawl is 'appropriately' contained. However, the land price effects of the MUL are severe, and hence so too are the resulting losses of efficiency. For instance, a 2007 report by MOTU found that prices just inside the MUL were up to 13 times higher than those directly outside it.⁴
29. Moreover, research commissioned by a consortium of Mangere land owners in 2008 showed that Auckland's business land prices are also very high, especially by Australasian standards.⁵ This means that a large number of people *and* businesses have been priced out of the market by the MUL, and that corresponding efficiency losses are significant.⁶
30. Yet another issue with the MUL is that it does not reflect overwhelming consumer preference for lower density living, not higher density.⁷ The quarter-acre dream persists, perhaps on a less ambitious scale, but the MUL fails to recognise this. In doing so, it commits regulatory failure.
31. Finally, it is useful to note the so-called 'paradox of intensification'. This occurs when urban containment concentrates traffic in more densely-populated areas, as it aims to do. But, in doing so, it increases human exposure to harmful vehicle emissions.

⁴ A. Grimes Y. Liang (2007), *Spatial Determinants of Land Prices in Auckland: Does the Metropolitan Urban Limit Have an Effect?*, *Motu Working Paper 07-09*, Motu Economic and Public Policy Research

⁵ Urbis (2008), *Auckland Southern Gateway Market Study and Land Use Assessment*

⁶ Reduced business investment also means reduced regional GDP and employment over the longer term.

⁷ For instance, a 2010 survey of 3,224 respondents by the NZ centre for Sustainable Cities, based at the University of Otago, found that 80% would prefer to live in a stand-alone house, and only 4% an apartment.

32. This is not to say that the MUL is without merit, or that it should be abandoned completely. Rather, the purpose of this introductory section was to provide some balance to the debate, which sometimes fails to acknowledge the economic detriments of the MUL.
33. These concerns certainly are nothing new, either. Several earlier reports have also identified major shortcomings of the MUL. For instance, a 2000 report by McDermott Fairgray Group stated:⁸

“Urban limits comprise a generalized and somewhat insensitive instrument. They shape and constrain urban form with reference to aggregate regional growth without necessarily reflecting local environmental issues. Nor do they provide a transparent basis for reconciling any economic or social costs or benefits with environmental objectives as a result of the configuration of the MULs in an area.”

34. More recently, the Urban Technical Advisory Group (UTAG) concluded that:⁹

“Ultimately, our view is that MULs are a blunt instrument for achieving their desired outcomes. In many cases, the desired outcomes have not been well articulated or are not well understood. It is our view that MULs should not in themselves be seen as a means to continue to manage urban growth in Auckland”

35. I support this statement. By extension, I also support strategic relaxation of the MUL, as do most urban economists.

36. A 2006 report by Phil McDermott Consulting on business land supply shortages in the Western Bay of Plenty offered a succinct and pragmatic solution with direct relevance to Auckland. It concluded:¹⁰

“The ideal resource management response may be to determine a generous long term target for land supply, identify likely and favoured localities, clarify the environmental and infrastructural expectations associated with development, and establish clear and reasonable criteria to encourage investors to bring the land to the market in an efficient manner.”

37. In short, Council should be proactively seeking new opportunities to increase the quantity and quality of business-zoned land. In the following section, I assess the merits of rezoning the subject land for future business use to support the cause.

⁸ McDermott Fairgray Group (2000), *Moving the Metropolitan Urban Limits: Requirements under section 32*

⁹ <http://www.mfe.govt.nz/rma/central/amendments/documents/urban-tag-report.pdf>

¹⁰ Phil McDermott Consulting (2006), *Business Land Requirements Review Western Bay of Plenty: Report to Smart Growth*.

JUSTIFICATION FOR INCLUDING THE SUBJECT AREA WITHIN THE MUL

38. First, it is important to remember that the plan change advanced by Manukau City Council envisioned the subject land falling within the MUL and supporting the wider transformation of the Mangere gateway area. Second, and more importantly, the region has a severe shortage of business zoned land, with more needed now.
39. The region's business land crisis has been well documented elsewhere, including in evidence presented to the plan change hearing. For instance, section 4.3 of the decision report stated:

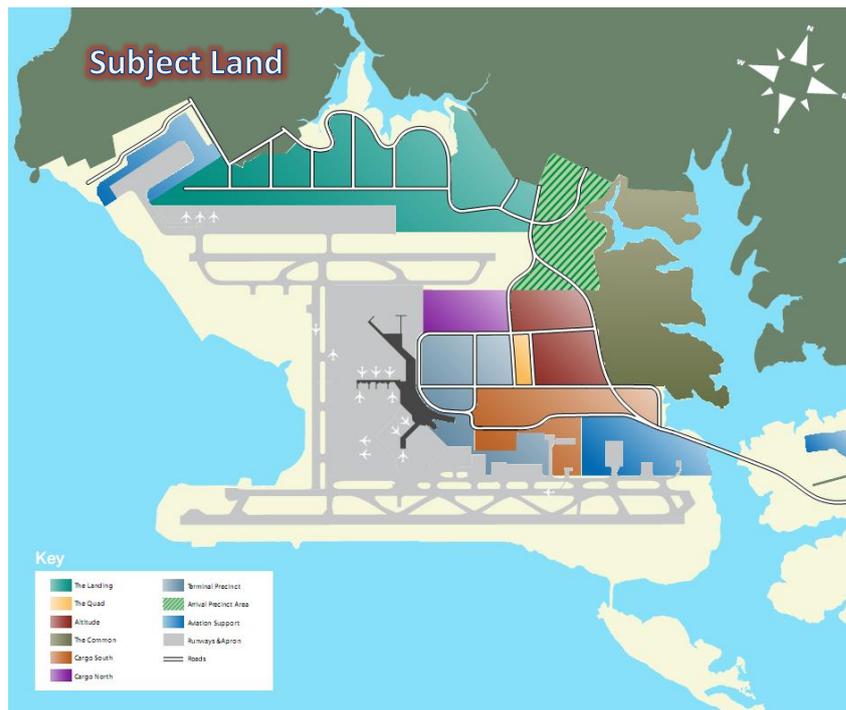
“we accept that on the basis of the evidence there is a recognized shortage of business land in Auckland, especially in response of those business activities that require large site sizes such as warehousing logistics. This evidence was not challenged.”¹¹

40. Planning evidence submitted by the respondent for this appeal accepted this position, and even conceded that the need for more business land appeared particularly acute in the Plan Change 14 area.¹² Hence, it is not a question of whether more business land is needed, but when and where it can be provided efficiently. As I shall now explain, including the subject land within the MUL and rezoning it accordingly is a prudent, strategic and pragmatic step in the right direction.
41. Perhaps the most compelling reason to add the subject land to Auckland's business land supply is its proximity to Auckland airport. Not only is the airport one of our most important strategic national assets, but it is also growing rapidly. For instance, a 2008 report by Market Economics showed that passenger numbers are expected to double by 2026, with freight volumes growing at a similar pace.
42. The airport's 2010 Master Plan outlines its strategy to accommodate growth. It includes the completion of a second runway, plus the development of seven integrated development precincts. Figure 3 shows the 25-year development vision for the airport, and also identifies the relative location of the subject land. Clearly, the close proximity of the subject land makes it a prime spot for future business growth.

¹¹ Statement of Evidence of Peter Dean Reaburn on behalf of Auckland Council, paragraph 4.3

¹² Reaburn Evidence, paragraph 5.4

Figure 3: Proximity of Subject Land to Auckland Airport



43. In addition to its close proximity, the subject land can also meaningfully support airport growth by accommodating a range of complementary land uses not permitted on the airport's land. For instance, visitor accommodation is one of the main uses proposed for the subject land, but this cannot proceed in airport zones.
44. Another reason to zone more business land near the airport is infrastructure efficiency. Indeed, permitting further development directly adjacent to pockets of land already earmarked for future development enables Council to exploit economies of scale in infrastructure provision. In other words, additions to planned capacity upgrades can be achieved at low incremental costs. These low incremental costs reduce the average cost of provision for all connected developments, and hence improve economic efficiency.
45. There is an interesting, yet slightly more obscure, side to the economies of scale argument too. This was addressed in evidence by Arthur Grimes on Plan Change 1 to the Canterbury Regional Policy Statement. He argued that extensions to urban growth boundaries should favour larger land holdings that can also exploit economies of scale in their own development.¹³ This is particularly relevant given the large size of the subject land parcels relative to Auckland's current vacant stock.¹⁴
46. The rapid projected growth of Manukau's population, and the desire to employ more people locally, adds further impetus for rezoning more land around the

¹³ Statement of Evidence of Dr Arthur Grimes on behalf of Prestons Limited

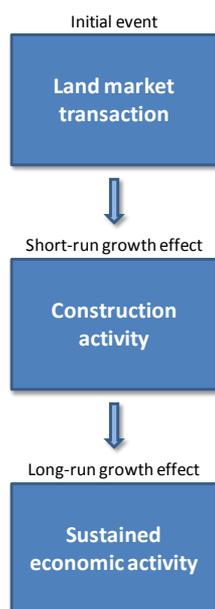
¹⁴ See, for instance, Urbis (2008), *Auckland Southern Gateway Market Study and Land Use Assessment*, section 3.1.2

airport. This was alluded to in the evidence of Mr Reaburn, who stated that one of the key reasons for plan change 14 was:

“The desire to reduce employment related trips out of the Mangere area by increasing employment opportunities within the Mangere gateway heritage area.”

- 47. This is particularly important given Manukau City’s poor commuting record. For instance, census 2006 showed that more than 47,000 people living in Manukau City worked in another territorial authority. This was the worst statistic in absolute terms, and in the bottom 10 relative to population.
- 48. Another good reason to extend the MUL around the subject land is that it is ready and able to be brought to the market when deemed appropriate. In doing so, it will trigger a sequence of events that stimulate short- and long-run economic growth. This is shown in the stylised figure below.

Figure 4: Economic Effects Associated with Land Market Transactions



- 49. Figure 4 shows that land market transactions are the first step in a cascading sequence of growth-augmenting activities. In the short run, land development creates economic impacts through the development of land and the subsequent construction of buildings while, over the longer term, it supports sustained increases in regional business activity.
- 50. Of course, it is not enough to simply list the advantages of rezoning an area, and suggest that it should be included in the MUL on that basis. To avoid such a possibility, the LGAAA introduced a list of statutory planning criteria against which any plan to shift the MUL must be assessed. The evidence of Mr Brian Putt provides

a comprehensive assessment of the subject land against these criteria, and finds a good fit. I support his assessment.

51. The *Auckland Region Business Land Strategy* also identifies the thirteen land criteria that are most important to regional businesses.¹⁵ I used these to further evaluate the subject land. The results, which are tabulated below, reinforce the value of the land for business use.

Table 1: Evaluation of Site against Criteria in *Auckland Regional Business Land Strategy*

Order of Importance	Location Factor	Assessment for Subject Land
1	Transport and accessibility	The site is adjacent to the country's largest airport, and has good connectivity to the state highway network.
2	Cost of land/ premises	The subject land will be relatively inexpensive compared to other vacant land parcels
3	Proximity to workforce	There is a strong and growing workforce in Mangere and the greater Manukau area
4	Carparking	The sites will be designed to include appropriate parking capacity
5	Quality of premises	The sites are likely to be developed to a high standard in keeping with the vision for the wider airport development
6	Technology available	The sites will be serviced by high speed broadband, and have access to all the modern technologies expected of such a development
7	Proximity to clients/customers	If developed for visitor accommodation, the site will be directly adjacent to the country's largest source of accommodation seekers - the airport
8	Exposure/profile	The site will be adjacent to the airport development, and thus have good exposure
9	Co-location/clustering	The site will be co-located among a large number of new and established businesses,
10	Lifestyle/amenity	The site is situated on the coast of the Manukau harbour with terrific views, and also adjacent a major recreational space - the Otuatua stonefields
11	Proximity to support services	Support services are nearby
12	Proximity to home	A ready supply of labour lives in close proximity
13	Proximity to suppliers	Many key suppliers will also be located at the airport

52. In addition to the various matters raised above, I also submit that the subject land should be included within the MUL and zoned accordingly because:

- Public access to the coast is currently very limited in this area and, as noted in the evidence of Mr Reaburn, only future development will improve it.¹⁶
- The land will be isolated if left as a rural zoning, contravening RMA requirements to enable a reasonable use.

¹⁵ Auckland Regional Council (2006), *Auckland Regional Business Land Strategy*

¹⁶ Reaburn Evidence, paragraph 8.7

- The predominant current use – cattle grazing – is of marginal economic value, and any future land owners are likely to seek more intensive land use anyway. Again, this point was conceded by Mr Reaburn.¹⁷ Given this fact, and recognizing the enormous expense involved with starting from scratch later, plans to enable the land’s potential should be set in motion now.
 - There are a number of planning controls that can be used to ensure future development is sympathetic to the local environment. *e.g.* by requiring a comprehensive development plan, as required for the Oruarangi sub-zone.
 - In any case, the proposed zone – *i.e.* future urban development zone – requires a further plan change before any major develop can occur. This provides a safety net against inappropriate development by requiring a thorough reassessment of the issues before anything significant happens.
53. To summarise: The Auckland region has a severe shortage of business land, and the subject area is a good fit with planning and economic criteria. While there may be lingering concerns about the effect of development on heritage sites, these can be readily addressed with available tools. In short, it is better to rezone this land subject to controls, than to not rezone it at all. To be absolutely sure, however, I now perform a detailed economic evaluation.

ECONOMIC ANALYSIS OF INCLUDING THE SUBJECT LAND WITHIN THE MUL

54. Before proceeding with the analysis, it is important to introduce some key concepts. Most are drawn from the field of welfare economics which, as its name suggests, is concerned with the welfare implications of government policies and other actions.
55. Like any other area of economics, the primary goal of welfare economics is to maximize efficiency. This can be thought of as making the best of what society has, both now and in the future.
56. Recognising that there are unlimited ways to try to make society better off, economists devised decision criteria to enable objective comparisons to be made. To this end, the pioneering economist Wilfred Pareto introduced the notion of ‘pareto improvements’ in the late 19th century. These suggest that a reallocation of resources among the members of society is efficient if at least one person is made better off, and nobody is made worse off. Despite some intuitive appeal, this definition was later deemed overly-restrictive. Indeed, most initiatives make some people better off, and others worse off.

¹⁷ Reaburn Evidence, paragraph 8.3

57. An alternative efficiency definition emerged in the late 1930s based on the notion of compensation. It stated that a reallocation of resources is efficient if the winners of that reallocation can fully compensate any losers and still remain better off. This definition remains the cornerstone of contemporary economics.
58. While the efficiency criterion described above is agnostic about distributional issues, there is recognition that these should at least be acknowledged. Accordingly, in what follows, I conduct an economic evaluation of including the subject land within the MUL – which focuses on efficiency – but also discuss distributional impacts.

COST BENEFIT ANALYSIS OF INCLUSION

59. The economic analysis that I have conducted uses a common economic technique known as cost benefit analysis (CBA). This identifies and, where possible, quantifies all the costs and benefits of competing options so that they can be ranked in a consistent and transparent manner. The status quo is often included so that the effects of each option can be expressed relative to ‘doing nothing’.
60. While CBA has been widely used for a range of policy analyses, its use in heritage assessments – which form the heart of this case – is rare. This was noted in a 2006 report by the Australian Productivity Commission, which provided a fairly damning account of common approaches to heritage regulation. For instance, it states:¹⁸

“The rationale for government intervention in heritage conservation rests on the view that owners, acting in their own interests, would conserve too little historic heritage. Governments have intervened by introducing regulatory regimes based on the identification of places with heritage characteristics and the subsequent provision of statutory protection through their inclusion on lists of protected places.

Typically cost considerations are irrelevant for the decision to list. As a consequence, the current heritage system,..., essentially requires property owners to provide, without payment, community-demanded heritage conservation services

Without the discipline imposed by having to pay the costs of heritage conservation, there may be over-provision of the heritage public good, or of particular types of heritage places, resulting in a net cost to the community as a whole, rather than a net benefit.”

61. A 2008 working paper by the Australian Office of Best Practice Regulation reinforced the need for CBA in cases related to heritage protection. For instance, it noted:¹⁹

“Various initiatives aimed at improving the quality of regulation have increased the focus on cost-benefit analysis as a tool for regulatory assessment. Cost-benefit analysis is a framework for analysis that follows a

¹⁸ Australian Productivity Commission (2006), *Conservation of Australia’s Historic Heritage Places*

¹⁹ Office of Best Practice Regulation (2008), *Cost Benefit Analysis and Historic Heritage Regulation*

logical sequence of steps: identifying policy options to solve a problem, setting out costs and benefits of each policy option, where possible measuring costs and benefits of each option in dollar terms, and then ranking the policy options in terms of net benefits to the community.”

62. However, it recognizes the difficulty in quantifying all the costs and benefits, and further adds:²⁰

But even when it is difficult to estimate some heritage conservation costs and benefits with any precision, applying the framework is important and useful in itself. The process of trying to describe and measure costs and benefits is worth doing. Cost-benefit analysis makes clear and transparent the assumptions and judgments made. Further, attempting to quantify costs and benefits encourages these factors to be more closely examined. Even imprecise measures can be valuable, because they can identify those proposals that are obviously worth proceeding with and those that are not.

63. It is precisely for these reasons that I have elected to perform a cost benefit analysis. Following are the key steps.

1. Define the options
2. Identify relevant costs and benefits
3. Quantify costs and benefits wherever possible
4. Calculate the net benefit of each option
5. Conduct sensitivity analysis
6. Identify the option with the highest net benefit
7. Make a recommendation.

64. Each step is described separately below.

Step 1: Define the options

65. Although the subject land could probably be used for a range of purposes, this analysis considers only two. The first is to retain the status quo, while the second is to include the land within the MUL and rezone accordingly.

Step 2: Identify relevant costs and benefits

66. The main costs and benefits of rezoning relative to the status quo are:

- The land value uplift of rezoning,
- The direct costs of rezoning,
- The potential loss of heritage values, and
- Improved public access to the coast

²⁰ Office of Best Practice Regulation (2008), *Cost Benefit Analysis and Historic Heritage Regulation*

Step 3: Quantify costs and benefits where possible

67. The table below estimates the land value uplift associated with rezoning. The physical area of each parcel was sourced from exhibit 20 in Mr Scott’s evidence, while the land values were obtained from the evidence of Mr Stevenson.²¹ The land subject to the NoR is expected to have a lower future value due to its proximity to the OSHR, and hence the likelihood of more restrictive encumbrances. Nevertheless, the total uplift still exceeds \$70 million.

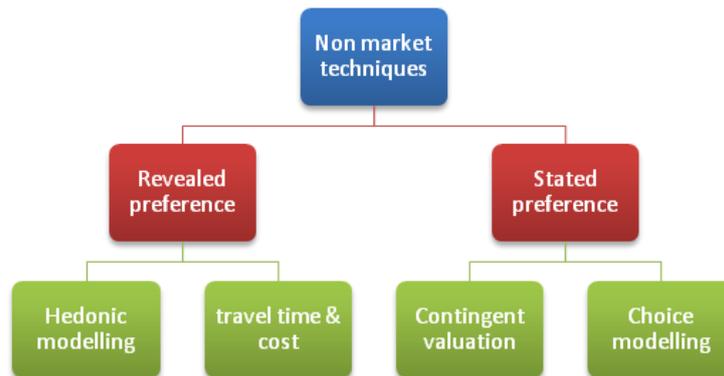
Table 2: Estimated Land Value Uplift from Rezoning

Land Owner	Area (Ha)	Current \$/m2	Future \$/m2	Current \$m	Future \$m	Uplift \$m
Ellet Ryegrass	5.560	\$20	\$50	\$1.1	\$2.8	\$1.7
Mendelssohn	9.679	\$20	\$50	\$1.9	\$4.8	\$2.9
T R Ellet	34.393	\$20	\$90	\$6.9	\$31.0	\$24.1
T R Ellet	16.709	\$20	\$90	\$3.3	\$15.0	\$11.7
T R Ellet	0.201	\$20	\$90	\$0.0	\$0.2	\$0.1
Scoria Sales Ltd	17.784	\$20	\$90	\$3.6	\$16.0	\$12.4
Scoria Sales Ltd	7.119	\$20	\$90	\$1.4	\$6.4	\$5.0
Gavin H Wallace	17.692	\$20	\$50	\$3.5	\$8.8	\$5.3
Gavin H Wallace	15.703	\$20	\$50	\$3.1	\$7.9	\$4.7
Rennie/Arranmore	9.019	\$20	\$50	\$1.8	\$4.5	\$2.7
Total	133.859			\$26.8	\$97.4	\$70.6

68. The direct costs of rezoning are difficult to predict, but have notionally been set at \$2 million. This covers all planning and resource management costs.
69. Unfortunately, estimation of heritage preservation and coastal access impacts is far less straightforward. The difficulty is that both relate to goods or services that are not actively traded in markets, and hence for which there is no market price. For instance, there is no ‘market’ for heritage preservation, so there are no observable market values that can be attached to consequent effects.
70. Absent market prices for heritage preservation and coastal access, some sort of proxy must be found. Fortunately, a range of valuation techniques has evolved to provide estimates of non-market costs and benefits in situations like this. These are categorized below.

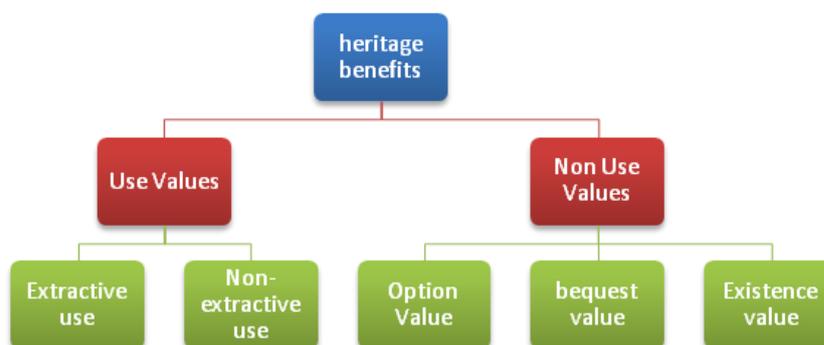
²¹ These land value estimates were independently verified by Bruce Whillans, who has 30 years commercial real estate experience and is currently negotiating transactions for the nearby Bianconi land.

Figure 5: Valuation Techniques



71. Figure 5 shows that non-market techniques can be classified as belonging to methods known as either revealed preference or stated preference, respectively. Revealed preference methods estimate the value of non-market goods or services by relating them to other goods or services for which markets do exist. Stated preference approaches, conversely, estimate non-market values by eliciting them from surveys.
72. Revealed preference techniques are generally preferred theoretically and empirically because they utilize information on actual behavior. However, their applicability is limited in matters of heritage protection. As a result, stated preference techniques are often used.
73. Within stated preference techniques, contingent valuation is by far the most common. It asks a series of questions designed to infer the amount that people would be willing to pay to preserve an area of heritage, for instance.
74. A major disadvantage of contingent valuation is that biases tend to creep in. Responses are not tempered by budget constraints, and there is an incentive to exaggerate, particularly when the ultimate use of the information is known. Even so, contingent valuation is the only practical approach here.
75. Irrespective of which valuation technique is used, an important first step is to determine what is at stake. Accordingly, the following diagram identifies the main categories of benefit commonly-associated with heritage protection.

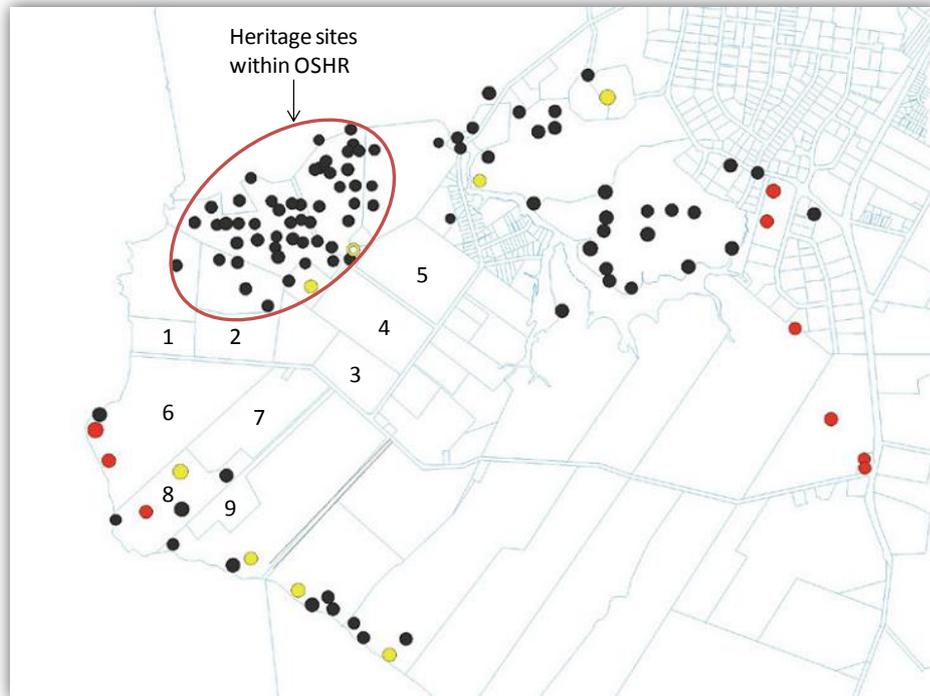
Figure 6: Categories of Heritage Benefit



76. Figure 6 shows that heritage benefits can be divided into use and non-use values. Use values are further divided into those associated with extraction – for instance the sale of heritage artefacts – and non-extractive uses. The latter includes the benefit of visiting places of heritage significance, for example.
77. Non-use values comprise three parts. The first is option value, which reflects the value that someone places on being able to visit a heritage area, even though they may not have done so. Bequest value is similar. It relates to the value that someone places on knowing that future generations have the option to visit. Existence values are slightly more obscure, and represent the benefit that someone gets simply from knowing that heritage is being preserved without ever visiting. Let us now apply these principles and techniques to the heritage impacts of rezoning the subject land.
78. First, it is important to note the status quo provides little (if any) heritage *use* values, because public access to the land is so heavily restricted. The same goes for option and bequest values. Access restrictions largely preclude these, too. This just leaves existence values. But, what value should we attach to them?
79. As noted above, contingent valuation is probably the most appropriate way to measure existence values. Unfortunately, however, designing and conducting a contingent valuation is resource intensive, and thus beyond the scope of this evidence.
80. One possible work-around is to find existence values estimated for places with similar heritage characteristics, and apply those. However, I was unable to find any reliable proxies despite exhaustive searches of the local and international literature. A more qualitative approach was therefore required.
81. To understand the magnitude of heritage existence values attached to the subject land, we must first put it in context of the surrounding environment. To this end, the figure below reproduces figure 4 of the archaeological appraisal by Louise Furey. Red dots mark historic European sites, black dots Maori archaeological sites, and yellow

dots Maori pa. The parcels labeled 1 to 9 comprise the subject land, with those labeled 1 to 5 also falling under the notice of requirement (NoR).

Figure 7: Recorded Archaeological Sites



82. Figure 7 shows that heritage sites are heavily concentrated within the Otuatua Stonefields Historic Reserve (OSHR), which is already protected. It also shows that only two of the subject land parcels (6 and 8) contain recorded sites, with none on the NoR land.
83. With respect to the subject land, it is important to note that the few recorded inland sites on parcel 8 have already been quarried away, while the remaining sites (on parcels 6 and 8) lie on the coast. These can easily be protected with esplanade reserves – or other design controls – while still allowing development to proceed.²²
84. So, what can we glean from all this? First, the majority of recorded sites are already protected within the OSHR, and only two of the nine subject land parcels contain recorded sites. Some of these have already gone, while others can be readily protected. This means that the incremental heritage benefits of preserving the status quo are likely to be marginal.²³

²² I note that Mr Scott's evidence includes a site development plan that gives effect to this.

²³ To put it slightly differently, there are diminishing marginal returns to heritage protection (as with any normal good or service), so the incremental benefits of protecting sites outside the OSHR will be minor given the dense concentration of protected sites already within the (immediately adjacent) OSHR.

85. To take it one step further, it could be argued that rezoning may actually *increase* heritage benefits provided the new zoning (i) preserves remaining heritage sites, and (ii) improves public access to them.²⁴
86. Given the ambiguity surrounding heritage effects, I tentatively assign a neutral value of zero. Same, too, for coastal access. In step 5, I explore the effects of different heritage scenarios to test sensitivity.
87. Finally, I note that a CBA usually seeks to identify not only the magnitudes of costs and benefits, but also their timings. This allows the results to be expressed in present value terms. However, given that most of the effects in this analysis are likely to occur at roughly the same time, I have left the figures in nominal terms to avoid unnecessary complication. I note for the record, however, that this does not alter my conclusions.

Step 4: Calculate the net benefit of each option

88. The estimated costs and benefits of rezoning are summarized below. These are expressed relative to the status quo, so only one set of figures appears.

Table 3: Estimated Net Benefit of Rezoning

Element of CBA	Value
Land Value Uplift	\$70.6m
Cost of Rezoning	-\$2.0m
Loss of Heritage	\$0m
Improved Public Access	\$0m
Total	\$68.6m

89. Table 3 shows that the net benefit of rezoning could exceed \$68 million.

Step 5: Conduct sensitivity analysis

90. An important step in CBA is to test the sensitivity of the results to changes in assumptions. In this analysis, the key variables are the estimated land value uplift and the impacts on heritage values.
91. Let us assume for now that the uplift estimates are reasonable, which I believe they are. Then, we can calculate the negative impact on heritage values that would be required to tip the balance from a net benefit to a net cost.

²⁴ This is especially true given that the existing zone permits some land uses that could undermine current heritage values. For instance, Mr Reaburn's evidence expresses concern about the effect of constructing new farm buildings, an activity that I understand is possible under the current zoning.

92. Using the information in Table 3, we can see that a heritage impact of at least \$68.6 million is needed for rezoning to impose a net cost on society. This is a significant figure, so it is helpful to consider how it might be comprised. One interpretation is that the site is so important that there are 68,600 people each willing to pay \$1,000 to preserve the status quo. Another interpretation is that there are 1,000 people each willing to pay \$68,600. I consider neither interpretation plausible. But what if the land value estimates were wrong?
93. Suppose now that land value benefits are halved, so that the value uplift minus the cost of rezoning is only \$33.3 million. Even under this scenario, there would still need to be at least 33,300 people each willing to pay \$1,000 to preserve the status quo or, alternatively, 1,000 people each willing to pay \$33,300. These figures, too, are difficult to conceive, and hence rezoning is almost certainly beneficial overall.

Step 6: Identify the option with the highest net benefit

94. Based on the analysis above, rezoning is the option with the highest net benefit.

Step 7: Make a recommendation

95. Based on the significant net benefits derived in my analysis, my recommendation is to permit rezoning. Not only will this realize significant gains in economic efficiency – consistent with section 32 of the RMA – but also allow the owners of the subject land to earn a fair return.
96. If Council decides, on whatever basis, that heritage sites on the subject land are so valuable that rezoning should not be permitted, it must compensate the land owners for the foregone benefits of rezoning. As noted by the Australian Productivity Commission, only when this discipline is imposed on Council is it forced to objectively weigh up the costs and benefits of the proposal, and not pursue heritage preservation at ‘any cost.’
97. Before concluding this section, it seems important to quickly discuss distributional effects. The direct costs and benefits of rezoning clearly fall on the land owners, and do not need to be discussed any further. The situation with respect to heritage preservation is more complex, however.
98. In short, the status quo amounts to private land owners being forced to commit their land to sub-optimal uses for the alleged benefit of the wider community without compensation. In my view, this is contrary to basic property rights. If the wider community had a legal entitlement to the land in question, which they do not, then one might ask what sort of compensation they require to permit rezoning.

However, since the community has no legal right over this land, the real question is what level of compensation the land owners would be willing accept to prevent rezoning.

99. To put it slightly differently, the proposal to rezone the land is consistent with the owner's rights to a fair and reasonable use of their land (as required by the RMA), and preventing that fair use could only be justified if fully-offset by compensation. I note in passing that the evidence of Mr Clough also suggests that compensation should be paid if Council wishes to preserve the subject land in its current state.

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100. Notwithstanding the analysis above, which clearly demonstrated the benefits of urbanization, it seems important to briefly discuss the merits of Council's notice of requirement.
101. I understand that the overarching purpose of the NoR is to extend the OSHR, and to ensure that surrounding land uses are complementary and sympathetic. While these seem like reasonable objectives, they must also be subject to a rigorous cost benefit analysis to ensure they are justified.
102. Although such an analysis is beyond the scope of this evidence, I wish to make a few passing remarks.
- First, recall that the land subject to the NoR contains no recorded archaeological sites, so its 'fit' with the OSHR is unclear.
 - Second, any plans to extend the OSHR must be justified by level of service targets set by Council for passive reserves. Indeed, the OSHR is already a very large area, and Council cannot arbitrarily issue notices of requirement to augment it without proving that additional acquisitions are needed to maintain its committed level of service. As far as I am aware, no such analysis has been furnished to support the NoR.
 - Third, the *2009 ARC Environmental Awareness Survey* showed that 88% of the region's residents were satisfied or very satisfied with access to parks and other open spaces. Thus, irrespective of Council's target level of service, the NoR cannot be justified on the grounds of community demand.
103. Given these points, and acknowledging the significant net benefits associated with rezoning, I consider it unlikely that the NoR can be justified on economic grounds.

APPROPRIATE ZONE FOR THE LAND ONCE IN THE MUL

104. Finally, I turn my attention to an appropriate zoning for the subject land once inside the MUL. In this respect, I agree with the planning evidence of Mr Brian Putt, which submits that the land be zoned “future urban development.” This zoning signals a commitment to enable future development, but provides time to carefully consider the appropriate staging and sequencing of future development. It also provides time for further archaeological exploration and recording to be completed before any development commences.

CONCLUSION

105. This evidence has considered the economic rationale for including the subject land inside the MUL and rezoning it for future urban use. It has identified a number of significant reasons to support this initiative, not least to bolster the region’s ailing business land supply.
106. To ensure that rezoning makes economic sense, I have tested it using a formal cost benefit analysis. The CBA clearly indicated that rezoning provides significant net benefits to the community, even accounting for perceived heritage impacts. I therefore recommend that the subject land be included in the MUL and rezoned for future urban development at the earliest convenience.
107. I also submit that the NoR be withdrawn for the reasons outlined above.