BEFORE THE HEARINGS COMMISSIONERS FOR THE WAIKATO DISTRICT COUNCIL

	BUCKLAND LANDOWNERS GROUP
PARTIES REPRESENTED	MIDDLEMISS FARM HOLDINGS LTD
AND IN THE MATTER	of hearing submissions and further submissions on the Proposed Waikato District Plan
UNDER	the Resource Management Act 1991

RURAL TOPIC – HEARING 18

STATEMENT OF ECONOMIC EVIDENCE FROM ADAM THOMPSON FOR MIDDLEMISS FARM HOLDINGS LIMITED AND THE BUCKLAND LANDONWERS GROUP

9 September 2020

Counsel Instructed:

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INTRODUCTION

- My full name is Adam Jeffrey Thompson. For the past 20 years I have provided consulting services in the fields of urban economics, property market analysis and property development advisory. For the past 16 years I have owned and managed two consulting firms that have provided services in these fields. I am presently the director of Urban Economics Limited.
- I have a Bachelor of Resource Studies from Lincoln University (1998), a Master of Planning from Auckland University (2000) and a Dissertation in Urban Economics from the London School of Economics (2014). I have studied urban economics at Auckland University and environmental economics at Lincoln University.
- I have undertaken over 600 economic and property market assessments for a range of private and public sector clients.

SCOPE OF EVIDENCE

- 4. I outline the costs and benefits of the Waikato District and the Middlemiss Submission recommended policy relating to rural subdivision of lifestyle blocks, and compare this to the Waikato District policy recommendation. The key attributes of the Middlemiss submission are:
 - Enabling the creation of a TDR in the Rural zone that occurs on a receiver site that does not have high class soil, as a result of:
 - the amalgamation of two Rural zone sites that have high class soil; or
 - the establishment of 3-5ha of native vegetation.

The key attributes of the Waikato District policy recommendations are:

- The parent lot must be 40 ha or larger;
- A maximum of one new lot may be created;
- The maximum parcel size is 1.6ha for a new lot, and the minimum size is 0.8 ha;
- If there is high class soil LUC 1-3 land on the parent parcel, a maximum of 20% of that land may be contained within the new lot.
- 5. The following reports have been referenced in this evidence.

- "Economic Aspects of Rural Subdivision", 24 August 2020, Dr Douglas Fairgray, Market Economics Consulting Limited ("the ME report").
- "Rural subdivision in the Waikato District", 23 August 2020, Professor Frank Scrimgeour, NZIBR, University of Waikato ("the UW report").
- "Section 42a Report: Hearing18: Rural Subdivision", 25 August 2020, Ms Katherine Overwater, Waikato District Council.

LIFESTYLE BLOCK DEMAND

6. Figure 1 shows the annual residential Building Consents for the Waikato District by Urban and Rural areas. There has been an increase of around 210 new residential dwellings consented per annum in rural areas of the Waikato District over the past 10years.

Year	Rural	Urban	Total			
2000	152	153	305			
2001	199	111	310			
2002	167	14 0	307			
2003	229	163	392			
2004	268	201	469			
2005	293	224	5 17			
2006	289	225	5 14			
2007	343	279	622			
2008	233	187	420			
2009	133	130	263			
2010	187	172	359			
2011	110	136	246			
2012	158	155	313			
2013	18 3	282	465			
2014	178	330	508			
2015	18 0	397	577			
2016	274	567	841			
2017	289	387	676			
2018	233	437	670			
2019	296	571	867			
10-year	20.9	343	552			
Average	209	545	552			
10-year	2.088	3 4 3 4	5 522			
Total	-,200	5,201				
Source:Stats NZ						

Figure 1: Rural Building Consents Waikato District

 Figure 2 shows the occupied household count Census data for 2006, 2013 and 2018. The data confirms that there has been an increase in the number of households of around 200-210 per annum in rural areas of the Waikato District.

Year	Rural	Urban	Total
2006	10 , 929	8 , 670	19,599
2013	12,336	9 , 699	22 , 035
2018	13 , 374	11 , 538	24 , 912
2006-2013 p.a. Avg.Growth	201	14 7	348
2013-2018 p.a. Avg.Growth	208	368	575
Source:StatsNZ			

Figure 2: Rural Household Growth 2006 - 2018 Waikato District

8. Figure 3 shows the location and quantity of new lifestyle blocks (of 0.4 – 10 hectares) created between 2002 and 2020. On average 193 lifestyle blocks were created annually. The main location was around Hamilton City. Another key location was near the southern boundary of Auckland. Overall there was a wide distribution.

Figure 3: Additional Lifestyle Blocks Created 2002-2020 (0.4 – 10 hectare)



Source: LINZ

ParcelSize (m²)	Number	Hectares
4,000 -5,000	90	40
5,000 -6,000	920	490
6,000 -7,000	370	240
7,000-8,000	290	210
8,000 -9,000	310	260
9,000 - 10,000	190	18 0
4,000 – 10,000	0 16, 2	1,420
10,000 - 20,000	820	1,090
20,000 - 30,000	220	550
30,000 - 40,000	10 0	350
40,000 -50,000	60	290
50,000 -60,000	40	200
60,000 -70,000	30	170
70,000 -80,000	20	14 0
000,00-90,000	20	16 0
90,000 - 100,000	10	90
Total	3,480	4,460
Lots Per Annum	193	-

Figure 1: Additional Lifestyle Blocks Created 2002-2020 (0.4 - 10 hectares)

Source:Urban Econom ics,Corebgic,LNZ

9. Based on the Building Consent data, the increase of households estimated by the Census, and the increase in new lifestyle block parcels, it is concluded that the annual uptake or demand for lifestyle blocks in the Waikato District is 200 per annum. This rate of demand is expected to continue over the medium to long term.

CAPACITY FOR ADDITIONAL LIFESTYLE BLOCKS

- 10. Figure 4 shows the total subdivision capacity, as enabled by the Waikato District recommended policy, and the existing lifestyle block lots without dwellings. The Waikato District recommended policy would enable 7,800 additional lifestyle blocks. In addition, there are 2,800 existing lots that are between 0.4 and 10 hectares that do not have a dwelling (i.e. they form part of an existing farm) and could be used for a lifestyle block. In total, Waikato District has potential for 10,600 additional lifestyle blocks.
- 11. At an annual demand of 200 lifestyle blocks per annum, this indicates the Waikato District recommended policy would enable 53 years of lifestyle block demand to be met (10,600/200=53). This is a central consideration for the districts rural subdivision policy, as additional lifestyle block subdivision will occur without constraint (in terms of quantity) for the foreseeable long-term future.

	Sı	ubdivision Capc	ity	Existing Capacity	TotalExisting Lots	
Zone	General Conservation Total (0.4-10ha)		& Subdivision			
	Subdivision	Subdivision	Subdivision	withoutDwelling	Capacity	
Rural	1 , 14 7	207,207	3,354	2,424	5 , 778	
Country Living	1,780	-	1 , 780	387	2 , 167	
Village	406	-	406	-	406	
Village 1000	2 , 261	-	2,261	-	2 , 261	
Total	5,594	2,207	7,801	2,811	10,612	

Figure 4: Capacity for Additional Lifestyle Blocks in Waikato District

Source:ME Consulting

LIFESTYLE BLOCK SUBDIVISION ON HIGH CLASS SOIL

- 12. At a rate of 200 lifestyle blocks per annum, in the order of 2,000 hectares will be transferred from rural to lifestyle block use per decade (assuming an average of 1.0 hectare per lifestyle block).
- At present there is 16,150 hectares of land used as lifestyle blocks in the Waikato District. This will increase to 18,150 hectares by 2031. Dr Fairgray estimates a similar rate of increase in lifestyle block land, from 16,150 to 18,760 hectares (Table 3-4, the ME Report).
- 14. The following figure shows the increase in land used for lifestyle blocks within the Waikato District over the period out to 2061, under the Waikato District recommended policy. This is forecast to increase from 3.8% of all land in 2021, to 4.3% in 2031 and 5.7% in 2061.

Year	Lifestyle Block Land (hectares)	TotalW aikato District Land Area (hectares)	% Lifestyle Block Land Use		
2021	15 0 , 15	424,700	3.8%		
2031	15 0 15,	424,590	4.3%		
2041	20 , 150	424,450	4.7%		
2051	22 , 150	424,380	5 2%		
2061	24 , 150	424,700	5.7%		

Figure 5: Lifestyle Block Land Use Waikato District 2021-2061

Source:Urban Econom ics, ME Consulting

- 15. The distribution of the additional lifestyle blocks is estimated by Dr Fairgray in Table 5-6 (the ME Report). He estimates that these lifestyle block will be distributed relatively evenly across the region. I agree that there will be an ongoing, relatively wide distribution as future subdivision will reflect the historic pattern shown in Figure 3.
- 16. Dr Fairgray estimates that 52% of rural lots have some high-class soil (paragraph 4.7). The Waikato District recommended policy allows subdivision to occur on land that has high class soils as follows:
 - General Subdivision: 20% of a properties land with high class soil can be included in new lifestyle block. For example, if a 40 hectare lot has 5 hectares of high class soil, 1 hectare can be subdivided into a lifestyle block.
 - Conservation Subdivision: Land with high class soil can be subdivided and used for subdivision of lifestyle blocks.

- Country Living, Village and Village1000 Zones: Land with high class soil can be subdivided and used for subdivision of lifestyle blocks.
- 17. The Waikato District recommended policy would enable the subdivision of land with high lass soil for a large proportion of new lifestyle blocks. I do not have the data to provide estimates, however as an indication, one third of new lifestyle blocks could occur on land with high class soil under the Waikato District recommended policy. This raises the potential for a loss of highly productive agricultural land, in the order of 600-700 hectares per decade¹, which is an economic cost in terms of lost agricultural production (over and above using lower class soils for lifestyle blocks).

IMPACT OF LIFESTYLE BLOCKS ON AGRICULTURAL GDP

18. The following figure shows the net present value (NPV) generated from the construction and habitation of 200 lifestyle properties per annum, for each year out to 2060. This pattern represents the historic uptake of lifestyle blocks in the Waikato District of 200 per annum.

Period	NPV (\$million)
10 <i>-</i> year	\$1 , 121
20-year	\$2,385
30-year	\$3 , 612
40-year	\$4,714

Figure 5: NPV of Lifestyle Block Development

- 19. The calculation assumes that the construction value starts at \$400,000 per dwelling in 2021 and increases by 1% per annum (a conservative estimate). The average household expenditure is \$52,000 in 2019 and is assumed to increase by 1% p.a. (also a conservative estimate). Household expenditure is assumed to begin the year after construction (i.e. with a lag). The NPV discount rate applied is 5%.
- 20. The NPV of the construction and operation of new lifestyle blocks is substantial. Over a 10-year period the NPV is \$1,121 million. Over a 20-year period this increases to \$2,385 million, and over a 40-year period this increase to \$4,714 million. In broad terms, the economic value of enabling 200 lifestyle blocks per annum over the 20-30 years is in the order of \$2-3 billion. This is a significant economic benefit.

ECOSYSTEM SERVICES

21. A paper by Iwi Ecosystem Services Research Team (Massey University and Landcare Research/Manaaki Whenua), published in 2012, created an economic valuation of the

¹ 200 lifestyle blocks * 1/3 * 1 hectare =

ecosystem services in the Ngāti Raukawa tribal area. This paper valued various types of ecosystems that generate value for humans (directly, indirectly and passively) including estuaries, swamps/floodplains, lakes, rivers, horticulture, forest-scrub, forest, etc.

- 22. Direct value is value that is included in GDP, e.g. forests provide timber, while indirect value and passive value are those non-tangible values generated from the creation and subsistence of the ecosystem such as carbon sequestration, erosion control, water regulation, recreation, animal habitat, etc.
- 23. The valuation for a hectare of forest was presented as \$2,642 (in 2020 terms). This is comprised of \$562 of direct effects and \$2,080 of indirect effects. While these numbers may not be directly applicable to Waikato District, they provide some indication of the importance of unmeasured benefits of ecosystem services to the economy that are not captured by GDP figures.

AGRICULTURAL GDP

- 24. Figure 6 shows agricultural output, employee count and output per employee in the Waikato and New Zealand (2000 2018).
- 25. The Waikato region has accounted for around 20% of New Zealand's agricultural output and around 15% of New Zealand's agricultural employment historically.

	Ŵ	I aikato Region		New Zealand			
Year	Agricultural Output (\$m)	Agricultural Em ployee Count	Outputper Empbyee	Agricultural Output (\$m)	Agricultural Em ployee Count	Outputper Empbyee	
2000	\$998	15,400	\$64 , 800	\$5 , 165	101 , 900	\$50 , 700	
2001	\$1 , 482	15,500	\$95 , 600	\$7 , 124	102 , 900	\$69 , 200	
2002	\$1 , 681	16,600	\$101,300	\$8 , 048	112,700	\$71,400	
2003	\$1 , 083	16,000	\$67 , 700	\$5 , 750	108 , 600	\$52 , 900	
2004	\$1 , 185	15,500	\$76,500	\$6 , 251	111,400	\$56 , 100	
2005	\$1,201	15,500	\$77 , 500	\$6 , 218	111 , 600	\$55 , 700	
2006	\$1,014	15,400	\$65 , 800	\$5 , 344	109,400	\$48,800	
2007	\$1 , 207	15,800	\$76,400	\$6 , 182	111 , 800	\$55 , 300	
2008	\$1 , 951	16,000	\$121 , 900	\$8 , 969	112 , 600	\$79 , 700	
2009	\$1 , 360	15 , 900	\$85,500	\$7 , 134	112,300	\$63 , 500	
2010	\$1 , 696	15 , 700	\$108,000	\$8 , 654	109 , 600	\$79 , 000	
2011	\$2 , 186	16,200	\$134 , 900	\$10 , 643	111 , 900	\$95 , 100	
2012	\$2 , 036	17,500	\$116,300	\$10 , 622	111 , 300	\$95 , 400	
2013	\$1 , 792	17,300	\$103 , 600	\$9 , 130	113,000	\$80,800	
2014	\$2 , 713	18,500	\$146 , 600	\$13 , 111	118,800	\$110,400	
2015	\$1 , 386	17,700	\$78 , 300	\$8 , 240	118,500	\$69 , 500	
2016	\$1 , 228	17,600	\$69 , 800	\$7 , 691	120 , 800	\$63,700	
2017	\$1 , 939	17,800	\$108 , 900	\$11 , 108	118,300	\$93 , 900	
2018	\$2 , 132	17,800	\$119 , 800	\$12 , 431	121,400	\$102,400	

Figure 6: Agricultural Output Waikato Region and NZ 2000-2018

Source:Stats NZ

26. Figure 7 shows the Waikato regions agricultural output (deflated @ 2% p.a.) for the 2000 – 2018 period. There is an average increase over this time of around \$27 million per annum (2.2% per annum). This trend is expected to continue into the future due to ongoing technological advances improving productive output.



Figure 7: Agricultural Output Waikato Region 2000-2018

- 27. Dr Fairgray estimates the impact of future lifestyle block development on Primary Sector Value Added. He concludes that there would be a reduction in primary sector value added of -\$138 million to -\$276 million as at 2061 (Table 5-3, para 5.11) as a result of the Waikato District policy recommendation. This is a significant reduction in the future growth of output, of 38-75% less than would be expected if no additional lifestyle blocks were created. This reduction is due to the reduction of land in agricultural use.
- 28. There appears to be a calculation error in Dr Fairgray's estimate of the impact of future lifestyle block development on Primary Sector Value Added in his Table 5-3. I have recreated his table to account for this possible error. The results show a loss in value added of -\$8 million to -\$18 million as at 2061, rather than -\$138 million to -\$276 million, as at 2061 in present value terms. This indicates that the additional lifestyle blocks in the district would have practically no impact on agricultural value added over the 2020-2061 period. This makes sense given the total decrease of rural land as a result of the lifestyle blocks is minor (an additional 1.4%, an increase from 3.8% to 5.2%, of the Districts total land is taken up by lifestyle blocks over the next 40 years) however the annual real growth in primary sector production is 2.2% per annum. The

main implication being that one year of real growth in primary sector production would offset the reduction in rural land resulting from 40 years of lifestyle block development.

29. Dr Fairgray's main conclusion is that the economic impacts of lifestyle blocks on primary production are significant to the Waikato District economy (para 5.13) therefore does not appear to be supportable.

Sector		Added	Area Lost		Value Added Reduction		Value Added Reduction PV	
		2060	@ 0.8 ha	@ 1.6 ha	@ 0.8 ha	@ 1.6 ha	@ 0.8 ha	@ 1.6 ha
Horticulture & fruit growing	\$62	\$100	0.5%	1.1%	-\$1	-\$1	\$0	\$0
Sheep,beef & grain farm ing	\$123	\$195	1.0 %	2 1%	-\$2	-\$4	-\$1	-\$2
Dairy cattly farm ing	\$220	\$354	0.7%	15%	-\$2	-\$5	-\$1	-\$2
Poultry, deer & other livestock	\$44	\$70	1.3%	2.7%	-\$1	-\$2	\$0	-\$1
Forestry & bgging	\$43	\$69	1.3%	2.6%	-\$1	-\$2	\$0	-\$1
Agricultural, forestry & fishing services	\$ 119	\$191	0.9%	1,8%	-\$2	-\$3	-\$1	-\$1
Total	\$611	\$979	۶ 9 .0	1.8%	-\$8	-\$18	-\$3	-\$7

Figure 8: Impact of Lifestyle Blocks on Primary Sector Value Added

Source:ME Consulting,Urban Econom cs

POLICY IMPLICATIONS

- 30. The Middlemiss submission would enable several significant economic benefits. In particular:
 - If 25% of all new rural subdivisions in the district over the next decade are the result of TDRs created by the provisions of the Middlemiss submission, then 150-175 lifestyle blocks would be created on land that does not have high class soils that would otherwise have been created on land that does have high class soils.

ME CONSULTING REPORT

- 31. Dr Doug Fairgray has completed a report entitled Economic Aspects of Rural Subdivision, dated August 2020. This report assesses the economic costs and benefits of lifestyle block subdivision in the Waikato District. Some of the key findings of the report are:
 - Dr Fairgray states "The Rural zone also accommodates a significant share of the District community, with some 51.2% of lots in the Rural zone indicated as being in 'Lifestyle 1' use, occupying 21.6% of the total land area in the zone.", and notes "The Corelogic categorisation of lifestyle lots includes their potential according to lot size, and so may overstate the incidence of genuine lifestyle lots or properties": (para 2.12). In his table 3-4 he estimates that of the 424,700 hectares of land in the Waikato District, 16,150 hectares (3.8%) is used for lifestyle blocks. This estimate of 3.8% more accurately reflects the actual land used as lifestyle blocks in my opinion because the Corelogic data applies the

definition of lifestyle to some larger lots (e.g. 10-40 hectares) that are in rural production, and these should not be considered to be lifestyle blocks.

- It is relatively rare for smaller rural parcels to be amalgamated into larger parcels (para 2.3)
- Lifestyle blocks result in a loss of productive capacity on that land (para 2.20). I do not agree with this conclusion as many lifestyle blocks have productive agricultural uses.
- TDRs are used by local authorities to relocate new lifestyle blocks from large high-class soil lots to smaller low class soil lots which has the economic benefit of protecting agricultural output. (para 2.21)
- Lifestyle blocks have a range of economic benefits, including re-population of rural areas that have experienced population decline and therefore supporting commercial and public services (retail, schools, etc.). (para 2.23)
- The Waikato district has 16,150 ha of lifestyle block land (or 3.8% of total). Dr Fairgray has forecast this to increase to 22,160 ha of lifestyle block land (or 5.2% of total land) by 2061 (Table 3-4).
- Dr Fairgray estimates 53% of rural zoned sites available for subdivision in the Waikato have some high class soils, that is 28% of all rural zoned lots have some high class soils. (para 4.7)
- Dr Fairgray estimates the economic value of new lots created under the General Subdivision and Conservation Subdivision options is \$133-141 million and \$42 million respectively (Table 5-4).
- Dr Fairgray concludes the TDR mechanism may have a number of economic benefits, however that it needs to be "soundly structured" (para 5.40).

S42 REPORT

32. Ms Overwater concludes that there are some benefits with respect to TDR provisions, including the redirection of development away from highly productive soils (para 644). There has been no evidence presented on the number of lifestyle blocks that would potentially occur on productive soils. I estimate that in the order of one third of new lifestyle blocks may occur on highly productive land, which would be in the order of 600-700 hectares per decade, under the Waikato District recommended policy. This is a significant economic cost that could be avoided or offset by the District Plan if it had appropriate provisions.

- 33. Ms Overwater outlined her discussions with Auckland and Hamilton City Council staff has identified some costs with TDRs, most notably from an economic perspective that they develop in an ad hoc manner. Having reviewed the location of historic (see my paragraph 8) and the estimated future lifestyle block development pattern (see Dr Fairgray's para 5.27) there does appear to be a widespread distribution of lifestyle blocks that are enabled by the Waikato District recommended policy, and consequently development would likely occur across the district, however with concentrations near Hamilton City and the Auckland boundary.
- 34. Ms Overwater also notes that highly productive soil may be lost at TDR receiver locations, which is a cost (i.e. loss of agricultural output) however this could be addressed by the District Plan policy, and the relocation of the lots to defined areas.
- 35. Ms Overwater states that receiver locations may not have capacity. This is unlikely given the district has an estimate 52 years of capacity under the Waikato District recommended policy. I also refer to the evidence of Mr Hartley who has provided a spatial location for receiver sites based on supporting existing rural communities. The Buckland Landowners Group area, which is now adjacent to urban zoned land in Auckland, also has merits as a receiver area for TDRs from larger lot areas with high class soils, that are in horticulture production.
- 36. Ms Overwater notes the TDR subdivision would not enable subdivision in locations where demand is high (para 655) which would be contrary to WRPS policy. TDRs would however tend to direct new lots from less valuable (demanded) locations to more valuable locations, and there would generally be near to Hamilton City and the Auckland boundary. The practical implications would be shorter drive times for those commuting to work which has a lower economic cost, and also less potential CO2 emissions.
- Ms Overwater's conclusion appears to be contrary to Dr Fairgray's conclusion on the economic value of TDRs.

NPS-UD

38. The NPS-UD requires a range of housing choices and locations. In particular:

Policy 1: Planning decisions contribute to well-functioning urban environments, which are urban environments that, as a minimum have or enable a variety of homes that:

(i) meet the needs, in terms of type, price, and location, of different households;

Policy 2: Tier 1, 2, and 3 local authorities, at all times, provide at least sufficient development capacity to meet expected demand for housing and for business land over the short term, medium term, and long term.

39. The Waikato District recommended policy would enable the demand for approximately 200 lifestyle blocks per annum to be met within the District. This is consistent with the historical rate of uptake and would represent a small fraction of the regional housing demand (in the order of 9%). On balance, I support the proposal for a small proportion of future households to reside on lifestyle blocks, and consider this to have economic benefits that are consistent with those sought by the NPS-UD.

PROFESSOR FRANK SCRIMGEOUR REPORT

40. I agree with most of the findings in Professor Scrimgeour's report, in particular his opinion of an appropriate objective function for rural zoning:

"An appropriate objection [sic] function for a rural zone is to maximise the net benefits within the zone from productive activities and non-market value from zone activities plus the net effects of any external effects on other zones, less the net costs of the infrastructure and service costs to the Council less any other external effects on infrastructure and the environment resulting from the associated land use and population associated with zone rules and regulations." - Professor Scrimgeour, p. 7-8

- 41. This objective provides the necessary scope to include considerations of the impact of ecosystem services for the Waikato District. Specifically, through the improved productive capacity generated through well-functioning ecosystem services and the positive environmental impacts generated.
- 42. Professor Scrimgeour also brings up the imposed costs of restrictive subdivision rules on existing landowners:

"More restrictive subdivision rules reduces subdivision activity. This imposes losses on those who would have subdivided (the capital gain not achieved though land use change – representing gains from rural living) but provide benefits through the greater area of productive land; the greater productivity from that land; and the sustained rural landscape and character." - Professor Scrimgeour, the UW report p. 8

43. While I agree with Professor Scrimgeour on the imposed costs of restrictive subdivision rules on existing land owners, he asserts, without evidence, that unsubdivided land yields greater productivity.

- 44. While this may be true in some instances it cannot be concluded prima facie as the marginal productivity of land approaches zero.
- 45. Thirdly, Professor Scrimgeour dismisses a TDR approach on two grounds:

"Firstly, there needs to be an adequate area of land where there is potential for the development right to be transferred to. Secondly, preliminary analysis suggests that at best it will have a modest impact on the issue relative to the complexity of the process from the perspective of citizens and Council personnel." - Professor Scrimgeour, p. 9

- 46. While I agree that an adequate area of land is needed for a TDR policy transfer, I do not agree that this is a reason to not have a TDR policy. A TDR policy should be available for those land owners with an adequate area of land based on the numerous benefits of TDR policies already outlined.
- 47. The second stated reason dismisses the tangible benefits of a TDR policy on the grounds that the policy must be necessarily complex. This reasoning is not standard practice for a cost benefit analysis as the relative benefits and complexities have been stated and not analysed. Further, I doubt the "complexity" of a TDR policy, which has been successfully implemented in the case of Auckland, would have much weight to its benefits. I have considered the draft rules proposed by Mr Hartley, and he has endeavoured to ensure that the method is practical from a planning implementation perspective. I do not consider that transaction costs would be so significant as to render the rules unworkable, and notwithstanding this, any lifestyle blocks brought about through TDRs would have an economic benefit that would offset any additional implementation cost.

SUMMARY OF ECONOMIC COSTS AND BENEFITS

- 48. I expect the historic trend, of an increase of around 200 lifestyle/rural households per annum, to continue in the Waikato district. A TDR policy would encourage subdivision on less productive soils compared with the proposed Waikato District policy of allowing subdivision on child sites with up to 20% high quality soils.
- 49. I estimate that one third of rural subdivision will occur on high quality soils if the Waikato District recommendations are approved. There would be notably fewer lifestyle blocks created on land with high class soils if the Middlemiss submission is approved.
- 50. A TDR policy allows for revegetation of lower productivity land and provides indirect and passive benefits through the provision of ecosystem services. These benefits are estimated to have a value in the order of \$2,600/ha annually. As an example, a 1ha

lifestyle lot providing 5 hectares of revegetation would generate \$13,000 of ecosystem service benefit annually, or \$179,000 in terms of NPV over 30 years (at a discount rate of 6%). If a quarter of new lifestyle blocks created over the next decade are as a result of TDRs created from revegetation the total NPV would be \$89 million. This is a significant economic benefit.

- 51. The NPV of the construction and operation of new lifestyle blocks represents a significant contribution to the Waikato District economy. Over a 10-year period the NPV is \$1,121 million. Over a 20-year period this increases to \$2,385 million, and over a 40-year period this increase to \$4,714 million. In broad terms, the economic value of enabling 200 lifestyle blocks per annum over the 20-30 years is in the order of \$2-3 billion. This is a significant economic benefit.
- 52. The costs of removing agricultural land is estimated by Dr Fairgray to be between \$51 million and \$102 million in NPV terms (plus an additional 20% of negative indirect effects e.g. reduced agricultural processing). This is a total negative impact of \$61 million to \$122 million NPV. I believe this estimate is incorrect and the NPV is in the order of -\$3 million to -\$7 million. This is a minor cost compared to the significant benefits outlined above.

CONCLUSIONS & RECOMMENDATIONS

53. The Middlemiss submission would not result in any additional lifestyle blocks being created in the Waikato District, however it would result in fewer lifestyle blocks being created on land that has high class soils. The Middlemiss submission would therefore result a net economic benefit that is greater than the Waikato District policy recommendation, and is therefore recommended for approval in respect of economic effects and in terms of analysis under s 32 of the Act (opportunities for employment and economic growth).

Adam Thompson

9.09.2020