

An industrial dairying preservation and promotion proposal?

**An analysis of the 'Highly productive
land' NPS**

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About Tailrisk economics

Tailrisk economics is a Wellington economics consultancy. It specialises in the economics of low probability, high impact events including financial crises and natural disasters. Tailrisk economics also provides consulting services on:

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5. General economics.

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An analysis of the ‘Highly productive land’ NPS

This paper provides a commentary on some aspects of the proposed National Policy Statement on Highly Productive Land. It has also served as a submission on the proposal. The paper discusses the followings:

- What is highly productive land, and how is it at ‘risk’?
- The relationship/disconnect with related policies: population growth; house prices; climate change and water quality.
- The depiction of the change as just a tidying up or regularizing of disparate treatments by councils of highly productive land under current legislation.
- The philosophical underpinning of the proposals.
- The response to the Treasury critique of the NPS.
- The arguments for protecting ‘highly productive’ land
- A review of the cost benefit analysis supporting the NPS.

The key conclusions are set out in the next section.

Key Conclusions

New Zealand’s ‘highly productive land’ is not being lost

‘Highly productive’ land is not being lost. It is just going into more productive uses that will improve the wellbeing of many New Zealanders.

The main effect will be to protect commercial dairying

The main effect of the policy will be to 'protect' commercial dairy farming from 'lifestyle' blocks. The NPS will protect 3.6 million hectares of land, including about 2.4 million hectares of dairying land. Present and future generations may not want commercial farming to be artificially protected. Some New Zealanders regard commercial dairy farming as unsustainable and even morally abhorrent.

The highly productive land NPS is inconsistent with the Urban Development Capacity NPS

It will reduce competition in the supply of urban development land and increase housing section prices.

Commercial farming is not being overwhelmed by the growth of lifestyle blocks

The most recent data suggest that the number of lifestyle blocks increased by less than 3 percent over 2010 to 2015. The number of blocks in the Auckland region actually fell by slightly.

Some 'highly productive' land is not economically productive

The average net return on intensive sheep and beef farms over the last decade was about \$250 per hectare. The lost output is about \$25 per urban section.

National Policy Statement not justified

The NPS is estimated to prevent a loss of net agricultural output of less than \$100,000 a year on the Ministry's adviser's most plausible assessment of its impact. This is not a matter of national significance justifying a national policy statement.

New Zealand is not at risk of not being able to feed itself

New Zealand is currently able to meet its fresh vegetable needs and export a significant proportion of its vegetable output from about 45,000 hectares of land. Market gardening has a long history of adjusting to urban growth and other pressures and there is plenty of land suitable for market gardening. The main impediment to adjustment in the sector is excessive regulation.

The contribution of lifestyle blocks to wellbeing in New Zealand is ignored

From a well-being perspective lifestyle blocks provide a range of advantages to people wanting to escape congested cities with over priced housing, to their vision of the good life in the country. These benefits have not been acknowledged or valued.

The cost benefit analysis was incomplete and flawed

The cost benefit analysis did not consider the impact on the expansion of urban land at all, and assumed that the constraints on lifestyle blocks would be costless. Only the benefits of the policy were counted. A robust cost benefit analysis would show significant costs.

What is highly productive land and how is being lost?

The headline argument for ‘protecting’ highly productive land it is an emotional, and even irrational, pitch made by the Ministers in the introduction to the consultation document. ‘Our land’ is somehow disappearing.

Our land is under threat

Our land is a precious taonga – an irreplaceable treasure and a source of life and wellness for our country. Our economy depends on our land, and our history and culture are tied to it.

New Zealand’s productive land is under threat and we have a duty to cherish and protect it for future generations.

We have already lost a lot of this precious resource. What we give up today is lost forever. If healthy soil resources are lost, they are not renewable in a human lifetime, which is why we need to act with urgency.

In this part we discuss what is ‘highly productive’ land and how it is ‘disappearing’.

Identifying highly productive land

The consultation document explains how ‘highly productive’ land is identified.

The most common system councils use to classify highly productive land is the Land Use Capability (LUC) system, which considers physical factors (rock type, soil, slope, severity of erosion, and vegetation) as well as inventory factors (climate, the effects of past land-use, and potential for erosion). Under the LUC system, land is categorised into eight classes according to its long-term capability to sustain one or more productive uses. Land that is classified as Class 1 under the LUC system is the most versatile and has the fewest limitations for use, while Class 8 is the least versatile with the highest limitations for use.

So the highly productive land definition is based on a categorization system largely driven by the physical characteristics of the land. The flatter the land (a slope of 20 degrees will place land in category four), and the deeper and richer the soil, the higher the category. The definition depends critically on an arbitrary cut-off

between 'highly productive' and non-highly productive land. Categories 1 and 2 are always regarded as 'highly productive', and cover about 1.5 million hectares, while some authorities use a 1-3 definition, which cover 3.6 million hectares. A 1-3 definition will be used as the default while authorities are getting their own plans in place, but it appears that this much more expansive definition could become the norm. Highly productive land is also referred to as versatile land because it can be used to produce a variety of agricultural outputs.

Much highly productive land has low economic productivity

Importantly, 'highly productive' is defined solely in terms of the land's physical capacity to grow agricultural products. It is not a measure of its economic productivity. Much 'highly productive' land is actually relatively unproductive in economic terms, compared to competing economic uses. In particular the economic productivity of farmland on most urban fringes will be a small fraction of its productivity for housing and commercial purposes.

Nor is highly productive land necessarily the most economically productive agricultural land. Some vineyard and orchard land is not defined as highly productive land, because it is not versatile. The land may only be good for growing grapes or fruit. However, despite the lack of logical coherence (to the extent that there is any logic in the proposals at all), the intent is that this land could still be captured by the NPS.

However, this land can still have unique characteristics that may warrant it being included in the scope of this proposed national direction. The intent of this proposed policy is to give councils and their communities the flexibility to identify land that has a lower LUC class rating (i.e. the less versatile land of LUC Classes 4–8), but also contains special properties that make it highly productive and worth protecting (e.g. suitability of the climate, water availability, size of the area of land).

So in other words there are no constraining rules. Councils can, effectively, restrict economic activity in rural areas in any way they see fit. This is a charter for local authority central planners, and marks the final demise of the original intent of the Resource Management Act. This was meant to be an impact based framework, removing the capacity of councils to arbitrarily impose their own views of what is an acceptable economic use of land, and what is not. The requirement for councils to give consideration to the loss of 'productive land' was deliberately scrapped. Some councils, at least partially, complied with the intent of the act, but others sought to defeat it. The latter approach is validated and reinforced by the proposed National Policy Statement.

What land will be affected?

The consultation document is almost bereft of information of the kinds of farming that will be 'protected' by the policy statement.¹ However, we can get a rough idea by looking at the map of the 1-3 class lands and the activities that are mostly performed there. The most protection will go to dairy farming. Dairy farms cover 2.4 million hectares (though not all of this is used for dairying farming) and the great bulk of this will be on highly productive land. However, the consultation document leaves the impression that swaths of horticultural land is at risk. But vineyards, kiwifruit, other orchards and vegetable growing cover only about 135,000 hectares. Cropping accounts for around 250,000 hectares, and the rest of the HPL will mostly be other pastoral farming (mostly sheep and beef).

Sheep and beef farming, has low economic productivity. The Beef and Lamb Economic Service puts the average economic surplus for intensive finishing farms in Northland, Waikato and the BOP for 2019-20 at \$456 a hectare (in a particularly good year), and the return on assets at 1.6 percent. The average surplus over the past decade has been about \$250, and the average return 1 percent. So if a hectare of land produced 10 urban sections, the average expected annual loss of agricultural net output would be about \$25 per section. Dairying profitability varies significantly from year to year and from farm to farm, but even assuming an operating profit of \$3000 a hectare, the loss in net output per section would only be \$300 per year.

Market gardening appears to be a particular point of sensitivity, and will be generally be restricted to 1-2 land. But market gardening only accounts about 35,000-45000 hectares², and that amount has been more or less constant over the last decade. That land produces most of the fresh vegetables consumed in New Zealand (worth \$1.0 billion) and about \$600 million of exports³.

Interestingly, the industry consultation feedback does not fully support the theme in the Consultation document that the primary industry is under assault through land loss. They say there is plenty of land in New Zealand and there is an acknowledgement that it can be appropriate for some activities (especially market

¹ There is a reference in the document that the amount of land **previously** used for vegetable growing decreased from 100,000 hectares in 2012 to 70,000 in 2016. Logically this means that 30,000 hectares must have gone back into vegetable growing, which is not quite the picture the document was trying to convey. It appears that information is some kind of mis-statement because we have been unable to match it with the reported agricultural census results. The 2017 census reports the area in outdoor vegetable growing as about 35,000 hc. (Ic6580 total outdoor area used for growing vegetables and cooking herbs). Freshfacts NZ appears puts the land in vegetables at 51,000 hc. in 2002 and 45,000 in 2018. The decline was due to a reduction in some processed vegetables and increased productivity. Less land was required to grow some crops.

² Agricultural censuses 2002, 2017

³ Freshfacts

gardening) to move as cities expand. Their main issue was with regulatory constraints.

The higher value agricultural activities mostly do not 'need' protecting. Developers will not be queuing up to convert golden kiwifruit orchards (selling at \$1.3 million per hectare) to lifestyle blocks, and similarly with vineyards. However, If these industries come under financial stress then the capacity to sell lifestyle blocks might provide some relief, but this could be precluded under the policy.

Nor does vegetable production really need protection. Certainly, some market gardening land has been swallowed up as cities, in particular Auckland, have expanded. But they are replaced by market gardens on less expensive land. The following passage from an Auckland council technical report⁴ illustrates the point

In the 1850s, over 3,000 hectares of cultivated land was located in Mt Eden, Three Kings, Manukau Road, One Tree Hill, Mt St. John and Tamaki; the majority situated on basaltic soils known as Auckland's traditional horticultural soils, by Māori and the early settlers. Early 1870s marked the arrival and establishment of Chinese in and around Auckland and from the late 1870s Chinese growers were found spread throughout the Carlaw Park, Khyber Pass, One Tree Hill, Mt Eden, Mt Roskill, Meadowbank, Mt Wellington and Panmure areas (Coleman 1967). Being regarded as the traditional horticultural soils, if a soil did not have the red chroma associated with basaltic soils it was considered unsuitable for vegetable cropping (Coleman 1967). This can also be said to be the case for some growers to this day, however these areas no longer exist for vegetable growing operations and have since "bowed" to urban development. Coleman (1967) reflects that only less than 20 years ago (i.e. late 1940s) Panmure, Mt. Wellington and Avondale were still renowned as vegetable growing areas.

Similarly market gardens have moved on from Mangere and Manurewa. Obviously none of these successive waves of change resulted in Auckland coming close to starvation, nor will future changes lead to fundamentally different outcomes. There is suitable land elsewhere and with global warming more will become frost free and growing seasons will be longer.

While the document gives the impression that Auckland market gardening has been under assault, the reality is that the area actually expanded from 4748 hectares in the 2002 agricultural census to 6574 hectares in 2017.

⁴ Auckland's Elite and Prime Land: Similar Messages and Continued Trade-offs 54 Years Later October 2013 Technical Report 2013/050

An example of the availability of horticultural land further afield is an assessment by the Taranaki development agency⁵, that indentified 90,000 hectares of land that was suitable for horticulture in Taranaki.

How is the HPL land ‘disappearing’?

The amount of the land that is lost to urban expansion is trivial in relation to the identified problem of the impact on food production and exports. What appears to be the major concern is the amount of land lost to so called ‘lifestyle’ blocks. We are told that there are about 175,000 lifestyle blocks covering 872,000 hectares. The 2018 MFE document *Our Land* reported

that over 40 percent of these have been established since 1998 – an average of 5,800 new blocks a year. In Auckland, 35 percent of the most versatile land is occupied by rural lifestyle properties.

This leaves the impression that there is an ongoing wave of lifestyle conversions on highly productive land. What was left out was that on a national basis only 17 percent of lifestyle blocks were on highly productive land in 2011, and that the pattern of growth since the RMA has come into effect seems to have largely petered out. The Market Economics cost benefit analysis paper reported on the growth in the number of lifestyle blocks up until 2015 in 6 districts, including Auckland. The total number increased from about 38,000 in 2010 to 39000 in 2015. In Auckland the number actually fell slightly.

The term life-style block sometimes has the negative connotation of townies somehow snatching land off ‘legitimate’ and ‘authentic’ traditional farmers, converting productive land into rural leisure centres. The reality is that what is a ‘lifestyle’ block is not well defined, but typically capture smaller plots that are used for non-traditional uses for the area. Some provide a horticultural income. They have a higher value per hectare than traditionally farmed land, partially reflecting artificial constraints on subdivision imposed by councils. Nor, of course, was the land in someway unfairly obtained. Farmers choose to subdivide because it is profitable to do so. Planning constraints on competition often means that a few lucky farms get large windfall gains while the rest miss out.

When is highly productive land lost?

The land, of course, is not ‘lost’. It has just gone into more highly productive uses which is reflected in a higher market value. And these blocks are highly versatile. In

⁵ The Potential for Horticultural Development in Taranaki 2014 by the Taranaki development agency Venture Taranaki

addition to housing services they may: produce vegetables and fruit for home consumption and sale; provide opportunities for recreation; grow trees to sequester carbon, or to support native birdlife, and so on.

Even taking the view that it is only agricultural production that matters, there is some evidence that agricultural production actually goes up when conversions occur⁶. From a well-being perspective these blocs provide a range of advantages to people wanting to escape congested cities with over priced housing, to their vision the good life in the country.

For many in the planning community, however this vision is anathema. The ‘good life’, they believe, is a small apartment in a city with a compact urban form. People should be not be permitted to escape from what the planners know is good for them.

So when the land is described as being lost, what is really meant is that the land is being lost from large scale commercial farming (and that people have been lost from the urban lifestyle). It is conceded that in principle the land could revert to commercial farming, but it is argued that in practice this hardly ever happens.

Subdivision of land is legally reversible: smaller parcels of land can be re-aggregated into larger parcels. However, once a subdivided, small parcel of land is valued by the market as a lifestyle block, and a residence is constructed on it, it is unlikely to revert to ‘normal’ rural land use. The key reason for this is the increased value of the property per hectare. When a large house is present, this sunk cost is included in the market value but may not be of value to a commercial producer.

To tease out the logic here, suppose dairy land worth \$40,000 a hectare is split into 6 hectare lifestyle blocks, with the land then being worth \$80,000 a hectare for its lifestyling properties. The purchaser builds a \$500,000 house. The next year there is a boom in international dairy prices and dairy land is suddenly worth \$150,000 a hectare. The land is now worth more for dairying (\$900,000) than lifestyling (\$480,000), but because of the sunk cost of the house (bringing the cost to

⁶ According to De Luca ([2009](#)De Luca R 2009), three surveys conducted in Western Bay of Plenty between 1996 and 2005 showed a consistent relationship between new lot sizes and primary production loss—up to 66% of properties less than 4 ha and up to 82% of those less than 1.5 ha were not being used for any productive purpose at all. On the other hand, on 29% of lots there was an increase in production following subdivision, generally because of a change from pastoral use to more intensive land uses. These more productive lots tended to be between 3 and 8 ha in size. On a weighted average basis it is possible that overall production could have increased.

\$980,000) the dairy farmer will not purchase it and there will be an efficiency cost of \$420,000. In retrospect the house should not have been built.

The weaknesses in the logic are: first, future expectations of dairy prices are already embedded in land prices and the 'inefficient' decision argument depends on a market price that is well outside current market expectations. More generally, if the possibility that investments could turn out in retrospect to be suboptimal, was grounds for councils stopping investments from proceeding, then all subdivision and building consents could be conditional on councils' views of the future.

Secondly, in many cases most of the land could revert to the higher productive use, even if a house had been built. The lifestyler, could carve off, say , 5.5 hectares and sell it back to the farmer (albeit at a discount to the extent that it might be more difficult for the farmer to manage).

If there is a problem here it may be largely due to regulation. Minimum land size requirements may prevent the transaction. Minimum block sizes have been used by Councils to reduce demand for lifestyle blocks and may have artificially increased the 'loss' of land in some cases. A lifestyler who might have preferred a 3 hectare block is forced to buy 6, even if their valuation on the additional 3 hectares is very low.

For the benefit of all New Zealanders?

The other bromide here is that productive land will be preserved for future generations of New Zealanders. But it won't. It will be preserved, in the case of dairy farms for the benefit of the small number of New Zealanders who might have the capacity and interest to engage in commercial dairy farming sometime in the future. The cost is that some lifestyle blocks and urban sections won't be available to a much larger group of New Zealanders in the future. And some New Zealanders don't want dairy farms preserved in their name. Vegan and vegetarians might not want to be associated with a policy that protects and promotes enterprises that enslave and murder animals⁷.

To summarise the discussion. The idea that the NPS is somehow necessary to preserve New Zealand's land is an obvious nonsense. The land and its soil is not disappearing. The real objective is to artificially protect 'traditional' commercial agriculture and to prevent too many people from living in the countryside, where and how they want to live. While the policy may reflect commercial self-interest and a reflexive nimbyism by some incumbent farmers, for the most part it appears to be driven by council planners and associated professionals, who wish to impose their vision of the how people should live.

⁷ This is not a view we share but we can understand how vegans and vegetarians might feel about the policy.

Consistency with other policies

Climate change and water quality

The Government's policies on climate change and water quality will put pressure on pastoral farming profitability and there must be a reasonable expectation that production will contract. Some strong proponents of these policies see dairying, in particular, as an unsustainable activity and would welcome that outcome.

Associated, and possibly more threatening developments (for farmers), are changes in consumer preferences and the development of cost competitive artificial milk⁸ and synthetic meat. Opinions, of course, vary about the implications for the New Zealand pastoral industry, but there is a possibility that within 30-50 years the dairy industry could go the same way as most of the New Zealand wool industry. Wool has been largely replaced by cheaper and preferred products, and is now mostly a valueless by-product of meat production.

Given this context the argument in the consultation document that the dairy industry has to be protected now to preserve it for the 'benefit' of future generations, and that this is preferred 'sustainable' course of action, simply doesn't make much sense.

House prices

The Government has said that its strategy to address the shortage of housing, and the socially and economically destructive rise in house prices, is to both build up and out.

But this NPS runs in the opposite direction. It is designed to reduce the supply of land for urban housing. There will also be a similar effect from the constraint on life style blocks. Fewer people are likely to leave the city for a country life style, and fewer houses will be freed up for people who prefer to live in the city.

It is stated in the consultation document that the proposed policy statement is 'complementary' to the NPS on Urban Development Capacity, and in response to Treasury criticisms on the supply impact, it is argued that all the policy is doing is redirecting supply, not reducing it.

The purposes of the NPS on Urban Development Capacity are worth repeating.

⁸ For a reasoned discussion of the possibilities see for example Synthetic foods to have 'major impact' within 10 to 15 years - Sir Peter Gluckman [Tom Pullar-Strecker Stuff](#) , Oct 12 2017

*This national policy statement aims to ensure that planning decisions enable the supply of housing needed to meet demand. This will contribute to **minimising artificially inflated house prices at all levels and contribute to housing affordability overall**. Currently, artificially inflated house prices drive inequality, increase the fiscal burden of housing-related government subsidies, and pose a risk to the national economy*

Competition is important for land and development markets because supply will meet demand at a lower price when there is competition. *There are several key features of a competitive land and development market. These include providing plenty of opportunities for development. Planning can impact on the competitiveness of the market by reducing overall opportunities for development and restricting development rights to only a few landowners.*

Quite how the proposed NPS complements these objectives is difficult to understand. First, many cities and towns are surrounded by ‘highly productive’ land. The policy statement will necessarily limit development options and inhibit the growth of a competitive market in new development sites that would drive land prices down. While expansion onto rural land is not ruled out altogether, the NPS raises the bar, and strengthens the hand of the council planners who are committed to the compact urban form model.

Second, a casual look at the Auckland map of land types shows that most of the best development sites are on highly productive land. While there may be sufficient ‘less productive’ land available, it may not be as well located and will be more expensive (steeper land) to develop. Taking the highly productive land out of the market must drive up prices. None of these possibilities were picked up in the cost benefit analysis. It was explained that it would be too difficult to make the comparisons on development costs. This was disingenuous. It would have not have been impossible to get some developers to provide ball-park estimates of the relative cost of development on some illustrative sites, and scale up the numbers. If, say, the additional costs were \$20,000 a section and 50,000 sites were affected over time, then the undiscounted cost would be \$1 billion, not a trivial number.

Population policy

Given many councils’ reluctance to allow freer land markets to function, a rapidly rising population has driven up house prices. The population growth was largely driven by an immigration policy that allows one of the highest immigration rates in the developed world. With a more natural, and economically rational, policy that targeted something like net zero immigration, New Zealand would soon settle to a stable population and the pressures on house prices, and the demand for rural land, that the government and planners seem to fear, would be less of an issue. Over 50

years a 1.5 percent immigration driven population growth doubles the population. Over 200 years the population will be 20 times bigger. Despite the demonstrable failure, of the 'immigration as critical economic enabler' mantra, policy makers seem unable to grasp the link between immigration driven population growth and land pressures.

A clash of economic philosophies: neo-stalinism versus neo-liberalism

It is unlikely that the arguments set out in this paper, and elsewhere, that restrictive land development policies are having damaging effects on societal wellbeing and economic efficiency for little benefit, will have any effect on the planning mentality behind the proposed NPS. That is because the planners⁹ are largely impervious to conventional economic argument, having a fundamentally different world view. This perspective is articulated in one of the papers by a group of Auckland city planners that was cited in the consultation document 'The odds appear stacked against versatile land: can we change them?' ¹⁰

The planners' perspective

In the authors' minds there is an acute tension between food production and buildings, and agricultural production has to be defended. The paper appears to be, in part, a response to the Productivity Commission's 2017 report that argued for greater regard to market forces in land use decisions. The tone is somewhat strident.

*An age-old argument, that tends to lack substantiated and sound evidence, is that land is worth more under development than under cultivation. Such arguments depend on a narrow **neoliberal** perspective, tending to recognise the short-term benefits and ignore the longer term costs, assuming the fiction of a free market – a system, which can't predict the needs and aspirations of future generations.*

Their competing perspective, which could be termed 'neo-stalinist', is that only planners can correctly foresee the future and the needs of future generations.

⁹ When we talk about planners we are not talking about all planners or necessarily any individual or group. Rather we talking about a mentality. Our planners are an ideal type that embeds the mentality..

¹⁰ The odds appear stacked against versatile land: can we change them?

[Fiona Curran-Cournane](#), [Nancy Golubiewski](#) & [Laura Buckthought](#) from the Research and evaluation unit

More generally, planners tend to believe that all land-use should be centrally planned and they are the people to do it. Planners tend to see rule based systems and the coercion that goes with them as natural and necessary.

‘Neo-liberal’ economists, on the other hand, tend to believe that ordinary people are the best judges of what is good for them, and that markets that express their needs should be freer to operate. They are sceptical about planners’ claims of omniscience and are alert to ‘government failure’. Planners and associated professionals have their own incentives and will be influenced by power, prestige and jobs (their own).

The second thread to the planning perspective is the physiocratic assumption that only agriculture is productive. The physiocrats were an eighteenth century school of French economists who believed that the wealth of a nation is generated solely by the land and that other activities are non-productive and parasitic. Of course economics has moved on since then, but the planners still refer to land as being unproductive if it is not used for farming.¹¹ Indeed these modern day physiocrats go even further. It is only traditional large scale agriculture that is truly legitimate. Lifestylers trying the country life are still essentially parasites and should be forced onto the least desirable land.

The third thread, which comes through most clearly in the Ministers’ introduction is a form of animism, soil worship.

Taken together the consultation document is a curious brew of neo-stalinist authoritarianism, physiocratic economics, and soil worship that makes rational debate about the issues difficult.

Cost benefit analysis doesn’t work

There is a further argument in the Auckland planners’ paper that cost benefit analysis doesn’t work for land use decisions.

Cost–benefit analysis (CBA) assessments have been critiqued for having various limitations when applied in such circumstances as costs and benefits of these land-use activities accrue over very different time horizons. While this is appropriate in some evaluations, it can be problematic where ecological thresholds exist or the natural resources and ecosystem services are not substitutable, as is the case for versatile land. Suggest the use of CBA should be restricted to the assessment of policies whose impacts do not extend far into the future.

¹¹ The Planning Commission reported a communication on the low level of economic literacy amongst planners which is behind their aversion to using land in an economically productive manner.

While the use of cost benefit analysis can be problematic for some environment decisions, it is difficult to see where the 'ecological threshold' is for the transformation of commercial dairy land into lifestyle blocks, or what 'ecosystem' services commercial dairying is providing. The idea that dairy farming and housing cannot be substituted lacks any economic or serious philosophical foundation, and is really not much more than a prejudice wrapped up in planning jargon.

The strange thing about the national policy statements is that the Urban Development Capacity NPS is solidly 'neo-liberal' while Highly Productive Land NPS is just as solidly neo-stalinist. Both are meant to apply to urban land expansion, but it appears the HPL –NPS will trump the Urban Development NPS.

However, the planners are stuck with the requirement to go through the cost benefit analysis process given the Government's expectations on good regulatory design. This exercise was done only grudgingly, and as the discussion on the cost benefit analysis below demonstrates, was deeply flawed.

The problem with this NPS is that councils will not conduct serious cost benefit analyses, and the consultation document provides an open invitation to do just that. The argument in the cost benefit paper is that incremental cost benefit analyses, based largely on market pricing, provides the wrong answers. It is only when you look at the impacts on the nation as a whole that the 'right' restrictive answer emerges. The argument is flawed, but Individual councils will be able rely on this mantra to take so called 'national' costs and benefits into account, and ignore more conventional cost benefit analysis results.

Tidying up current practice or a or a more fundamental change

We found that the depiction of the policy statement as largely a tidying up and regularisation of current practice under the RMA to be somewhat misleading. As we noted above the purpose of the RMA was to shift to an effects based regime and that it purposely removed the capacity of councils to have prescriptive rules based on their desire to 'preserve' traditional farming activities to the exclusion of other economic activities in rural areas. Some authorities complied with the spirit of the RMA, and we saw an increase in more productive use of agricultural land. Some sought to stymie the act, and hence we got the range of 'interpretations'.

The MPI argument

The consultation document tries to make the case that restrictions on the non-agricultural use of productive land were really in the RMA all along and that this has been clarified by the Courts.

The management of highly productive soils (land) is a relevant consideration under section 7(b) and 7(g) of the RMA, which refer to the efficient use and development of, as well as the finite characteristics of, "natural and physical resources". This has been clarified by the Courts, which have found that land/ soil is a resource that must be considered under sections 5 and 7 in relation to both present and future generations.

Despite this clarification, concerns have been raised by councils, soil scientists and primary sector representatives that the lack of explicit reference in the RMA to this issue is resulting in limited weight being given to highly productive land when making decisions on competing land uses.

The flaw in the argument

The limited weight to given to highly productive land is because consideration of the needs of future generations does not logically lead to the protection of 'productive land' and a bias against residential/commercial developments and lifestyle blocks. These will be also be available to future generations and we have no reason to believe that future generations will value commercial pastoral farming over lifestyle blocks and housing. Indeed they may well look back and wonder why commercial farming operations that allowed the enslavement and murder of animals was ever permitted, let alone be protected. How could such activities ever have been regarded as sustainable?

If we look at 7b and 7g of the RMA they more logically point to the conventional assessment of economic costs and benefits that some of the councils have been using.

(b) the efficient use and development of natural and physical resources:

Efficiency points to land going to its most highly productive use. There is nothing in the RMA that even suggests that only agricultural production counts in an efficiency assessment.

(g) any finite characteristics of natural and physical resources:

Land is a finite resource, which just points to the importance of using it efficiently. In particular, land is a constrictively finite resource for housing near urban areas, whereas agricultural production can be performed over a wider geographical radius while still meeting peoples needs. The finite resource consideration points, if anything, to a bias in favor of housing land development.

Notably it is mostly just in the minds of some lawyers, soil scientists and council planners that the connection between future needs and protecting highly productive land exists. Economists tend to look at the convoluted arguments used by scientists and planners to make the connection, with bemusement and frustration.

RMA should have been amended

So what the NPS really is, is an amendment to the RMA reintroducing the productive land requirement. A bill to that effect should have been introduced, titled *The industrial dairying protection and promotion bill* to reflect its true purpose and effect:

Arguments for protecting ‘highly productive land’

The market failures argument

It was argued in the Cabinet paper that there is a failure in the market for rural land that justifies a policy intervention.

There are two limbs to the ‘market failure’ argument. The first is that the market does not properly value the long term value of highly productive land.

This argument is nonsense.¹² Land, whether it is used for housing, commercial enterprises, lifestyle blocks or ‘traditional farming’ is valued on the basis of its future stream of benefits. The paper produces no arguments or evidence to support the assertion that there is some fundamental problem with how the land market assesses and values those future benefits.

However, what appears to be argued is that the price of dairying land, for example, will rise markedly in the future from a current price of around \$35,000 a hectare, to say \$150,000. So decisions made on its lifestyle value of \$100,000 a hectare will turn out to be wrong. Anything is possible but when we put some concrete numbers into the argument it becomes apparent that the planners’ claim to know the future better than the market is based on implicit pricing assumptions that are probably delusional.

¹² Nonsense is a strong word, but a fair description. It is perhaps not as strong as the ‘hogwash’ description used by Eric Crampton of the New Zealand Initiative. Other apt adjectives include: rubbish, balderdash, gibberish, blather, tripe, bilge, bosh, bunk, bull eyewash, clobberer, garbage etc., etc.

The second argument is that decisions that are made incrementally at the individual project level can generate the wrong result when the aggregate effects across the region and country over time are considered. The reasoning is that there are linkages from the farming sector to downstream processing and servicing that will be hit if commercial farming contracts. But again this is based on assertion rather evidence and is not well based in economic theory. A well developed set of linkages will make farming in that location more profitable and this will be reflected in land prices. There is no prima facie case for market failure in the land market.

All economic activity has upstream and downstream linkages, but this does not justify centralised economic planning for most of the economy. On the planners' logic the motor car should have been banned because it would have impacted on the linkages from the horse and cart industry to the wider economy.

There is no evidence that commercial farming is a special case that would justify a planning intervention. Rather, the opposite might be true. Most milk and meat is processed outside the districts they are produced in, so the linkages, at the local level are mostly fairly slight.

Highly productive land not substitutable.

A recurring argument is that highly productive land is not 'substitutable', especially the most elite soils. Again this is mostly nonsense. Their output can be substituted by equivalent soils a little more distant from the city, or if the supply of 'elite soils' is exhausted, then by slightly less productive soils. For most people a lettuce is a lettuce. It doesn't matter where it is grown. This is a case of planners grabbing words, that may be appropriately used for some environmental issues (for example can you really place a reliable monetary value on the existence of the tiger in the wild, that would compensate for its loss?), to give their arguments more emotional resonance. We doubt if the possible 'loss' of Pukekohe potatoes is quite as serious as the loss of the wild tiger.

The keeping your option open argument

Another way of expressing the long run value argument is that it keeps our options open for the future. Andrew and Dymond¹³, whose work is cited in the consultation document put the argument.

¹³ Andrew R & Dymond JR. (2012). Expansion of lifestyle blocks and urban areas onto high-class land: An update for planning and policy, *Journal of the Royal Society of New Zealand*. Volume 43, 2013 - [Issue 3](#)

The RMA establishes the promotion of sustainable management of resources as its overarching goal, where sustainability recognises potential impact on the ability of future generations to meet their needs. Given that we do not know the needs of future generations, it can be argued that we should leave options open to them, and it would then follow that non-renewable resources should be protected.

This is a hopelessly weak argument, that, if taken seriously, would mean that no one would ever make a decisions about anything that involved any sort of trade-off. Because the next generation might just possibly have different preferences, the decision would be left to them. But they in turn could not make a decision because they would have to leave it to the next genertion, and so on.

It is even weaker in the case of 'life-style' blocks, because they, are substantially reversible decisions. The next generation can convert lifestyle blocks back to dairy farms, though it is probably very unlikely that this would make economic sense.

Food security

One of the sillier arguments in the document is food security. Unless 'highly productive' land is protected we will not be able to feed ourselves, with fresh vegetables being the special point of sensitivity. It is also argued that local production is important to food security. We are already feeding ourselves and exporting about a third of the production using just 35,000 hectares of land, so the prospect of running out anytime soon is extraordinarily remote. If there are temporary shortages for particular products then imports can fill the gap.

in any plausible and relevant future there is no risk to New Zealand's capacity to feed itself, even if that were the policy goal. Food security is just a bogus, protectionist argument that has been used by various countries to exclude New Zealand imports over many decades, and the Ministry of Primary Industries should be embarrassed to be using it. They should be especially embassed given that maintaining New Zealand's role as a food exported is an objective of the NPS. If foreign food security advocates all got their way we wouldn't be exporting food.

The food security argument is used in the context of the debate about preserving the Pukekohe market gardens. To put some facts into the argument. Vegetables account for about 8 percent of New Zealanders' food budgets (Stats CPI weights). Auckland has about 20 percent of New Zealand market gardening land, (with Pukekohe accounting for more than half of that), but more than a third of its population, so a lot of its vegetable needs are imported from other regions. So the Pukekohe local component comes to about 2.5 percent of Aucklanders' total food expenditures.

Somehow, preserving that number is vitally important to Aucklanders' food security wellbeing. Obviously a nonsense argument.

Preservation of New Zealand's export sector

Highly productive land provides significant economic and employment benefits to the communities that surround them, and collectively underpins the value of New Zealand's primary sector. Half of our export earnings come from land-based primary production ; therefore the productivity of our land ensures New Zealand's position as a major food exporter.

There is no intrinsic reason why New Zealand should target a particular level of land based exports, and effectively subsidise the traditional export sector by prohibiting land from being used for other purposes. In any event the productivity of 'our land' won't ensure New Zealand's position as a major food exporter. If the demand for traditional pastoral products collapses with changing technology and consumer preferences, New Zealand may not be major food exporter in the future. Carbon farming could be the new big industry.

The supposed 'loss' of highly productive land has not impacted noticeably on New Zealand horticultural exports which seems to be the special area of concern. Indeed horticultural exports have been a success story, growing from around \$1.5 billion in 2000 to \$5.5 billion in 2017. Some of this is produced on what is officially described as lifestyle blocks.

Employment

It is argued that the NPS will help preserve rural employment. What this ignores is that the competing land uses will generate more employment in most cases. Lifestyle blocks generate demand for services which has helped reinvigorate declining rural communities.

Market Economics (M.e) (who did the cost benefit analysis) argued that the protection of farming jobs is a highly significant benefit of the NPS. However they presented some different evidence when they were arguing on the other side. In a report undertaken for the Manukau City Council in June 2005 entitled "Mangere-Puhinui Rural Zone Review – Horticultural Land Use Viability" they presented evidence that the cost of not allowing the land in question to be urbanised would be high:

- An urban business use was estimated to provide 230 times more jobs than intensive horticulture.
- An urban business use was estimated to provide 613 times the economic output of intensive horticulture.

Now that was a while ago; the facts of the case were different to the run of the mill conversion; and M.e may have had a road to Damascus conversion on the value of rural jobs since then. But we might have expected M.e to have made some attempt to assess the net job impact of urban and lifestyle conversions, rather than just asserting that preserving farming jobs in a particular location was good in itself.

Tourism

There is a passing argument that the 'threat' to the 'traditional' New Zealand rural character could negatively impact on the tourism industry. Tourists expect to see a pristine New Zealand rural landscape and could be disappointed if they don't. Tourists probably do expect to see sheep in the high country, and on green rolling or hilly countryside, but the policy statement will have no beneficial impact on these activities (except possibly negatively - more lifestyle blocks might be forced on to less productive pastoral land which otherwise would be grazing sheep).

Rather fewer tourists will have any expectations about the industrial scale dairy farming and the policy statement is largely designed to protect and enhance. But without the NPS a tour bus guide could be forced to change his commentary from:

*"we are now passing an industrial scale New Zealand dairy farm. It has 1400 cows managed on strict business principles. Bobby calves are taken from their mother at birth and slaughtered... any cow that is not highly productive is identified and slaughtered to maintain production at the highest possible level. As well as producing food for world markets processed in huge distant factories, this farm also produces more than 2000 tonnes of carbon emissions a year, and pollutes the waterways."*¹⁴

To

We are now passing what we call a lifestyle block area where New Zealanders can escape the stresses of city life on to a small farm, producing food more sustainably than large commercial farms. We will be stopping at the local farmers market in five minutes and you will have an opportunity to taste and buy. We will meet outside the giant micro-greens statue.... the biggest in the world.... in thirty minutes.

As for the Pukekohe market gardens, we doubt if many tourists have ever seen them, or would care if they were converted to lifestyle blocks.

¹⁴ This is not entirely fair to dairy farmers who have a business to run, but tour bus drivers do tend to be melodramatic.

Preserving New Zealand cultural values

There is also a passing argument that while New Zealanders are no longer farmers, we are 'attached' to traditional farming in some way, so protecting these farmers in some way protects our cultural heritage. Many people would take issue with that argument. As noted, for some livestock farming, particularly large scale dairying, is anathema, and should be stamped out, not preserved.

The stronger cultural argument, in our view, is that New Zealand, in contrast to the 'old country' allowed space and freedom. Rather than being crammed into a terrace house, they could have a quarter acre, and grow their vegetables and fruit and if they choose. The planners of course hate freedom and space. For them the more compact (cramped) the urban environment the better.

Some New Zealanders do have an attachment to farming but the ownership of a commercial farm is not open to them. But they can get a taste of the life by buying a lifestyle block and farm in small way. The purpose and effect of the NPS is to make that more difficult.

Loss of productivity

Here there is an obsession with preserving physical production of certain agricultural products at all costs, while the scale of the 'problem' is exaggerated.

The fragmentation of land into rural lifestyle properties as a key issue facing highly productive land. Economies of scale mean fragmenting land into smaller parcels reduces the productivity of the overall rural area. In addition, the creation of rural lifestyle properties typically involves the construction of driveways, dwellings, garages or utility buildings that further reduce the amount of land available for production.

This is the physiocratic argument again. Only agricultural output is 'productive' and the increased productivity of rural areas from the introduction of new activities is ignored. A single consultant, working remotely from his lifestyle block will be a many times more economically productive than the handful of sheep that were previously run on the plot.

Even taking the narrow view that only production from the land counts, In many cases home production by lifestyle (fruit, vegetables etc.) will exceed the value of the previous livestock production.

The obsession is all the more apparent in the concern that buildings and driveways will further reduce production. Maybe a tenth of a hectare will be 'lost' at worst. This is a case of the soviet style economic planners' obsession with physical production.

Reverse sensitivity – when new land uses conflict with existing uses

Reverse sensitivity refers to the vulnerability of an existing activity to complaints from newly located activities in close proximity that are sensitive or incompatible with that existing activity (e.g. new residential dwellings next to a rural production activity). Reverse sensitivity effects are not unique to highly productive land or primary production, but they can be a particular issue for certain primary production operations (e.g. spraying, operation of noisy machinery, etc.). This can lead to complaints and subsequent constraints on these established operations

This is no doubt true in some cases but it certainly doesn't justify a blanket ban. There are more efficient ways to deal with the issue by assigning property rights that protect the interests of the existing farming activities.

Preserving the Queen street farmer?

Many vegetables are grown on highly productive land close to large urban centres. There may be some cost efficiencies in producing vegetables within a close proximity to these population centres. While a degree of inter-regional food supply will always be needed due to certain crops performing better in different regions, there is a growing desire from consumers for locally-grown food.

The cost efficiencies are captured in the price of the land. If consumers truly want local food, then the market could accommodate that. No one has to sell their rural land, so if a particular producers wants to forgo the capital gains from selling their land then they can hold on it and sell their local product at a premium if the demand is there.

The reality is that most consumers mostly don't really care whether their vegetables are grown locally or a bit further afield. The logic (and emotion) behind the NPS is that once land is used to produce vegetables it should stay that way for ever to preserve local production. If vegetables were once grown near Queen Street, then they should still be grown there. In this world 'Queen street farmer' would be a reality, rather than a perjorative term.

The effect of the policy statement, will be of course be to stop some would be 'lifestylers' growing their own food (which is increasingly difficult in an urban environment), which is as local as you can get. They can also sell there products to those who are most interested in local production, through farmers markets, small retailers and the like.

Community identity – the big carrot effect

The produce from highly productive land can also help shape a community's identity. Anecdotal information suggests that communities take pride in living in an area that is well

known for particular produce. Some communities have chosen to celebrate this with annual harvest festivals, regular farmers' markets and even erecting large novelty statues including a kiwifruit in Te Puke, various fruits in Cromwell and a carrot in Ohakune.

One of the threads in the paper is the expansion of life style blocks is a threat to cohesive local 'communities'. This is mostly sentimental and inaccurate. Ohakune is not, if it ever was, a community focussed just on carrot growing¹⁵. It is now largely based on skiing and other outdoor pursuits. Kiwifruit growing around TePuke is not under threat. How many people are buying up \$1.2 million a hectare gold kiwifruit orchards to turn into lawns, a swimming pool and a tennis court? Genuinely productive horticulture land is valuable and has an innate protection against the intrusion of the least productive lifestyle subdivisions.

We suppose that life styling blocks would be more acceptable if life-styling community erected large statues of alpacas and the like, outside the local coffee shops. This might be regarded as a bit tacky and passe' but it might be a sacrifice that lifestylers are prepared to make to get a better life.

The 'threat' to an 'imagined' community is discussed in a survey of Pukekohe market gardeners¹⁶. Pukekohe has a population of 31,500. There are 60, market gardeners in the locality, so the number of people with a direct interest in the industry might be two or three percent of the population. It is hardly a community vitally dependent on market gardening for its income and identity.

Only 16 of market gardeners actually answered the survey, so it was probably biased. Some of these growers were 'committed' to the land, but only half would encourage their children to take up the lifestyle. Their main concerns were: low profitability; excessive regulation by clueless regulators; 'reverse sensitivity', and supermarket buying practices. Notably lacking from the report was any detailed information on the key financial drivers of economic change: profitability and the price of the land for urban or lifestyle development. If the going rate was, say \$500,000 a hectare, then many market gardeners on the average 77 hc. property might happily take their \$37.5 million.

¹⁵ Though to be fair, a big turnip, swede and a parsnip have more recently been added to a children's park adjacent to the big carrot

¹⁶ 'Attitudes of a farming community towards urban growth and rural fragmentation—An Auckland case study: Curran-Courane et al'. 2016

Even if in the unlikely event these all of these farms were replaced by much more productive urban activities then the community wouldn't change very much, and exports would not be affected materially. Change would happen gradually, and over time the market gardening past would largely be forgotten. Vegetable production would simply increase elsewhere. Auckland would continue to be fed. The net impact might be a small decrease in dairy and sheep and beef production somewhere further afield.

The price of food

It is implied that the price of food will increase with the 'loss' of productive land.

The pricing of food is complex. However, ceteris paribus, when existing productive, high-class land is taken out of commercial production, food prices are likely to rise as supply reduces or supply is maintained by producing on land of lower quality.

Over time there has been no obvious movement in food prices despite the supposed 'loss' of land over decades. There is no reason to expect that future land 'losses' will make a material difference. Most food prices are set on international markets and a very small difference in New Zealand production will have no impact on these prices. Fresh vegetables tend to be non-traded goods and there might be a very small impact on vegetable prices, but even this is not clear. Prices are set by the cost of growing on the most marginal land, with the higher profitability of better located and more productive land being capitalised in land prices. With global warming (and carbon fertilisation) productivity in most areas will increase, so Pukekohe land should have ready replacements.

The overseas dimension

A reduction in the availability of highly productive land has been identified in other countries.

We are told that urban expansion will reduce the amount of Melbourne's vegetables grown on current vegetable producing areas. No doubt, but this is a natural part of urban growth and hardly constitutes an argument for doing anything in particular in New Zealand.

In the United States of America (USA), every state has enacted its own right-to-farm laws. These regulations seek to protect qualifying farmers and ranchers from nuisance lawsuits from newly-established rural dwellers who try to stop or reduce farming operations that they perceive as a nuisance.

This is not not really relevant in New Zealand, which is less litigious than the US, but it does point to the assignment of property rights. If the property right to conduct farming business without undue consideration to the new comers, sits with the

incumbents, and the new comers are fully informed, then the problem is largely solved. It doesn't require a ban on there being any newcomers. Some councils already inform newcomers of the 'risks' and inconveniences of living in mixed activity areas.

Both Oregon in the USA and Adelaide in Australia have long-standing planning regimes that restrict development on, and subdivision of, productive land.

And then must be tens of thousands of localities that do not have such laws. They prefer affordable housing, space and freedom over artificial constraints on what people can do. Germany has a right to build provision in its constitution.

And then there is the European Community

Europe is also putting protective measures in place for productive land. The 7th Environment Action Programme, which is guiding European Union (EU) environmental policy until 2020, recognises that soil protection is a serious challenge. The EU has identified the impact of soil sealing, when the ground is covered by impermeable material such as concrete or asphalt, as a threat to fertile agricultural land and one of the main causes of soil degradation for EU countries. In 2012, the EU produced guidelines for best practices to reduce, mitigate and compensate for soil sealing (European Union, (2012).

This is a very general and mostly vacuous document that implicitly places a nearly absolute value on a piece of soil. The implication of this philosophy is that we should all live in tents – sealing soil with a building is inherently bad, even wicked.

In any event 'soil-sealing' is hardly a serious problem. Good soil is a valuable commodity, which is typically removed before development, and then reused. But apparently even shifting soil is something of a crime in the eyes of soil animists.

Urban expansion puts pressure on biodiversity

Land use change on city fringes can put pressure on biodiversity in urban areas. Research shows that indigenous land cover is higher on the edges of New Zealand cities than in the middle of them. Indigenous land cover is less than 2 percent on average within urban centres, and increases to over 10 percent on the urban–rural boundary (Clarkson et al, 2007). Other ecological studies indicate that a drop below 10 percent for indigenous vegetation cover may trigger a decline in many species (McIntyre & Hobbs, 1999; Drinnan, 2005). Most of New Zealand's urban fringe areas are above that threshold, but urban expansion on the edge of cities, and the loss of indigenous vegetation cover there, could cause disproportionate change in the remaining biodiversity.,

This is mostly a nonsense argument. Pastoral farms on city fringes are not biodiverse, nor is a 30 hectare broccoli field. Lifestyle blocks with their trees, gardens

and so, on will typically be much more biodiverse than the commercial farms they replace. The conversion process also provides an opportunity to protect and extend natural habitats.

Shifting to new fields

The impact on the horticulture sector from urban expansion onto highly productive land would not present an issue if there is the ability for horticulture production to move to suitable land elsewhere. However, there are often a range of regulatory, environmental and physical constraints that limit the ability of horticulture production to move elsewhere and this is a particular barrier for New Zealand's productive horticulture hubs.

These constraints are not identified in detail, and appear to reflect some feedback from the horticultural sector. But the problem, and the implication that horticultural production can not be replaced, is exaggerated. If the problem is regulatory then it may reflect an industry view that it is better to deal with the regulatory devil you know than a new regulator some kilometres down the track. If the issue is unreasonable and excessive regulation then the obvious solution is to fix the problem at source.

MPI responses to Treasury criticisms

The Cabinet paper on the NPS presented Treasury's serious concern with the NPS proposals. The Treasury argued.

1. Councils are likely to increase protection more than intended.
2. Regulatory uncertainty for developers would increase.
3. Increase consideration would be given by councils before any land is released

Treasury pointed out the very high costs of restrictive rules on urban expansion, noting the price differential on the urban boundary for 600m lot of between \$136000-\$207,000 in Auckland, Hamilton and Tauranga.

The response from MPI was that the concerns are overstated.

- *There is no evidence that councils will provide more protection for productive land than intended and it is unclear that councils would have the incentive to do so.*

The MPI's first point is probably literally true. The intention is to be highly restrictive, so councils will probably match that intention. What Treasury possibly meant is that councils will be more restrictive than the NPS on urban development land intended.

In terms of Councils' incentives, councils do not need to respond to financial incentives. They can impose an ideologically driven planning agenda without consequences, and some have a strong track record in doing so. There is every expectation that they will use this NPS to unwind, as much as they can, the effect of the Urban Development NPS.

- *Uncertainty for developers is speculative*

There is a clear link between uncertainty and the cost of development. That link has been discussed and identified in the relevant literature. Any developer would say that any attempt to develop HPL would be uncertain because so much depends on the whim of the council. This is the expectation of councils in the NPS:

Councils will be required to demonstrate they have thoroughly considered alternative locations and options (i.e. intensification). They will also need to have considered the full range of benefits and costs (social, economic, environmental and cultural) arising from urban development on highly productive land compared to the longterm, intergenerational benefits that would occur from the continued use of that land for primary production

From a developers perspective this could mean anything.

- *No clear link between additional consideration and restrictions*

There obviously is. Councils that were taking a more liberal approach to development based on a standard cost benefit analysis would be bound to consider the vague and incoherent 'considerations' laid out in the consultation document. This can only be more restrictive than the status quo.

The main response to Treasury was that the intention is to redirect rather than restrict urban development, with the implication that this will be costless, but this is simply not true.

Market failure

The Treasury also said the market failure that the policy statement is intended to address was not clearly identified. The response was that the market failure was that market does not value the long term benefits and sustainability benefits. As we noted above these are just unsubstantiated assertions without any backing evidence, or even any coherent and objective descriptions of what these terms mean.

The Cost Benefit Analysis

The cost benefit analysis was conducted by Market Economics (M.e).

Purported flaws in current assessment processes

In the introduction to the quantitative part of the report there is a discussion of what M.e sees as the flaw in the way some councils are currently reviewing development proposals.

Marginal analysis based on comparison of land use outcomes in financial terms at a single parcel level is heavily weighted toward favouring change away from productive farming. This is because the financial returns from residential and business uses are in almost all instances greater than those from productive farm activity using the HPS, while the value of land for countryside living is usually several times that of land used for productive farming activity. That means there is considerable incentive for current (farming) landowners to sell land, because the value of the HPS resource to the individual landowner is usually far less than the potential price to be gained by selling for countryside living or urban purposes.

They then go on to make the dubious argument that the production chain is not valued in the individual transactions. The flaw in that argument is that the linkages will make growing more profitable in that location and this enhanced profitability will be reflected in land prices. There is no market failure.

Often these production chains form the basis of industrial activity in rural areas and are vital to the wider economy in terms of providing a diversity of employment and because of the other trades and support industries they help sustain (mechanics, electrical services and so on). None of the benefits associated with either these jobs or the fact that a district can offer a diversity of employment and economic opportunity (and contribute to food production and supply) are captured in the single landowner transaction with a developer looking to provide urban edge expansion.

Their solution is to change the assessment process.

Rather than asking developers to show on balance (in cost benefit terms) that the development of HPS for non HPS uses is beneficial for the economy, the key issue is how can the District or City provide for urban expansion or lifestyle block development whilst protecting HPS for future generations?

And the technical solution is to allow urban expansion and lifestyle block development, but ensure that it is on non-high productive land. And it is argued that it can be 'proved' that this works.

At the macro level, it is relatively easy to prove that providing for urban development on non HPS soil is far less costly to the overall economy, than allowing consumption of HPS land.

The cost benefit analysis, we presume, is their attempt at providing that proof.

The fatal flaw

Before we get into the detail of that analysis we should point out the 'fatal flaw' in the analysis. It depends on non-productive land being a perfect substitute for productive land for urban and lifestyle development purposes. Where they are not perfect substitutes there will be a cost, but this cost is ignored. Reasonable adjustments for non-substitutability will change the benefit cost ratios from being barely above 1 to significantly below it. The M.e proof doesn't work.

NPS is not justified on the Ministry's evidence

The other important point to note is that, even if you accept the M.e methodology, the net benefits are likely to be very small. If councils apply the NPS with medium intensity then the net present value of the benefit for the sampled authorities is \$1 million. Almost all of the gains are eaten up by administrative costs. On a nationwide basis the benefits might be double the \$1 million. Over the 30 year evaluation period this is an average discounted loss of around \$66,000 a year. As these benefits are trivial it is hard to see how a national policy statement can be justified. An avoided cost of \$66,000 a year is hardly a matter of national significance.

The cost benefit analysis

The key omission from the analysis is the lack of any assessment of the costs and benefits of the restriction on urban expansion. They were not covered, mainly, it was claimed, because this has been difficult to do in the time available.

Nevertheless, it was claimed that the effects would be positive. At one point in the paper we are told that an assessment is coming, but at another point we are told perhaps not, because it would be so difficult to do.

The benefit of redirecting urban expansion away from HPL (where feasible alternatives exist) has not been quantified. The difficulties and uncertainties of quantifying this mean that it is likely to remain unquantified in any future updates. If anything, including this benefit is likely to increase the net benefits of the NPS –HPL summarised below.

As we discussed above it is highly likely that the costs would be significant, which perhaps explain their reticence to do anything other than make the unsupported claim that there will be net benefits.

Assessment of the restrictions on Life style blocks

There were two elements to the study. The first was an qualitative assessment which ranked various impacts by their degree of importance. It added little of value other than illustrating the authors' bias towards the proposed policy statement. A good indication of their thinking is captured by some of their qualitative assessments of the status quo.

*Lifestyle blocks are located in areas considered most optimal by the market. **Low significance.***

So much for the market.

*Domestic food supply continues to be poorly considered in planning and decision making. **High significance.***

This is just a presumption that the market based assessments are wrong rather than a cost.

*Loss of (primary production and processing) jobs in rural areas. **High significance.***

Their own quantitative analysis suggests that the loss of rural jobs will be small. The increase in jobs servicing urban expansion and lifestyle blocks is ignored.

*Farming families, with aging farmers and no successors willing to work the farm, can maximise returns from land through subdivision – and retire. This is especially the case for horticultural holdings. These are often close to urban areas, and have good climates so are attractive to the market. **Low significance.***

If you are the farmer who is seeking a payoff after a lifetime of poorly rewarded toil, this would be highly significant.

*Security of food supply for local markets as well. Local production of food helps keep local prices of fresh food down. This benefits local communities. **High significance.***

Some locals might purchase from a grower outlet at a lower price but this is hardly of high significance. In Wellington farmers bring produce from 100 km. to local markets to keep the cost of fresh produce down.

*Existing infrastructure supporting primary production will be sustained in its current location. Potential for increased output and greater efficiency. **Low significance.***

This is correct but it not consistent with the weight placed on the supply chain in their economic framework.

Lifestyle block modelling

The modelling covered 6 districts that were illustrative of both high and low growth areas, covering possibly more than 50 percent of nationwide lifestyle block demand.

The lifestyle modelling was conducted as follows.

- The future demand for lifestyle blocks out to 2048 was estimated for each district.
- The economic value (the gross value of production less the cost of labour and intermediate inputs) of agricultural production on highly productive land that would be saved by the NPS was estimated.
- Replacement lifestyle blocks on non-highly product are identified and the loss of net economic output from that land calculated.
- The analysis was conducted assuming both medium and high intensity of application of the NPS by Councils.

The key results in net present value terms are shown in table 1 . Under the medium regulatory intensity assumption the net benefits are \$1 million. This is an annual benefit of around \$33,000 a year. There is a gross 'saving' of net agricultural output of \$71 million (\$2.4 million a year- and less if there is some agricultural production on HPL lifestyle blocks) but the cost of producing that output is \$53 million. The net benefit of \$18 million is almost entirely swallowed up by the \$17 million cost of implementing the policy. Under the high regulatory assumption the net benefits over 30 years are \$51 million or about \$1.6 million a year.

Problems with the analysis

There are a number of serious problems with the analysis.

1. It is assumed that there is no agricultural production on subdivided land. As noted above there is evidence that production on larger subdivided plots can actually be higher than the pre-subdivided plots. Making an allowance for some production would scale down the benefits.
2. It is assumed that the opportunity cost of preventing subdivisions on HPL is exactly offset by the gain from subdivisions on non-HPL land, so opportunity costs can be ignored. That is, it is assumed that the non-HPL subdivisions are a perfect substitute for HPL subdivisions. It does not matter that the replacement subdivision might be distant from the preferred location; is more expensive to build on; or might be unsuitable for preferred lifestyle activity because of its steepness or lack of good soil.

This is obviously wrong. The correct way to assess the net opportunity cost could be roughly as follows:

- Calculate the opportunity cost of restricting HPL use as the value of the land as a lifestyle block, less its value as commercial agricultural land. Say \$100,000 a hectare less \$30,000, for a net loss of \$70,000 a hectare.

- Calculate the gain on the less desirable non-HPL. Say \$40,000 less \$10,000 for a net gain of \$30,000.
 - The net cost of the policy is \$70,000 less \$30,000 or \$40,000 a hectare.
3. The opportunity cost when there is insufficient non-HPL land to substitute for HPL is ignored. The stated reason for doing so is that it would be difficult to calculate because they would need values for the relevant land. Second it would be difficult to calculate the values over the full assessment horizons. Both are lame excuses. Opportunity costs are at the heart of a proper cost benefit analysis and it is essential to have an assessment. Transactions values are available online and M.e could have sought the advice of competent rural valuers to provide rough indicative values. As for the time horizon issue, M.e appear to have no problem in calculating the value of production over the assessment horizon, which would have required projections of future product prices.
 4. There are issues with some the individual district calculations. Table 2 shows the gross outputs by the six districts. For example Ashburton has a gross NPV saving of HPL production of \$63million, a loss of \$21 million on non-HPL land for a net gross output gain of \$42 million.

The biggest contributor to the overall gross gain is Waipa with a gross production savings of \$171 million. This is because Waipa has a minimum plot size of 40 hectares. The savings occur because it is projected that 220 'lifestylers' would buy these plots and convert them into very large front lawns (it is assumed that there is no agricultural production on lifestyle plots, no matter how large). This is unlikely. Someone buying a 40 hectare plot will do something with it. Leasing much of it to an adjoining commercial farmer is an obvious option.

5. The other oddity is that for three of the districts there are production gains (especially Auckland where there is a gain of \$23 million) on non-HPL rather than losses from the redirection of lifestyling to non-HPL. This has something to do with how the 'status quo' is defined in the model, but the logic is too convoluted to be worth pursuing in detail here. The main point to note from the analysis is the the gross present value of gains for Auckland is just \$14 million, or less than \$0.5 million a year. After accounting for production losses on non-NPL this figure would be even smaller. Adjusting just for these district oddies would push the benefit cost ratios below 1

Table 1: Benefits and costs

	Medium impact \$'m	High impact \$'m
Plan changes	17	17
Cost of resources	53	198
Costs	70	215
Future resources protected	71	266
Net gain	1	51

Table 2: Gross output impact by district

	HPL gain \$'m	Non-HPL land loss \$'m	Net impact \$'m
Ashburton	63	21	42
Selwyn	77	65	12
Horowhewuna	1	0.6	0.5
Western BOP	3.1	-0.1	3.2
Auckland	14	-23	37
Waipa	170	-1	171

Benefits left out

We are told that a key omission from the benefit quantification was that no monetary value was placed on *the intrinsic value of natural capital in the form of protection of highly productive land.*

M.e do not define what they mean by 'natural capital' in this context, or give us any guidance on why its value is significant. It is not at all clear that industrial dairy farming, as opposed to lifestyle blocks adds to the capital value of the nation's eco-system services. As noted above many people think that dairy farming has a negative impact on the eco-system.

Summing up

In our view the cost benefit analysis is something of a charade designed just to meet the requirement to produce a cost benefit analysis. It has serious omissions and

relies on implausible assumptions to generate a positive outcome. Its main useful output is that it demonstrates that the loss of agricultural output from HPL is not an issue of national importance that justifies a national policy statement.

