

**BEFORE INDEPENDENT HEARING COMMISSIONERS
APPOINTED BY THE HAMILTON CITY COUNCIL**

IN THE MATTER of the Resource Management Act 1991 (**Act**)
AND

IN THE MATTER of an application for subdivision and land use
consent for the Amberfield development
pursuant to the Act.

APPLICANT Weston Lea Limited

CONSENT AUTHORITY Hamilton City Council

**EVIDENCE-IN-CHIEF OF JOHN PHILIP SMALL
FOR WESTON LEA LIMITED**

Dated: 12 April 2019

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SUMMARY OF EVIDENCE

1. My name is John Philip Small, and I am an economist retained by Weston Lea to provide an independent assessment of the costs and benefits of the proposed Amberfield development. In this section I summarise my evidence, according to the key headings in this statement, as follows:

Context for Development

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- (a) I have reviewed the planning evidence of Mr Serjeant and considered several relevant planning documents. My evidence discusses features of the NPS-UDC and District Plan that are relevant to my economic assessment.
- (b) I make particular note of the density objectives for new development in this location (sixteen dwellings per hectare), and the implications of this for the Amberfield development which is constrained in land area by riparian and conservation reserves. I also note the emphasis given to efficiency in the NPS-UDC and outline how economists view efficiency.

Accommodating Hamilton's Growth

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- (c) To assess the demand for new housing in Hamilton, I begin by reviewing the population forecasts provided by Statistics New Zealand. I then use demographic data to convert these population projections into demand for household accommodation. My mid-range estimate is that, over the 15-year period starting in 2018, Hamilton will need 17,538 new dwellings.

Economic Merits of Peacocke

(Page 13)

- (d) There are several areas around Hamilton where housing growth could be located. I have considered the relative merits of these areas from an economic perspective. Compared with the other main alternative locations, my review suggests that residential development at Peacocke is highly desirable.

- (e) In reaching that view I considered cost issues and the potential value that could be created. The Peacocke location has several advantages, including its shape, proximity to the CBD and location between the city and the airport.

Sports Parks

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- (f) I have reviewed materials relating to the provision of sports parks at the Amberfield development and commented on two pivotal issues: (a) who should pay for sports parks; and (b) the timing of their provision. Key facts of relevance to my analysis are that:
 - i. The smaller of the two proposed sports parks is located on the Amberfield land. The Council seeks 7ha of land within Amberfield is provided by the Weston Lea for a sports park. This is a much larger area than the 2.5ha of land that would be warranted to serve Amberfield alone; and
 - ii. Even a 2.5ha sports park would not be needed for many years as the Amberfield development fills up. I calculate that there will not be sufficient demand for the first complete sports park until the end of 2027.
- (g) My evidence describes significant inefficiency that will arise unless the matter is resolved in a way that:
 - i. Ensures pro-rata sharing of the cost of sports parks across all of the developable land at Peacocke, including the opportunity cost of land reserved for sports parks; and
 - ii. Only incurs sports park development costs as population growth materialises in the area.
- (h) My evidence explains the source of the economic inefficiency that needs to be avoided. It operates through the cost of development and shows up in higher section prices, reducing demand and slowing down the growth of the area.

Conclusion

- (i) In my opinion, there are clear net economic benefits associated with the proposed Amberfield development and it should be approved subject of course to satisfactory resolution of outstanding matters.
- (j) One of those outstanding matters concerns the provision of sports fields. I have outlined the principles that should guide resolution of this matter and explained the economic (inefficiency) costs that need to be avoided.

INTRODUCTION

2. My name is John Philip Small.

Qualifications and experience

3. I hold a PhD in economics from the University of Canterbury and was an academic economist, teaching microeconomics and econometrics for eleven years, mostly at the University of Auckland where I also served as Head of Economics. In 2001 I founded Covec, an Auckland based consultancy firm with two former students.
4. Much of my consulting experience about how to design public policy, taking account of the incentives and constraints acting on private business-people. In this capacity have worked on many RMA matters, for example concerning property development, amenity protection and GMO regulation. I have also provided expert economic testimony in anti-trust litigation, working for agencies that are prosecuting firms for breaches of competition law. In this work, it is necessary to understand the relevant law.
5. I have held three five-year warrants as a lay member of the High Court under section 77 of the Commerce Act 1986. I am a member of the Electricity Price Review panel, which is due to report to the Government in May. In December 2018 I was appointed an Associate Commissioner of the Commerce Commission, where I am focused on the first “market study” into retail petrol markets. Due to these public service commitments I am now winding down my domestic consulting practice.

Scope of evidence

6. I have been retained by Weston Lea Limited (**Weston Lea**) to prepare a statement of evidence on the economic merits (i.e. the costs and benefits) of the proposed Amberfield development.
7. In preparing this evidence I have:
 - (a) Reviewed key features of Weston Lea’s application to the Hamilton City Council (**Council** or **HCC**) for subdivision and land use consent;

- (b) Reading the planning evidence of Dave Serjeant, which describes, among other things, the relevant planning context;
- (c) Familiarised myself with relevant planning provisions including the National Policy Statement on Urban Development Capacity (**NPS-UDC**), the operative Hamilton District Plan (**District Plan**) and the operative Waikato Regional Policy Statement;
- (d) Analysed official projections of population growth in Hamilton and converted these into household growth projections;
- (e) Considered the main categories of cost, including the opportunity cost of accommodating growth at Amberfield rather than elsewhere; and
- (f) Reviewed the likely benefits of the proposed development.

CODE OF CONDUCT

- 8. I have read the Environment Court Code of Conduct for expert witnesses and agree to comply with it.
- 9. I confirm that the topics and opinions addressed in this statement are within my area of expertise except where I state that I have relied on the evidence of other persons. I have not omitted to consider materials or facts known to me that might alter or detract from the opinions I have expressed.

CONTEXT FOR THE DEVELOPMENT

10. The proposed development is located on 105ha that lies between the Hamilton CBD and the airport. It would add significantly to the housing capacity of Hamilton. As a non-complying activity under the District Plan, the proposal requires careful scrutiny.
11. In this section I review the relevant policy context, particularly with the NPS – UDC but also with reference to the District Plan.

National Policy Statement on Urban Development Capacity

12. The NPS-UDC came into effect in 2016. Mr Serjeant's evidence (at paragraph 50) is that it was promulgated to "*ensure that urban areas, particularly high growth urban areas such as Hamilton City, provided sufficient capacity for residential and business growth*". The NPS-UDC seeks to enable communities to promote their social, economic, cultural and environmental well-being while managing effects. Specifically, it promulgates the national significance of:
 - (a) urban environments and the need to enable such environments to develop and change; and
 - (b) providing sufficient development capacity to meet the needs of people and communities.
13. The NPS-UDC specifies objectives and policies. The objectives are stated in four groups. The first concerns *outcomes* of planning processes, while the other three groups focus on different aspects of the planning *process*. The outcomes group describe features of the urban environments that emerge from planning processes, seeking to ensure that these environments:
 - (a) Enable the four well-beings set out under s 5(2) of the Resource Management Act 1991 (**RMA**);
 - (b) Provide sufficient overall capacity for housing and business and variety and choice within these categories; and
 - (c) Are able to change and evolve in line with the future needs and desires of the relevant population.

14. Regarding the planning process itself, the NPS-UDC notes:
 - (a) The need for a strong fact base to inform decision making;
 - (b) The need for planning authorities to be responsive to changing local needs and to facilitate the four well-beings; and
 - (c) The need for co-ordination, for example of infrastructure with development, and for close integration of planning for different features of urban environments within and between local authorities.

15. As applied to the proposed development at Amberfield, the NPS-UDC requires that decision-makers assess whether the development is consistent with enabling Hamilton's current and future residents to enhance their well-being. Basic infrastructure including road, water and communication systems need to be *efficiently* provided, along with other social facilities such as sports fields.

16. The need for efficiency is clear in the NPS-UDC. Efficiency shows up in the preamble, in the first objective (OA1), and in policies PA3 (which I note Mr Serjeant (at paragraph 53) considers relevant) and PB7. Efficiency is an economic concept and economists recognise it as having three dimensions:
 - (a) Productive efficiency refers (in this context) to minimising the cost of development, subject of course to relevant quality standards, and to minimising the occupation costs for future residents of a development;
 - (b) Allocative efficiency refers to not choking off demand by over-pricing the goods and services required; and
 - (c) Dynamic efficiency refers to the way developments reflect the changing needs of the community.

17. In my opinion, these efficiency concepts are relevant to an overall economic assessment of the Amberfield development proposal. I will draw on them as required in what follows.

The Operative Plan

18. I am not a planning expert, but it is important for my economic assessment to review the planning context and in particular to be comfortable that the proposal is not in conflict with planning objectives or policies. The relevant district plan is the Operative Hamilton District Plan. Hamilton comes within the regional jurisdiction of the Waikato Regional Council.
19. I have reviewed the assessment of the proposal against the objectives and policies of the District Plan.¹ I rely on Mr Serjeant's evidence regarding the specific planning issues arising in this matter.
20. One fact that has been brought to my attention concerns Policy 3.3.1.b of the District Plan which states that "an overall residential density of 16 dwellings per hectare (excluding transport corridors)" should be achieved. This provision is also contained in the Waikato Regional Policy Statement² which refers specifically to "*Hamilton Greenfield*" developments itemised as "*Rototuna, Rotokauri, Ruakura, Peacocke*". The importance of this policy is reinforced by the December 2018 adoption of a new objective (Objective 3.27) as discussed by Mr Serjeant.
21. The proposed development includes riparian reserves along the river and other reserves normal for this type of development. In addition, for environmental reasons, specifically the preservation of native bat habitat, a further significant part of the 105ha site will be a reserve.
22. I understand from Mr Serjeant's evidence that achieving the target density of 16 dwellings/ha, while also providing for a relatively large amount of reserve land, will require some higher density housing in the development. This is a good example of how planning requirements can guide development toward sustainable practices, which offer a variety of living environments and greater choice, and is consistent with the NPS-UDC. Mr Serjeant discusses the implications of achieving the target density, including for the creation of further reserves within the Amberfield area.

¹ Appendix A of the Application, received by the Council on 15 June 2018.

² Policy 6.15 Density targets for Future Proof area

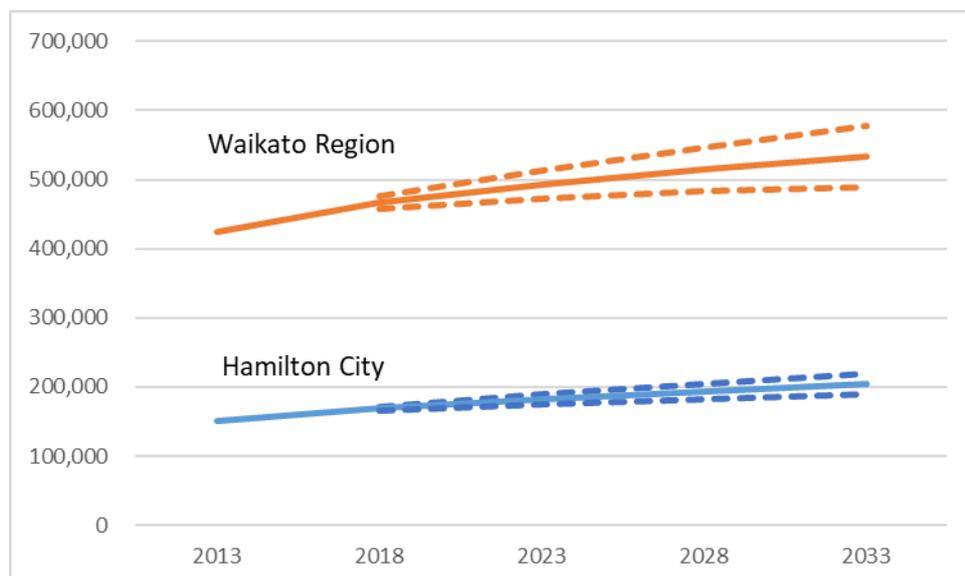
ACCOMMODATING HAMILTON'S GROWTH

23. Official statistics strongly suggest that Hamilton will experience considerable population growth in the years ahead, and it is therefore prudent for the HCC to develop plans to accommodate that growth. One of the locations in which this might be achieved is known as the Peacocke area as defined in the Peacocke Structure Plan Area (**PSPA**). My economic assessment of the overall merit of this proposed development continues in this section by:
- (a) Reviewing population growth expectations for Hamilton;
 - (b) Converting these into projections of additional households; and
 - (c) Assessing the economic merits of the Peacocke location relative to other options.

Population Projections

24. Stats NZ provides population projections at the sub-national level based on the periodic census data and a range of other factors. The most recent census was in 2013. In **Figure 1** below, I show these projections out to 2033 for the Waikato Region and for Hamilton City. I note that the dashed lines are “low” and “high” projection scenarios and the solid line is the “medium” projection, on which my analysis will be focused.

Figure 1: StatsNZ Population Projections for Waikato and Hamilton



25. These projections imply that over the next fifteen years (2018 – 2033) Hamilton city can expect an extra 35,700 people, with a low-high range of [23,400 – 47,900].

Conversion to Households

26. Since we are interested in demand for housing, these population growth estimates need to be adjusted to account for the fact that many households contain more than one person. I have made this conversion to households by drawing on StatsNZ decomposition of the “medium” population projections for Hamilton City into household types.

27. My conversion method is shown in **Table 1** below and relies on the conversion factor shown in the right-most column. This factor is 1 for households with one adult only, $\frac{1}{2}$ for households with two adults, and zero for children who are assumed to live in an already counted household with adults. The final household type is “other living arrangements” which would include shared flatting situations. I have assumed an average of three persons in each of these households.

Table 1: Conversion of Population Estimates to Household Estimates

	2013	2018	2023	2028	2033	Factor
Total Population	150,200	168,700	182,100	193,500	204,400	
Partner in couple-without-children family	30,200	35,300	39,300	42,600	46,300	0.50
Partner/parent in two-parent family	32,200	35,900	38,900	41,300	43,200	0.50
Child in two-parent family	31,900	34,800	36,900	38,200	39,000	0.00
Parent in one-parent family	9,200	10,200	11,000	11,600	12,200	1.00
Child in one-parent family	15,000	16,500	17,500	18,200	18,700	0.00
Person in one-person family	12,400	14,200	15,900	17,600	19,400	1.00
Other living arrangement types	19,300	21,900	22,700	24,000	25,500	0.33
Unique Households	59169	67227	73491	79070	84765	
Average Household Size	2.54	2.51	2.48	2.45	2.41	

28. The factors are multiplied by the populations in the body of Table 1 and the results are summed in the row labelled “Unique Households”. This method results in an estimate that 17,538 extra households will need to be accommodated in Hamilton City over the next fifteen years, an increase of 26% on the 2018 number.

29. The average size of a household is falling over time as shown in Table 1. Single person households are an important contributor to this demographic change; whereas total households are expected to increase by 26%, single person households are up by 37% over the same fifteen-year period.
30. Based on this information, it seems that while the proposed development will make a material difference to the shortfall in accommodation in Hamilton, it will not be sufficient to accommodate all of the expected growth. I understand that the total number of dwellings likely to be facilitated at Peacocke (when fully developed) is around 8500, which is less than half of the total demand over the next fifteen years.³
31. The Amberfield component represents around 15% of the total capacity of the Peacocke area, which will make a significant contribution to filling the accommodation gap in Hamilton. However, a significant amount of development will also be required in the northern and eastern fringe areas.

ECONOMIC MERITS OF PEACOCKE

32. I turn now to consider the potential locations at which these additional households could be accommodated, and in particular to comparing Peacocke with the other main options open to the HCC. It will be helpful to begin with **Figure 2** which is drawn from the HCC website⁴ and shows three potential growth locations which I will describe as the northern fringe, the eastern fringe, and Peacocke.

³ See page 88-89 of <http://www.futureproof.org.nz/file/future-proof-strategy-november-2017-final-271117.pdf>

⁴ <https://www.hamilton.govt.nz/our-city/city-development/peacocke/Pages/default.aspx>

Figure 2: Possible Growth Sites around Hamilton

33. In what follows, I will compare the cost of development and the potential value creation across these three locations. This approach provides relevant information to the economic assessment, since that process needs to start from the observed fact that more housing is needed. It is possible that development in the Amberfield/Peacocke area creates an opportunity cost, in the sense that it diverts new housing and residents away from other locations that might create more value to the community as a whole (e.g. in the form of social, economic, cultural and/or environmental well-being). My approach allows for this effect to be factored into the overall economic assessment.

Cost Issues

34. We should take a broad view of costs in this comparison, including physical infrastructure normally controlled by Councils (e.g. water networks), transport costs for residents and the costs of other service networks such as telecommunications and energy networks.
35. Costs are influenced by the size and shape of the development areas, and their proximity to the centre of Hamilton. Regarding proximity, the northern fringe and the northern part of the eastern fringe are further from the centre of Hamilton than Peacocke, which will lead to higher construction and usage costs for any networks that have significant need to reach central Hamilton. This is likely to include transport networks including public transport. I also note that Hamilton's point of connection to the high-voltage national electricity grid is located in the south-west part of the city, materially closer to Peacocke than either of the other two growth areas.
36. The relatively rounded shape of Peacocke is also likely to reduce costs relative to the other two growth areas. In particular, it will enable the relatively cost-effective "hub-and-spoke" network design for public transport and other networks. For example, it is easy to imagine a public transport station in a central location at Peacocke, with feeder routes connecting it within the development and a higher-capacity route connecting the whole area to central Hamilton.
37. For these reasons I consider that there are no more valuable development opportunities that would be foregone as a result of proceeding with the proposed.
38. Regarding the actual costs of infrastructure (pipes, wires, roads etc) required to service the Amberfield development, I consider that these costs will be internalised by the residents of Amberfield and can therefore be safely disregarded. There are two main mechanisms that achieve this internalisation.
39. Firstly, there are likely to be charges levied on developed sections to cover shared infrastructure of various types; the Council's development

contributions policy provides a basis for such charges. We can expect the developers to recover these costs from the residents through section prices.

40. Other infrastructure costs, notably for electricity and communications services are recovered directly from residents by the firms that incur them, albeit that in some cases these charging mechanisms are regulated to limit firm profits.
41. In summary, I consider that from a cost perspective:
 - (a) the Amberfield development is at least as good as any alternative location for Hamilton's growth and appears superior to the main alternatives; and
 - (b) provided the cash outlays required to service Amberfield are properly defined (which may be a matter of contention for some works), we need not concern ourselves with these costs since they will be internalised by the residents.

Value Creation

42. Costs are not the sole criterion for choosing a development area; there may also be value-related differences. One such example is the evidence that the urban design aspects of the Peacocke development proposal are particularly appealing, including its connection with the Waikato River.
43. The Peacocke area is also located between the CBD and the airport. The Amberfield component of the broader development area is likely to cater to relatively affluent residents, for whom living between these established nodes will be particularly convenient. I would also expect this location to create a feedback loop in the form of more demand from businesspeople to locate in Hamilton as a result of better home-airport connectivity.
44. Another potential source of value comes from the established economics literature on agglomeration effects. These are positive spill-over effects that arise when people are co-located. A larger pool of people leads to more chance encounters with others. Some of the benefits are non-market effects such as enjoying the company of others and enhancing a sense of community. There can also be measurable economic benefits arising from the sharing of ideas.

45. While it is not possible to reliably predict the value of agglomeration economies, for the reasons outlined above it does seem likely that the location and shape of Peacocke will generate more of these valuable benefits than would occur in the other two growth locations.

SPORTS PARKS

46. Some unresolved issues concern sports parks. I have been asked to comment on these matters as a professional economist. In this section I discuss two issues arising from my analysis:
- (a) Who should pay for the sports park land; and
 - (b) When they should pay.

Who Should Pay

47. The Council's Section 42A report identifies a total requirement of around 24ha of land to service the future population within the Peacocke area. This amount of land is calculated using several inputs, particularly:
- (a) the Council's target service level for winter sports fields, which is 0.6 fields per 1000 residents;
 - (b) an estimate that 2ha is required for each winter sports field, which includes land for amenities associated with each field; and
 - (c) an expectation that the Peacocke area will eventually contain 8500 dwellings.
48. The Amberfield development contains 105ha which Mr Serjeant calculates to be approximately 15% of the total land area. Mr Serjeant also assumes (as seems reasonable) that it would be safe to predict that Amberfield will also have 15% of the dwellings and residents. However, one of the sports park areas identified is located within Amberfield, so there is a mis-match between the demand for winter sports parks that Amberfield will generate (when fully developed) and the amount of land Weston Lea (as the developer) is required to reserve for winter sports fields.

49. It should be clear that there is no economic basis for requiring the Amberfield development to bear the full costs of sports parks for the whole development. That would be an inefficient outcome because, by way of example, it would:
- (a) Increase the cost of developing building sections at Amberfield by pushing it towards more difficult terrain; which will
 - (b) Increase the cost-covering prices of the sections that are made available at Amberfield; and
 - (c) Delay uptake of those sections as a result of their higher prices.
50. To avoid these efficiency costs, it will be necessary to share out the costs of the sports fields evenly across all of the building sites in the Peacocke area. There are various ways this could be achieved, with the principles underlying development contributions offering one obvious approach. If this land must be reserved now (i.e. to refrain from using it to create building sections), the cost of reserving it could be treated as if it were a stormwater facility or some other piece of council-provided infrastructure. Then developers can pay their share of the cost of the sports parks as building sections are brought to market.
51. I understand that the Council is suggesting that Weston Lea be required to vest 7ha for sports parks as part of the Amberfield development. This is an excessive request, whether it is assessed on a share of land basis or the more accurate level-of-service basis. It is currently expected that Amberfield will eventually be home to 833 dwellings. Using my household size estimates from Table 1 above, these dwellings are likely to house 2090 people.⁵ Applying the relevant level of service (0.6 sports fields per 1000 population) shows that, once fully developed, Amberfield will require 1.25 sports fields, which (following agreed practice) I double to convert to a land area of 2.5ha. This is obviously well below the 7ha requested.
52. The efficiency costs identified above would apply if the Council insists on an excessive demand for sports park from *any* developer.

⁵ This is derived by multiplying the 2018 average household size of 2.51 by 833 dwellings.

Timing

53. The question of who should pay is connected to further issues over the timing of land provision, the incurring of development costs and the financing of sports parks. Planning for the PSPA has suggested two moderately large sports parks, rather than multiple smaller park areas. So, whereas the appropriate share of total sports field land that should be allocated to Amberfield is enough for 1.25 fields, a fragmented provision of this type would be inconsistent with the Structure Plan.
54. In my view, such fragmentation would also be inefficient as can be seen by contemplating the practical issues associated with providing for $\frac{1}{4}$ of a sports field.
55. By contrast, an approach that ensures that parks are of a reasonable size seems much more likely to provide whatever sports fields are ultimately needed in an efficient manner. However, it does require a pro-active strategy by HCC to acquire the relevant land, develop it and share the costs in a reasonable and efficient way.
56. It is beyond my brief to opine on exactly how this should be achieved. However, two observations that should, in my view, influence the way this problem is resolved.
 - (a) First, it is clear that the population demand that gives rise to a need for sports parks will only emerge slowly, Amberfield is the first tranche of residential development in the Peacocke area, and it only covers 15% of the total area. Amberfield itself is expected to fill up slowly, at the rate of around 100 building sections per annum, starting in 2022. Allowing 2.51 residents per dwelling, and assuming dwellings take no time to build, Amberfield will not have the 1666 residents that need *one* winter sports field until the end of 2027.
 - (b) Second, the parts of the greater Peacocke area outside of the Amberfield site are largely in dispersed ownership, so that further residential development will either require consolidation or action by smaller-scale developments. This will tend to slow down the supply of

building sections beyond Amberfield, further restricting the speed of population growth in this area.

57. Under these circumstances, there are significant cost savings from deferring the development of sports parks. Moreover, this is not a situation where, for cost reasons, it is efficient to build infrastructure ahead of demand. There is no loss of service associated with matching park development to population levels, just an avoidance of excessive costs.

Dated this 12th day of April 2019

A handwritten signature in black ink, appearing to read 'John Small', written in a cursive style.

John Small