

Memo

5th July 2016

To: Auckland Unitary Plan Independent Hearings Panel

From: Patrick Fontein

Subject: **Feasible Dwelling Capacity of the PAUP's Countryside Living (CSL) and the IHP's CSL.**

1.0 Background and Introduction.

Patrick Fontein of Studio D4 (SD4) has been engaged by the Auckland Unitary Plan Independent Hearings Panel (IHP) to review the feasible development capacity of:

1. The PAUP's Countryside Living (CSL) land area.
2. The IHP's Countryside Living (CSL) land area.

This CSL work is part of a series of related development capacity analysis SD4 has carried out for the IHP on the Auckland existing urban areas and the future urban zone (the FUZ).

The PAUP's CSL land locations and their gross areas were provided by the IHP, attached as Appendix 1.

The IHP's CSL land locations and their gross areas were provided by the IHP (under Confidentiality) on the 27th April 2016, attached as Appendix 2.

The IHP have requested SD4 to ascertain the realistic dwelling capacity of the PAUP's CSL and the IHP CSL areas, taking account of the areas likely to be taken for road reserves and landscape reserves.

Below we highlight the analysis methodology and the assumptions made. We then provide a commentary on the Results, followed by the Conclusions.

2.0 The Analysis Methodology and Assumptions Made

2.1 CSL Gross Area. We have taken the CSL land locations and gross areas and tabulated these into a spreadsheet. This spreadsheet is provided in Appendix 3 for the PAUP CSL and Appendix 4 for the IHP CSL. The contents of each of the columns are described in detail below. The PAUP CSL has a gross land area of 22,062 hectares. The IHP CSL has a gross land area of 25,354 hectares, so approximately 15% more.

2.2 Terrain. We have reviewed the terrain of the countryside living areas. Level land areas will be easier to develop as 1-2 hectare allotments, and will thus yield greater dwellings (per say 100 hectares), than undulating hills covered with native bush.



2.3 Road Reserves. For CSL areas, the Road Reserves takes some area off the gross site area, although not in as greater a proportion as normal residential subdivisions, eg for the FUZ. Careful analysis was undertaken of recent lifestyle block subdivisions of similar section sizes, with the amount of land the road reserves took up. We have allowed to take off 5% off the gross land area for road reserves in the CSL areas.

2.4 Landscape Reserves. We have made an allowance of circa 8% of gross area. This takes account of most CSL land managing stormwater on site and a small allowance for passive and active open space reserves.

2.5 Net Development Area. Accounting for all of the above factors gives the Net Development Area. The results show an area of approx. 87% of the gross land area, which is representative of recent CSL subdivision developments.

2.6 Business Area. No allowance has been made by SD4 for any business zoned land within the CSL areas provided. Should business zoned land be desired in future, this is a straight forward exercise, we just need to take off the gross land area to be used for business from the gross CSL land area.

2.7 Planning Rules Assumptions for PAUP CSL. Part of the CSL is covered by Table 10 of the PAUP, Part 3, Sect 5 Subdivision. Other parts of the CSL are not covered by Table 10, which we have taken account of.

2.8 Planning Rules Assumptions for IHP CSL. Also as Table 10 of the PAUP, Part 3, Sect 5 Subdivision and other parts of the CSL which are not part of Table 10. The IHP's modifications provide greater land surrounding Coatesville, Kumeu and Taupaki, which have more relaxed TRSS rules. This has contributed to the IHP's CSL land providing greater dwellings than the PAUP's.

2.9 Factors affecting Development Capacity. Calculating development capacity within the Auckland CSL areas is not a straight forward exercise. As well as more traditional development factors like terrain and existing dwellings (discussed below), there are big differences in the extent of Significant Ecological Areas (SEA) within each location, as well as a number of locations having specific precinct rules, many of which restrict development capacity. This thus leads to an assessment of developable dwellings per chosen area of land, which is discussed in more detail below.

2.10 Hectares / New Dwelling. Considering the terrain of the land, the density of the existing dwellings on the land, the extent of SEA and then a location's precinct rules are the main factors which affect an assessment of the amount of new dwellings likely to be able to be developed into each CSL area being evaluated. Areas with easy terrain, low density of existing dwellings, less SEA's etc, will score highest, i.e. use less land per new dwelling. Conversely land that already has a greater proportion of dwelling density, and has tougher terrain, will yield less future dwellings (per say 100 hectares of land). The precinct rules within each location are then an overall "filter" effectively "blocking" development to greater densities than the precinct allowances, in these locations. The above factors are why the areas surrounding the Waitakere Ranges, with substantial native bush and a difficult terrain, have a lower density. The precinct rules have the biggest relative impact in areas such as Matakana, Warkworth and Waimauku. The scores provided are the hectares per *new* dwelling, and take account of the existing dwellings. E.g. for a 100 hectare area, that we have provided a score of 2.5, this equates to 40 new dwellings. If the 100 hectares already had 5 dwellings, the total dwellings for the 100 hectare area will now become 45, or a *total* hectare / dwelling score of circa 2.22.

2.11 Additional Dwellings. Taking the net developable land area and dividing this by the hectares per new dwelling, gives the total dwellings likely to be yielded for each CSL area. For the PAUP CSL this gives a total of 7,129 and for the IHP CSL gives 7,979 dwellings that can reasonably be provided within the CSL area. As noted in Appendix 3 and 4 below, the overall hectares / *new* dwelling for both the PAUP and the IHP are between 2.7 and 2.8, providing a *total* hectare / dwelling score of circa 2.5 to 2.6, which we believe is reasonable.

2.12 Take Up Rate. This is mainly dependent on the market attraction of the area and the proximity (mainly in travel time) from urban Auckland. The take up rate will only marginally affect the yield. Outlying or slow take up areas may not be fully developed within the 30 year timeframe considered in this assessment.



2.13 Existing Use Lot Size. Different to the FUZ analysis, the existing use lot size will not greatly affect the take up rate of further more intensive development. An owner of a 10 hectare block, may well be attracted to subdividing down to 2 hectares, and creating 4 extra lots for dwellings. Larger land parcels will provide a greater overall redevelopment margin, but these larger lots are also more likely to be in more productive existing agricultural or horticultural use than the smaller allotments. The higher the existing residential dwelling density, will reduce the new dwellings able to be provided on a given CSL area.

2.13 Countryside Living within the total Rural Development Capacity. This CSL development capacity has been undertaken as part of SD4's work for the IHP on the existing urban area, the FUZ, and the rural / CSL area. Observers of the overall data provided for this work will note that the CSL development capacity numbers for the CSL and rural land are provided as one total number, being the 7,129 within the CSL as part of the overall 13,929 dwelling capacity within the PAUP; and the 7,979 within the CSL as part of the 14,220 as the IHP Recommended Plan, to ensure consistency in the manner in which the analysis was undertaken.

3.0 Commentary on the Results and Conclusion

3.1 The PAUP CSL Area

The provision of 22,062 hectares of CSL gross land area has yielded **7,129 extra dwellings**, able to be developed within the PAUP CSL area, as shown in Appendix 1.

3.2 The PAUP CSL Area

The provision of 25,354 hectares of CSL gross land area has yielded **7,979 extra dwellings**, able to be developed within the IHP CSL area, as shown in Appendix 2.

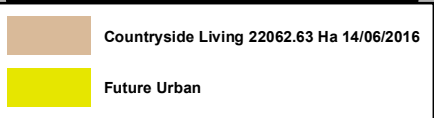
3.3 Variances between the PAUP and the IHP CSL Areas

The IHP's CSL has provided **850 extra dwellings** able to be developed within the CSL area, relative to the PAUP.

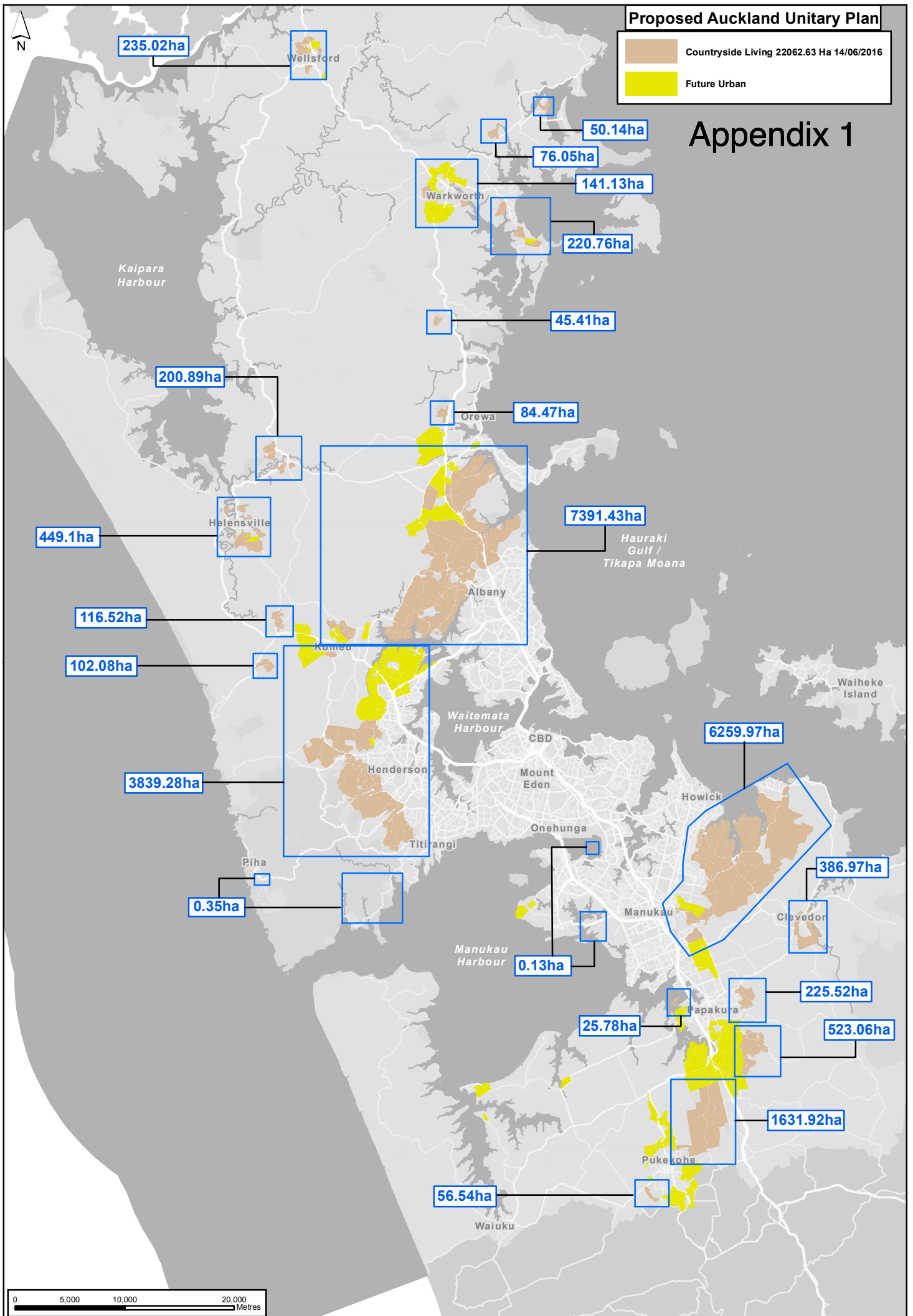
We believe we have followed a fair and robust methodology, that should be widely accepted within the overall property community, for reviewing the extra dwelling capacity of the PAUP and the IHP CSL. We are satisfied that this robust process has produced reliable results.

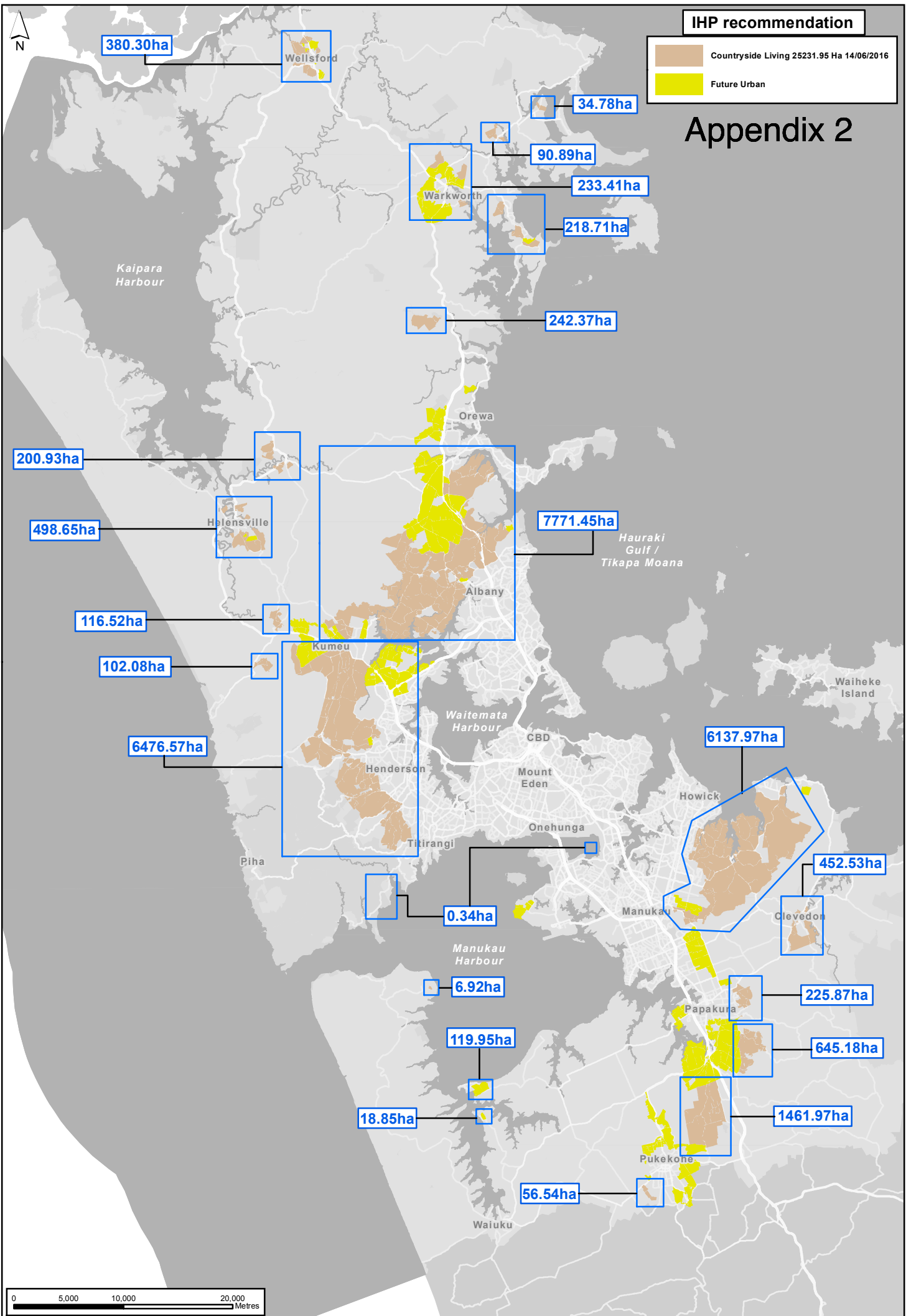


Proposed Auckland Unitary Plan



Appendix 1





Appendix 3: PAUP Countryside Living

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	FUZ Location Name	CSL Zone Gross Area	Terrain	Road Reserve	Landscape Reserves	Net Dev Area	Hect/New Dwelling	Additional Dwellings	Take Up Rate	Exist Use, Lot Size*
1	Wellsford	235.02	A	5%	8%	205.41	2.3	89	D	A
2	Point Wells	50.14	B	5%	8%	43.82	1.5	29	D	C
3	Matakana	76.05	B	5%	8%	66.47	4.4	15	C	A
4	Warkworth	141.13	B	5%	8%	123.35	4.4	28	C	A
5	Mahurangi	220.76	B	5%	8%	192.94	2.5	77	C	C
6	Puhoi	45.41	C	5%	8%	39.69	4.6	9	C	C
7	Kaukapapa	200.89	B	5%	8%	175.58	2.3	76	A	A
8	Helensville	449.10	B	5%	8%	392.51	2.5	157	D	A
9	Waimauku	116.52	B	5%	8%	101.84	4.5	23	C	B
10	Muriwai Rd	102.08	B	5%	8%	89.22	2.4	37	C	A
11	North Auckland	7,475.90	A	5%	8%	6,533.94	3.0	2,178	B	A
12	West Auckland	3,839.28	D	5%	8%	3,355.53	3.2	1,049	B	A
13	East Auckland	6,259.97	B	5%	8%	5,471.21	2.3	2,379	A	A
14	Clevedon	386.97	B	5%	8%	338.21	2.4	141	B	A
15	Pararekau Isl.	25.78	B	5%	8%	22.53	4.1	5	A	A
16	Hunua Rd	225.52	B	5%	8%	197.10	2.3	86	A	A
17	Ararimu	523.06	B	5%	8%	457.15	2.5	183	A	C
18	Ramarama	1,631.92	A	5%	8%	1,426.30	2.6	549	C	D
19	Pukekohe	56.54	A	5%	8%	49.42	2.6	19	C	C
		22,062.04		12.60%		19,282.22	2.70	7,129		

A = Level	1,103	1,765	87.40%	dw/ha	0.32	A = Fast	A = Large	
B = Easy	Hectares	Hectares			Gross R	B = Good	B = Med-Lge	
C = Moder.						C = Moder.	C = Medium	
D = Tough						D = Slow	D = Small	
							* relative to it's FUZ area	

Appendix 4: IHP Countryside Living

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	FUZ Location Name	CSL Zone Gross Area	Terrain	Road Reserve	Landscape Reserves	Net Dev Area	Hect/New Dwelling	Additional Dwellings	Take Up Rate	Exist Use, Lot Size*
1	Wellsford	380.30	A	5%	8%	332.38	2.3	145	D	A
2	Point Wells	34.78	B	5%	8%	30.40	1.5	20	D	C
3	Matakana	90.89	B	5%	8%	79.44	4.4	18	C	A
4	Warkworth	233.41	B	5%	8%	204.00	4.4	46	C	A
5	Mahurangi	218.71	B	5%	8%	191.15	2.5	76	C	C
6	Puhoi	242.37	C	5%	8%	211.83	4.6	46	C	C
7	Kaukapapa	200.93	B	5%	8%	175.61	2.3	76	A	A
8	Helensville	498.65	B	5%	8%	435.82	2.5	174	D	A
9	Waimauku	116.52	B	5%	8%	101.84	4.5	23	C	B
10	Muriwai Rd	102.08	B	5%	8%	89.22	2.4	37	C	A
11	North Auckland	7,771.45	A	5%	8%	6,792.25	3.0	2,264	B	A
12	West Auckland	6,476.57	C	5%	8%	5,660.52	3.2	1,769	B	A
13	East Auckland	6,137.97	B	5%	8%	5,364.59	2.3	2,332	A	A
14	Clevedon	452.53	B	5%	8%	395.51	2.4	165	B	A
15	Hunua Rd	225.87	B	5%	8%	197.41	4.1	48	A	A
16	Ararimu	645.18	B	5%	8%	563.89	2.5	226	A	C
17	Ramarama	1,461.97	A	5%	8%	1,277.76	2.6	491	C	D
18	Pukekohe	56.54	A	5%	8%	49.42	2.6	19	C	C
19	Awhitu	6.92	B	5%	8%	6.05	2.5	2	D	A
		25,353.64		12.60%		22,159.08	2.78	7,979		

A = Level
 B = Easy
 C = Moder.
 D = Tough

1,268
 Hectares
 2,028
 Hectares

87.40%

dw/ha

0.31
 Gross R

A = Fast
 B = Good
 C = Moder
 D = Slow

A = Large
 B = Med-Lge
 C = Medium
 D = Small

* relative to
 it's FUZ area