

Memo

5th July 2016

To: Auckland Unitary Plan Independent Hearings Panel

From: Patrick Fontein

Subject: **Feasible Development Capacity of the PAUP's FUZ and the IHP's FUZ.**

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 Future Urban Zone (FUZ) land area.
2. the IHP's Future Urban Zone (FUZ) land area.

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

The IHP's FUZ 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 development capacity of the PAUP's FUZ and the IHP FUZ areas, taking account of the areas likely to be taken for road reserves, landscape reserves and with an allowance for business land.

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 FUZ Gross Area. We have taken the FUZ land locations and gross areas and tabulated these into a spreadsheet. This spreadsheet is provided in Appendix 3 for the PAUP FUZ and Appendix 4 for the IHP FUZ. The contents of each of the columns are described in detail below. The PAUP FUZ has a gross land area of 10,112 hectares. The IHP FUZ has a gross land area of 12,119 hectares, so approximately 20% more.

2.2 Adjacent Density. We have then considered the density of nearby residential neighbourhoods, which give a clear indication of the likely dwelling / hectare density of the future new neighbourhoods.

2.3 New Suburb Site Size. The terrain of the gross land areas was then considered. Areas with more undulating terrain were given a more generous reserve requirement, to take account of the contours.



2.4 Road Reserves. The Road Reserves takes a lot of area off the gross site area. Careful analysis was undertaken of recent subdivisions of similar section sizes, with the amount of land the road reserves took up. The road reserve area of 25% for larger sections and 28% for smaller sections is considered representative.

2.5 Landscape Reserves. The Landscape reserves consisted of circa 10% of gross area. This takes account of passive and active open space reserves, as well as some stormwater reserves.

2.6 Net Development Area. Accounting for all of the above factors gives the Net Development Area. The results show an area of approx. 2/3 of the gross land area, which is representative of recent subdivisions.

2.7 Business Area. With business land, for this FUZ assessment we refer to light and heavy industry, rather than town centres. There are two columns which consider the amount of business zoned land for each location relative to the total net area, and then a column which provides the Net Business area for each location. Any future town centre residential development can be considered *within* the residential areas and dwelling numbers provided. Careful consideration was taken of:

- Auckland Council's Jeremy Wyatt's submission to the IHP, dated 27th July 2015
- The relative proportion of residential to business in most large cities. 8-10% of residential areas seemed a reasonable allowance.
- The relative quantum of business zoned land required within the Auckland Plan. SD4's Vacant Industrial Land Fine Grained analysis conducted for Auckland Council in 2014 highlighted approx. 300 vacant hectares of business zone land. A further 700 hectares of land would provide 1,000 hectares of vacant and future business zoned land, which Industry would be satisfied with.
- The locations of FUZ business land was considered, relative to industry's demand and the land owner's willingness to provide. The southern corridor / Drury is the most likely and highest future demand area for business zoned land.

2.8 Net Residential Area. Subtracting the business land area from the net developable area provides the Net Residential Area, in hectares. For the PAUP's FUZ a result of 6,109 hectares and for the IHP's FUZ, a result of 7,373 hectares. For both FUZ, the net residential area is just over 60% of the gross overall land area, a percentage which we feel is reasonable.

2.9 Intensification Levels. This section then considers the likely levels of intensification that could prevail within each location. Flat Bush and Hobsonville are already showing strong intensification and are likely to maintain this. This also takes some allowance for future higher residential densities in and surrounding future town centres. Conversely the more distant and rural areas are likely to have less intensification.

2.10 New Dwellings / Hectare. Considering the likely section sizes and the likely intensification factors, gives a dwelling per hectare assumption. This ranges between 15 to 30-35 dwellings per hectare, with a slight anomaly of the small Hobsonville site near the water. The dwellings / hectare take account of the existing dwellings that are on each site. An overall *new* dwelling / hectare density of circa 18.7-18.9 in FUZ areas, means the overall average dwelling density / hectare will be circa 20 when taking existing dwellings into account. This is considered fair and consistent with the more recent subdivisions completed on the outskirts of Auckland.

2.11 Resultant Dwellings. Taking the Net Residential developable land area and multiplying this by the dwellings per hectare, gives the total dwellings likely to be yielded for each FUZ area. For the PAUP FUZ this gives a total of 115,260 and for the IHP FUZ gives 138,177 dwellings that can reasonably be provided within the FUZ area. As a back check this is a dwelling density from the overall gross land area of circa 11.4 dwellings / hectare, which also feels sensible.

2.12 Take Up Rate and Existing Use Lot Size. These two issues are related. When a FUZ area is predominated with Lifestyle blocks of relatively small land area, they are going to be harder to re-develop to subdivisions, relative to a 100 hectare site. The result is that these smaller existing use lots will take longer to develop. Another major factor in take up rate is the distance to the main Auckland urban area. An Albany or Flat Bush FUZ site will have a take up rate that is much faster than a FUZ site in (say) distant Helensville.



3.0 Commentary on the Results and Conclusion

3.1 The PAUP FUZ Area

The provision of 10,112 hectares of FUZ gross land area has yielded the following:

- 627 net hectares of business zoned land
- 6,109 net hectares of residentially zoned land
- at a dwellings / net hectare of 18.87, **115,260 extra dwellings** are able to be developed within the PAUP FUZ area, as shown in Appendix 1.

3.2 The IHP FUZ Area

The provision of 12,119 hectares of FUZ gross land area has yielded the following:

- 700 net hectares of business zoned land
- 7,373 net hectares of residentially zoned land
- at a dwellings / net hectare of 18.74, **138,177 extra dwellings** are able to be developed within the IHP's FUZ area, as shown in Appendix 2.

3.3 Variances between the PAUP and the IHP FUZ Areas

The IHP's FUZ has provided an additional 2,007 hectares of FUZ gross land area, compared to the PAUP FUZ. The differences in resultant yields are as follows:

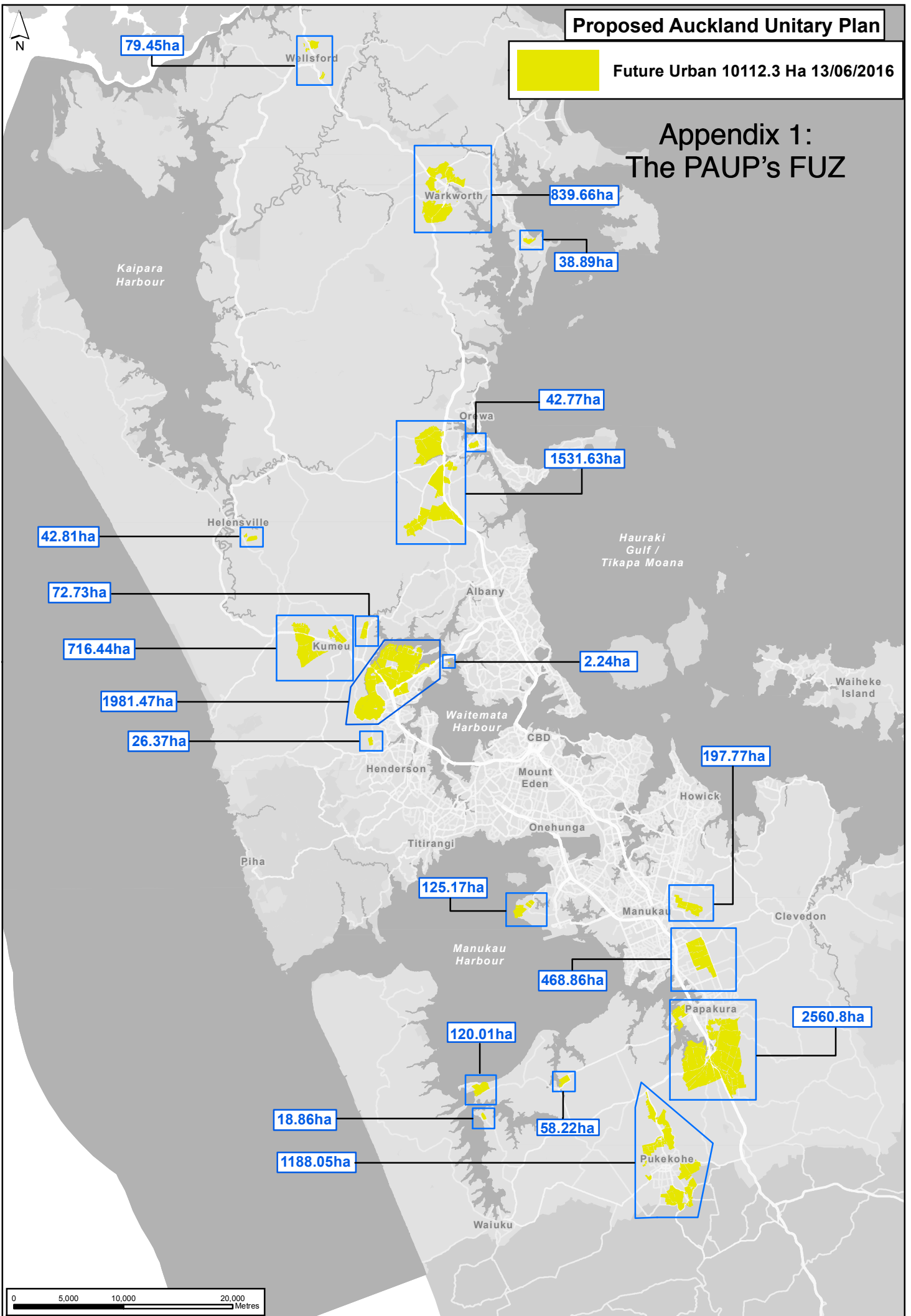
- The IHP has an increase of 77 net hectares of business zoned land, relative to the PAUP.
- The IHP has **22,917 extra dwellings** able to be developed within the FUZ area, relative to the PAUP.

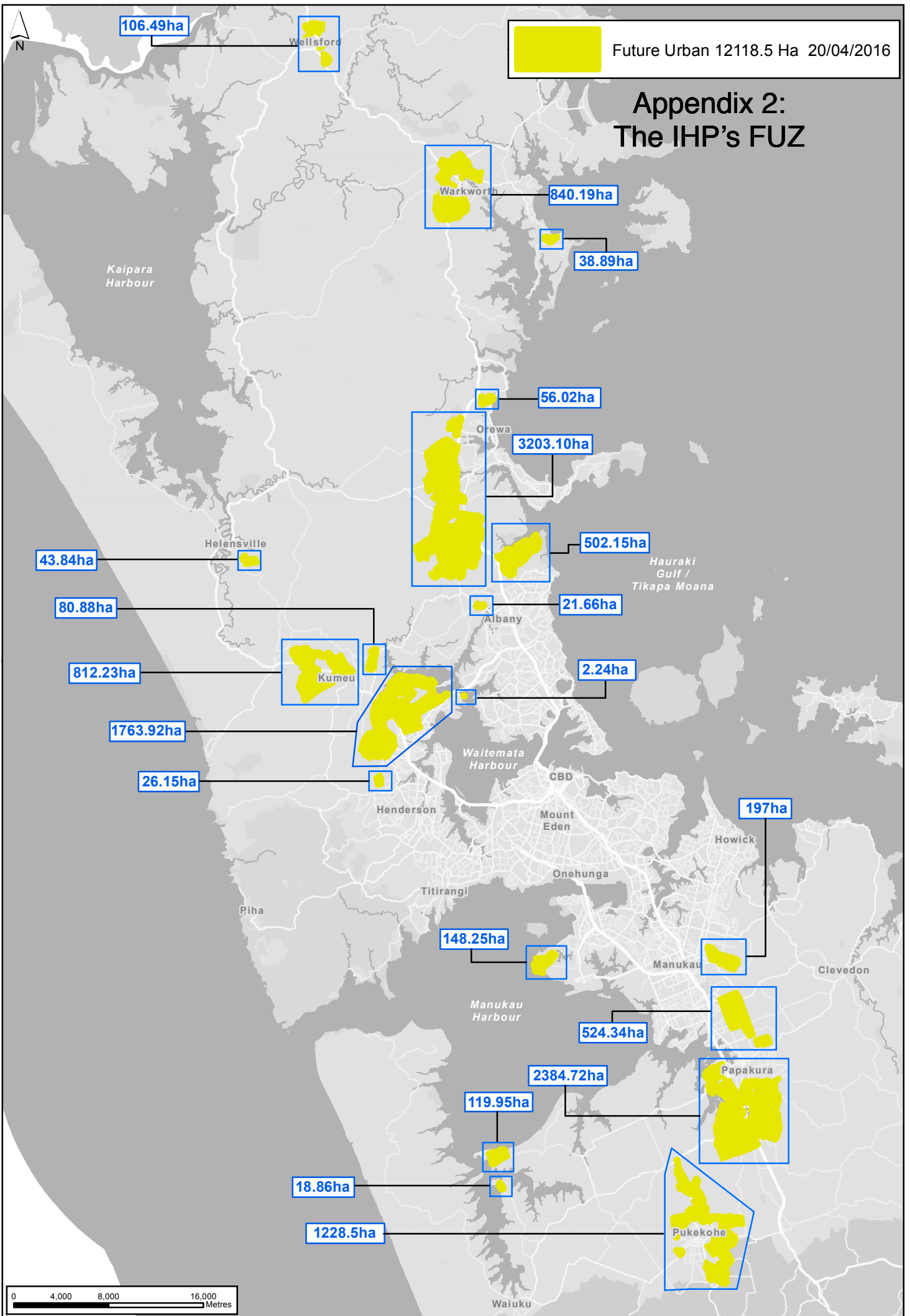
We believe we have followed a fair and robust methodology, that should be widely accepted within the overall property community, for reviewing the extra dwelling and business land capacity of the PAUP and the IHP FUZ. We are satisfied that this robust process has produced reliable results.



Future Urban 10112.3 Ha 13/06/2016

Appendix 1: The PAUP's FUZ





Appendix 4: IHP Future Urban Zones Analysis

by Patrick Fontein, Studio D4

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	FUZ Location Name	FUZ Zone Gross Area	nt Density	New Sub Site Size	Terrain	Reserve	cape Reserve	Net Dev Area	ss % of Net	assumed Bus Area	Net Resid Area	Intensification	new dwell / hectare	Dwellings	Take Up Rate	Exist Use, Lot Size*	
1	Wellsford	106.49	D	D	A	25%	10%	71.88	8%	5.75	66.13	D	15	992	D	A	
2	Warkworth	840.19	D	D	B	25%	10%	567.13	8%	45.37	521.76	D	15	7,826	D	C	
3	Mahurangi	38.89	C	C	C	26%	12%	25.33	8%	2.03	23.30	C	18	419	C	A	
4	Hatfields Beach	56.02	C	C	B	26%	10%	37.31	8%	2.98	34.32	C	18	618	C	A	
5	Dairy Flat-Silverd	3,203.10	C	C	B	26%	10%	2,133.26	6%	128.00	2,005.27	C	18	36,095	C	C	
6	Okura	502.15	C	C	B	26%	10%	334.43	8%	26.75	307.68	C	18	5,538	C	C	
7	Albany	21.66	C	C	B	26%	10%	14.43	0%	0.00	14.43	C	18	260	A	A	
8	Helensville	43.84	D	D	C	25%	12%	28.93	8%	2.31	26.62	D	15	399	D	A	
9	Kumeu	812.23	D	D	A	25%	10%	548.26	6%	32.90	515.36	D	16	8,246	C	B	
10	Riverhead	80.88	D	D	A	25%	10%	54.59	8%	4.37	50.23	D	16	804	C	A	
11	Whenuapai-Redh	1,763.92	C	C	A	26%	10%	1,174.77	5%	58.74	1,116.03	C	18	20,089	B	A	
12	Ranui	26.15	C	C	B	26%	10%	17.42	5%	0.87	16.55	C	18	298	B	A	
13	Hobsonville	2.24	A	A	A	0%	15%	1.90	0%	0.00	1.90	A	80	152	A	A	
14	Ihumatao	148.25	C	C	A	26%	10%	98.73	8%	7.90	90.84	C	20	1,817	C	A	
15	Flat Bush	197.00	A	A	C	28%	12%	124.82	8%	9.99	114.83	A	35	4,019	A	A	
16	Takanini	524.34	A	A	A	28%	10%	339.77	5%	16.99	322.78	A	30	9,684	A	C	
17	Drury	2,384.72	C	C	B	26%	10%	1,588.22	19%	300.33	1,287.89	C	20	25,758	C	D	
18	Pukekohe	1,228.50	C	C	A	26%	10%	818.18	6%	49.09	769.09	C	18	13,844	C	C	
19	Clarks Beach	119.95	D	D	A	25%	10%	80.97	6%	4.86	76.11	D	15	1,142	D	A	
20	Glenbrook Beach	18.86	D	D	A	25%	10%	12.73	6%	0.81	11.92	D	15	179	D	A	
		12,119.38				33.39%		8,073.07	8.7%	700.04	7,373.03		18.74	138,177			

A < 400m2	A < 400	A = Level	3,145	1,218	66.61%
B = 400-500	B=400-500	B = Easy	ectares	ectares	
C = 500-600	C=500-600	C=Moder.			
D > 600m2+	D > 600+	D=Tough			

A = High	Net R	11.40	A = Fast	A = Large
B = Some	Gross R		B = Good	B = Med-Lge
C = Min			C = Moder.	C = Medium
D = Unlikely			D = Slow	D = Small

* relative to it's FUZ area