

Memo

5th July 2016

To: Auckland Unitary Plan Independent Hearings Panel

From: Patrick Fontein

Subject: **The ACDC Development Capacity Model: v3.8 Results, Description and Explanation.**

1.0 Introduction

Patrick Fontein of Studio D4 (SD4) has been engaged by the Auckland Unitary Plan Independent Hearings Panel (IHP) to work with Auckland Council (AC), to review the residential development capacity of the urban Auckland areas, using the IHP's proposed rules and zoning of areas, using the ACDC Model, as described in the Section below.

SD4 have been provided with the proposed IHP changes during the last few months, and these have been fully incorporated into these latest results of the ACDC. Please refer to the IHP's Report for the details of the proposed rules and zone changes. The urban area definition is also contained within the IHP Report.

2.0 Background to the ACDC Model Evolution, to reach the ACDC v3.8 Results

I was part of the Auckland Plan Advisory Committee, set up by Auckland Council from late 2010, throughout 2011, prior to the Auckland Plan release in early 2012. During 2011, SD4 worked for AC to provide property advice on the Auckland Plan, which included reviewing the development capacity of areas of Auckland, relating to proposed planning rules being considered. The Auckland Plan considered an increase of 400,000 dwellings in greater Auckland in a 70:40 format, with a target of 240-280,000 (60-70%) dwellings within the existing urban Auckland footprint, and 120-160,000 (30-40%) outside of existing urban areas.

The early SD4 work on development capacity analysis with Auckland Council evolved during 2012 through to 2014, with SD4 carrying out various consultancy tasks for AC during this time. In early 2015, the IHP requested an expert group be established to review the development capacity enabled by the Proposed Auckland Unitary Plan (the PAUP), the 013 Topic Expert Group (013EG). I was part of the 013EG. From Feb-July 2015 the 013EG set up the Auckland Council Development Capacity (ACDC) Model.

The ACDC Model was created by the 013EG Members, with the main contributors to its formation being AC's Kyle Balderston, Adam Thompson, Doug Fairgray and myself. The 013EG Report to the IHP, dated 22nd July 2015 describes in detail how the ACDC Model works, what it's assumptions are etc.

My further background that is of relevance to this consulting work and development capacity analysis is provided in a number of submissions to the IHP during 2014 and 2015, and will not be repeated here.



The 013EG produced the initial Model run of the ACDC (v1), that considered the existing urban residential development capacity that the PAUP enabled. See the 013EG Report of 22nd July 2015. The urban residential development capacity of the PAUP (using ACDC v1) was 83,420 dwellings, which included 19,000 Housing NZ Corp (HNZC) dwellings, see Appendix 1 attached.

The strong benefit of the ACDC Model is that it can review the development capacity impact of proposed changes to planning rules and zone changes.

During Aug-Sept 2015, AC considered a series of proposed modified residential zoning rules (which evolved into Auckland Council Amended Plan, or ACAP). As the ACAP rules were being considered, the ACDC Model considered a number of scenarios, which eventually led to the ACDC v2.4. (Note: v2.4 did not make allowance for any up zoning of areas, also considered by AC in late 2015). AC's ACAP, using ACDC v2.4 provided a development capacity of 167,165 dwellings, which included 23,000 HNZC dwellings, see Appendix 1.

3.0 The further ACDC Model Analysis, leading to ACDC v3.8

The changes proposed by AC under ACAP that produced the ACDC v2.4 results, created an urban development capacity of 167,165 dwellings over a 30 year period, which for a target of 400,000 dwellings was just over 40%, and well short of the 60-70% target.

In early 2016, the IHP engaged SD4 directly to review the development capacity impact of a variety of IHP proposed zoning rule modifications and changes to where the zones would be applied, in an effort to create sufficient urban dwelling development capacity to reach the 60-70% target of the Auckland Plan.

During the last 3 months I have been working closely with AC's Kyle Balderston and the IHP team (under Confidentiality) to carefully refine the inner workings of the ACDC Model (effectively a full "Commissioning" of the ACDC Model, which we had not had the time to implement during 2015), and have the ACDC Model evaluate a range of scenarios that the IHP team asked us to consider.

The latest evaluations were under the ACDC "v3.range", and the final results which have formed the IHP Recommended Plan, have been provided here as ACDC v3.8.

The ACDC Modelling that led to v3.8 followed a similar approach as the earlier ACDC modelling. However as the modifications of rules proposed by the IHP required changes to the formulae that drive the ACDC Model, we thought it prudent to engage with the 013 Property Development Expert Group (the 013PDEG) Members again, to ensure that a wide range of property development experts were satisfied and were willing to "sign off" with the methodology of the ACDC v3 changes. All the 013PDEG Members as the 013EG Group (see 013EG Report for Member names, in Appendix C) contributed, and Mr Chris Dibble was added to this 013PDEG to provide the latest 2015-2016 property market sales information. All of the interchange of communication between the 013PDEG and SD4 were provided to the IHP.

The final results of the IHP's proposed changes, has yielded an existing urban development capacity of 270,071 dwellings within ACDC v3.8, which is within the 60-70% range sought as part of the Auckland Plan.

The following section will provide a brief commentary on the differences that the IHP's planning rule and zone modifications have made to the development capacity of the urban areas, since the PAUP as notified (ACDC v1) and using AC's modified residential planning rules, ACAP (ACDC v2.4).

People reviewing the ACDC results will see a row for Housing NZ Corp, separate from the ACDC calculations. The HNZC development capacity numbers have been kept separate as they have been evaluated by SD4 and AC in conjunction with HNZC. HNZC often have different economic drivers than those of the private sector and that used in the ACDC Model. A consistent approach has been used, whereby the HNZC land has been excluded from the ACDC modelling in all cases. The development capacity numbers for HNZC steadily increase from the original PAUP's 19,000, to 39,000 when following the IHP's recommended modifications.



4.0 Development Capacity changes created by the IHP's Rule and Zoning Modifications

Appendix 1 highlights the changes in development capacity achieved by the IHP planning rule and zoning modifications. The main variances, which can also be clearly seen in the "Heat Maps" produced by AC as part of the IHP Report, are as follows:

- An increase in the amount of land zoned Mixed Housing Urban, THAB and Mixed Use
- Rule changes that have allowed many more properties to become "development feasible". The main contributing rule changes have been:
 - Removing the restrictions on dwelling density (number of units viz land size) in MHS and MHU.
 - Slight increases in allowable building heights in the MHU zone
 - Slight increases in allowable building coverage in the MHS and MHU zones
 - Changes to the minimum apartment size requirements

5.0 Further work undertaken by SD4 for the IHP in recent months

SD4 have also undertaken work for the IHP on the following:

- Calculating the current (mid 2016) unmet Auckland dwelling demand (housing shortfall), taking account of all other Reports and analysis on this subject.
- Calculating the residential and business land development capacity within the proposed Future Urban Zone (the FUZ).
- Calculating the residential development capacity of the Countryside Living areas (the CSL).

Whilst all of this work has been undertaken separately, there are connected strands which we have taken account of. The development capacity using the IHP's recommendations of all of these areas, and within the existing urban areas (as this Report) can all be seen in Appendix 1.

Appendix 2 has been provided to show in graphical form, all of these results.

6.0 Conclusion

The IHP have considered all of the submissions made to it, and have proposed a series of planning rule changes and modified the locations in which the various zonings should apply, in an effort to provide sufficient realistic feasible development capacity within urban Auckland.

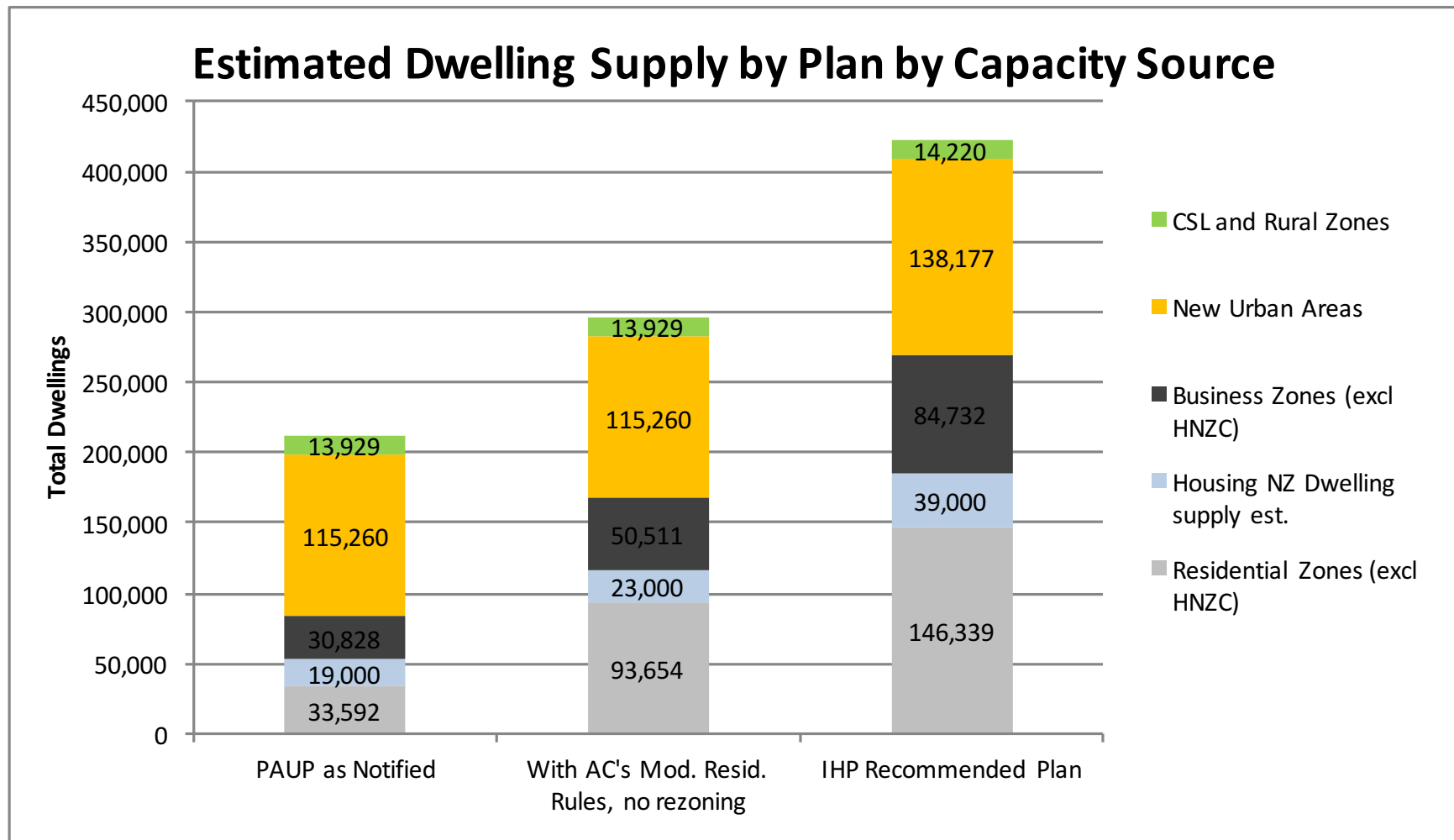
The ACDC Model is an industry accepted process to evaluate residential development capacity, and the recommended IHP modifications have provided a feasible urban development capacity of 270,071 dwellings within ACDC's Model v3.8, assuming a 30 year development period, which is comfortably within the 60-70% Auckland Plan target range.



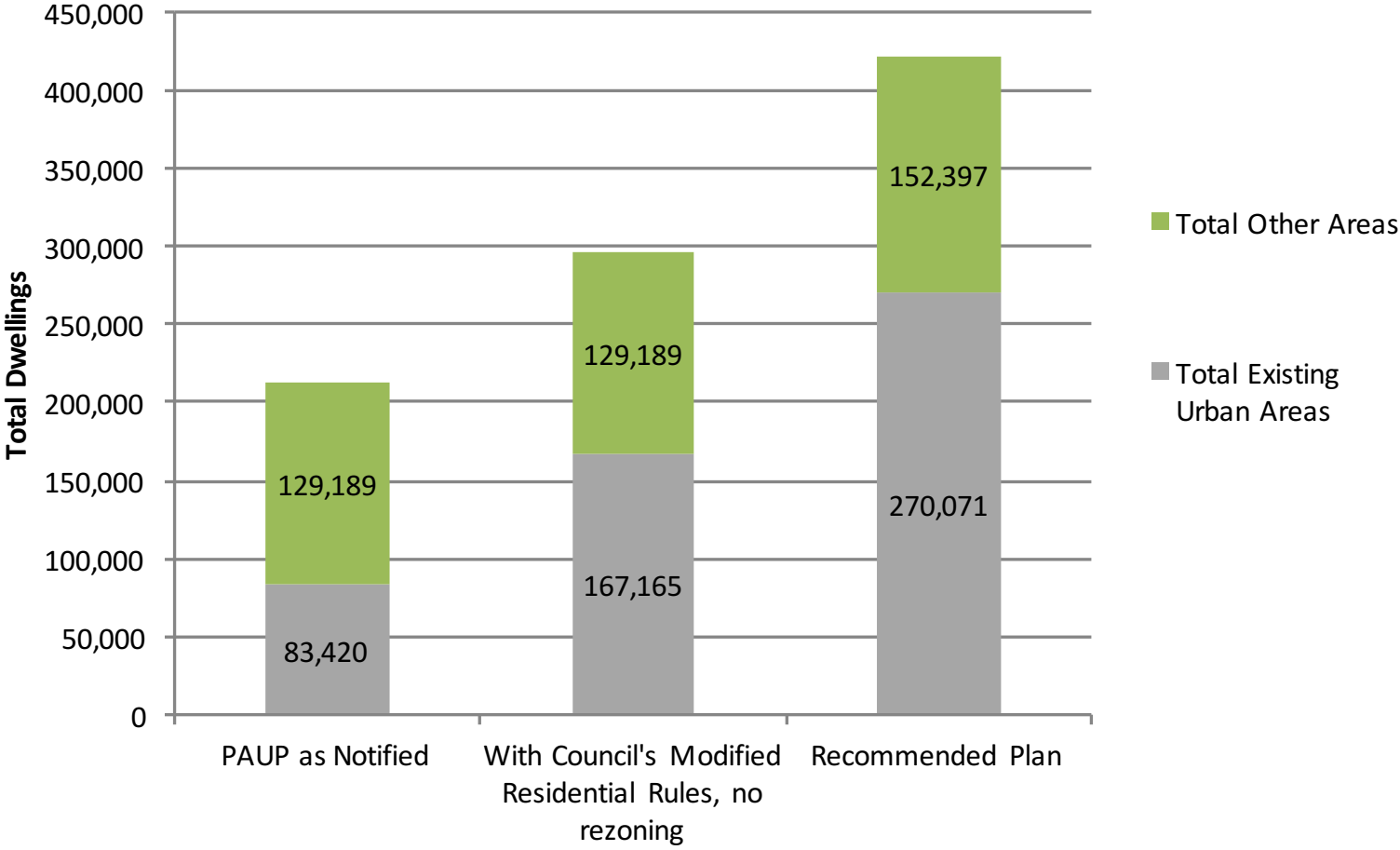
Appendix 1: Feasible Development Capacity Numbers

Capacity Source	PAUP as Notified	With AC's Mod. Resid. Rules, no rezoning	IHP Recommended Plan
Residential Zones (excl HNZC)	33,592	93,654	146,339
Large Lot	248	132	86
Rural and Coastal settlement	165	205	439
Single House	9,000	7,036	10,734
Mixed Housing Suburban	13,910	47,911	49,744
Mixed Housing Urban	5,267	18,411	47,698
Terrace House & Apartment Building	5,002	19,959	37,638
Housing NZ Dwelling supply est.	19,000	23,000	39,000
Business Zones (excl HNZC)	30,828	50,511	84,732
Mixed Use	5,978	17,572	28,768
Neighbourhood Centre	100	1,632	969
Local Centre	371	1,525	2,359
Town Centre	4,111	5,312	15,517
Metropolitan Centre	6,952	7,243	23,998
City Centre	13,316	17,227	13,121
Total Res & Bus Zones (incl HNZC)	83,420	167,165	270,071
CSL and Rural Zones	13,929	13,929	14,220
New Urban Areas	115,260	115,260	138,177
Future Urban Zone	115,260	115,260	115,546
Live Zoning	0	0	22,631
Estimated Total Dwelling Supply	212,609	296,354	422,468

Appendix 2: Graphical display of development capacity analysis results



Estimated Dwelling Supply Number, by Plan, by Capacity Location (Existing Urban vs Other)



Estimated Dwelling Supply, by Plan, by Capacity Locat. (Exist Urban v Other), %

