### **HOUSING AFFORDABILITY:**

### ARE FINANCIAL BARRIERS CAUSED BY HOLDING COSTS SIGNIFICANT FOR GREENFIELD RESIDENTIAL DEVELOPMENT IN NEW ZEALAND?

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#### **Discussion Paper**

### ABSTRACT

Over rent years it may be readily demonstrated that increasing prices being paid for residential accommodation in new housing estates have done little to assist the housing affordability problem. A critical question to be asked is whether this might simply represent profiteering by developers, or are there genuine increases in underlying cost structures to an extent that force developers to pass theses costs on? Moreover, are such costs actually passed on, and to whom? As to the nature of these costs, are developer infrastructure contributions - regularly cited as the most significant contributor of planning or development costs – all-pervasive? Or, are there other non-financial barriers - such as inconsistent planning requirements, development assessment procedures, and conflicts between developers and local councils – emerging as almost equally significant impactors? Research conducted over recent years in Australia suggests that whilst in many cases it may be true that development contributions for infrastructure represent the single largest planning related cost, their existence also impacts the holding cost equation. Such findings - recognising the significance of holding costs - have underpinned a diverse range of planning reforms in Australia, including systematic enhancements intended to reduce administrative requirements, system complexity and timeliness. In short, it has seen the instigation of replacement organisations, and the implementation of new systems and procedures all designed to reduce "red tape". It is apparent that most of these reforms directly address the invasive impacts of holding costs which can be established as a potentially formidable financial barrier, even though they typically present in a less visible form (since they typically stem from issues revolving around uncertainty, timeliness and inconsistency). This paper examines whether similar operating scenarios exist in New Zealand and moreover, are the financial benefits arising from such planning reforms and intervention transplantable in this Tasman neighbour?

Keywords: Holding costs; greenfield development; infrastructure costs; housing affordability.

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# holding costs



 those costs revolving around an assessment of "carrying costs" related to capital and other outlays in the context of residential greenfield property development

# applicability

 midsized to larger (around 200+ lot) residential greenfield property development

# significance of holding costs



- underpinned a diverse range of planning reforms in Australia
- instigation of replacement organisations, and the implementation of new systems and procedures all designed to reduce "red tape".
- Are financial benefits arising from such planning reforms and intervention transplantable in New Zealand?

## Research conducted in SEQ



holding costs rival apparently more pervasive, obvious costs (e.g. development contributions expended towards infrastructure) involved in large-scale residential property development

## housing affordability: Holding costs are significant impactor

### **Timeframe Analysis - Case Studies**





## Holding cost model tested (Base case scenario)

Economic Analysis to Examine the Sensitivity of Time on a Develo	opment Proj	ect			Output Sumr	nary
oss of Interest due to assessment period				\$1,067,034	\$5,335	\$5,33
				SUMMARY - This	SUMMARY -	BASE CASE
Assumptions used - summary				scenario	This scenario	SCENARIO
				\$ Development	\$ Per Lot	\$ Per Lot
Jevelopment Timing & Physical attributes						
f activities are conducted concurrently, enter total time for all related activities once only	0.00		-	0.00	0.00	0.0
Cite purchase ( acquisition (including pagetisticae)	0.00	months	a	0.00	0.00	0.0
site purchase / acquisitori (including negotiations)	0.00	months	0	0.00	0.00	0.0
Negotiation of infrastructure levies & detailed structure planning	0.00	months	d	0.00	0.00	0.0
Statutory Planning (subdivision) including DA	18.00	months	e	18.00	18.00	18.0
Building consent approvals	0.00	months	f	0.00	0.00	0.0
Funds raising (debt and / or equity)	3.00	months	a	3.00	3.00	3.0
Construction & development - major civil works (roadworks infrastructure)	9.00	months	h	9.00	9.00	9.0
Oher Building & construction (if applicable)	0.00	months	i	0.00	0.00	0.0
Other	0.00	months	j	0.00	0.00	0.0
TOTAL development time from acquistion	30.00	months	k	30.00	30.00	30.0
TOTAL development time including site identification	30.00		1	30.00	30.00	30.0
TOTAL development time from acquistion - No. Years	2.50			2.5	2.5	2
CPI (Inflation), Interest rates, Household Income & Exposure levels	-					
nterest rate (average commercial weighted cost p.a.) *	9.00%	per annum		9.00%	9.00%	9.00
nflation rate (average weighted CPI p.a)	6.50%	per annum		6.50%	6.50%	6.50
Average Interest rate p.a home mortgage **	10.70%	per annum		10.70%	10.70%	10.70
Assumed Mortgage term (years)	20	years		20	20	2
Mean equivalised disposable household income (household weighted)	\$51,656	per annum		\$51,656	\$51,656	\$51,65
Average exposure level over period of development (acquistion costs)	100.00%			100.00%	100.00%	100.00
Average exposure level over period of development (rates, infrastructure charges, DA etc)	80.00%			80.00%	80.00%	80.00
Average exposure level over period of development (development costs)	85.00%			85.00%	85.00%	85.00
Physical Attributes & Costs						
Number of lots in subdivision	200			200	200	20
Jndeveloped Land Cost	\$7,500,000			\$7,500,000	\$37,500	\$37,50
Acquistion costs	3.10%			\$232,500	\$1,163	\$1,16
Total acquistion costs	\$38,663			\$7,732,500	\$38,663	\$38,66
loss of Interest (acquistion) over a development period of	30	months	b to j	\$1,858,992	\$9,295	\$9,29
Rates, infrastructure levies / charges, DA, consultants, special council charges & land tax say	8.00%	of acquistion and land costs per lot p.a.		\$1,546,500	\$7,733	\$7,73
nterest on rates, infrastructure levies / charges, DA, consultants, special council charges & land tax	30	months	c to j	\$297,439	\$1,487	\$1,48
Development Costs, including major civil works, building and construction	\$75,000	per lot		\$15,000,000	\$75,000	\$75,00
nterest Costs on development - based on	100%	of total development period				
=	9.0	months	h to j	\$851,289	\$4,256	\$4,25
Total Development costs incluiding interest			-	\$19,554,220	\$97,771	\$97,77
Total Costs of Development including acquistion costs				\$27,286,720	\$136,434	\$136,43
Margin and selling details	00.000/	(T ) ) ·		A5 157 0.11	007.007	007.00
	20.00%	of lotal costs		\$5,457,344	\$27,287	\$27,28
Sale price before selling costs	0.049/			\$32,744,063	\$163,720	\$163,72
	3.84%			\$1,255,899	\$0,279	\$0,27 \$170.00
				\$33,999,962	\$170,000	\$170,00
IOTAL HOLDING COSTS FOR PROJECT (ex strategic identification costs)	¢5 225			\$3,007,720	\$15,039	\$15,03
Eatal costs of motigage repayments due to assessment period	\$0,000 \$55			\$1,007,034	\$0,000 ¢55	φ0,00 ¢0
Total costs of montgage repayments due to assessment period, per month	\$33 \$154			\$10,940	60¢	ېن 190
	\$134			\$30,859	\$154	\$15 4 077
Lost or mortgage repayment as a result or assessment period as a % or mean nousehold income	1.27%			1.27%	1.27%	1.27
cost or mortgage repayment as a result of holding costs as a % of mean household income	3.58%			3.58%	3.58%	3.58
based on 90 day bank bill rates (including typical corporate borrowing lending margin).		<i>a</i> + >				
<ul> <li>based on commercial rate plus 1.7% margin based on long term differential between 90 day Bank Bills</li> </ul>	and Housing Loan	s (danks)				
Detail	Developement	Per Lot				
Acquistion cost (undeveloped land)	\$7,732.500	\$38.663		22.74%	Acquistion (land)	
Rates, infrastructure levies / charges, DA, consultants, special council charges & land tax say	\$1.546.500	\$7.733		4.55%	Levies, charges	DA, consultan
		¢,,				,

## "What If" Scenarios: Holding Costs Summary



Increment

## "What If" Scenarios: Holding Costs (Housing Affordability) Summary



### Holding Cost - Housing Affordability Trendlines: Polynomial trendline equations



Polynomial regression equation is labelled on trendline

### "What If" Scenario:

### Total development time from acquistion

	\$50,000			500					Wh	at l	f" S	cer	nari	0:			D	eve	elop	me	nt ti	ime	
							9 x 10	0%										TON	n ac	qu	Sili	on	
	\$45,000							F	Regression Formula								y = 0038x - 0.004						
	\$40,000	-						F	R2 (unforced intercept)									0,					
ts	\$35,000								Arcta	ang ed)	ent,	in (	deg	ree	S							0.2	
So	\$30,000	-							Vidt	h												2.1	4
Bu	\$25,000								leig	ht											1	5.7	5
ldi	\$20,000	Tangent of the linear trend											0.14										
Ĭ	\$15,000							/ t	Ang ang	le: / ient	Arc ) ir	tang n de	gen eare	it (ii	nve -	rse							nou
	\$10.000								unfo	orce	ed i		- <u>g</u> . (									7.7	4
	\$5,000				-	T					Ċ,										- 5%	payme	ofm
	\$0 -								1	1		1	1	,	1	1	1	1	1	1	0%	- P	
		12	13	14	16	18	20	22	24	27	30	33	36	40	44	48	53	58	64	71		ge	)
						Тс	otal de	evelo	opme	nttim	ne tro	m ac	quisti	ion (n	nont	hs)						L ga	
			Holdin	ng Cos	ts																	o u	
			Cost o	f mor	tgage	repay	yment	as a r	result	of hol	dingo	osts a	as a %	of me	ean ho	buseh	old ind	ome					
	-	Linear Trend (Cost of mortgage repayment as a result of holding costs as a % of mean household income)																					

Sensitivity of nine factors impacting holding costs, and subsequent effect on housing affordability



Sensitivity Assessment	Angle	Variable
Very Extreme	>10 °	Interest / Inflation rate Change
Extreme	7-10 °	<ul><li>Mean equivalised household income</li><li>Development time from acquisition</li></ul>
Significant	4-7 °	<ul><li>Undeveloped Land Cost</li><li>Number of Lots in subdivision</li></ul>
Moderate	1-4 °	• Development Costs, including major civil works, building and construction - per lot
Minor	up to 1 °	<ul> <li>Rates, infrastructure charges, DA, consultants, etc - % land acquisition costs per lot p.a.</li> <li>Acquisition costs (% of undeveloped land cost)</li> </ul>
Nil	zero °	Developers Margin