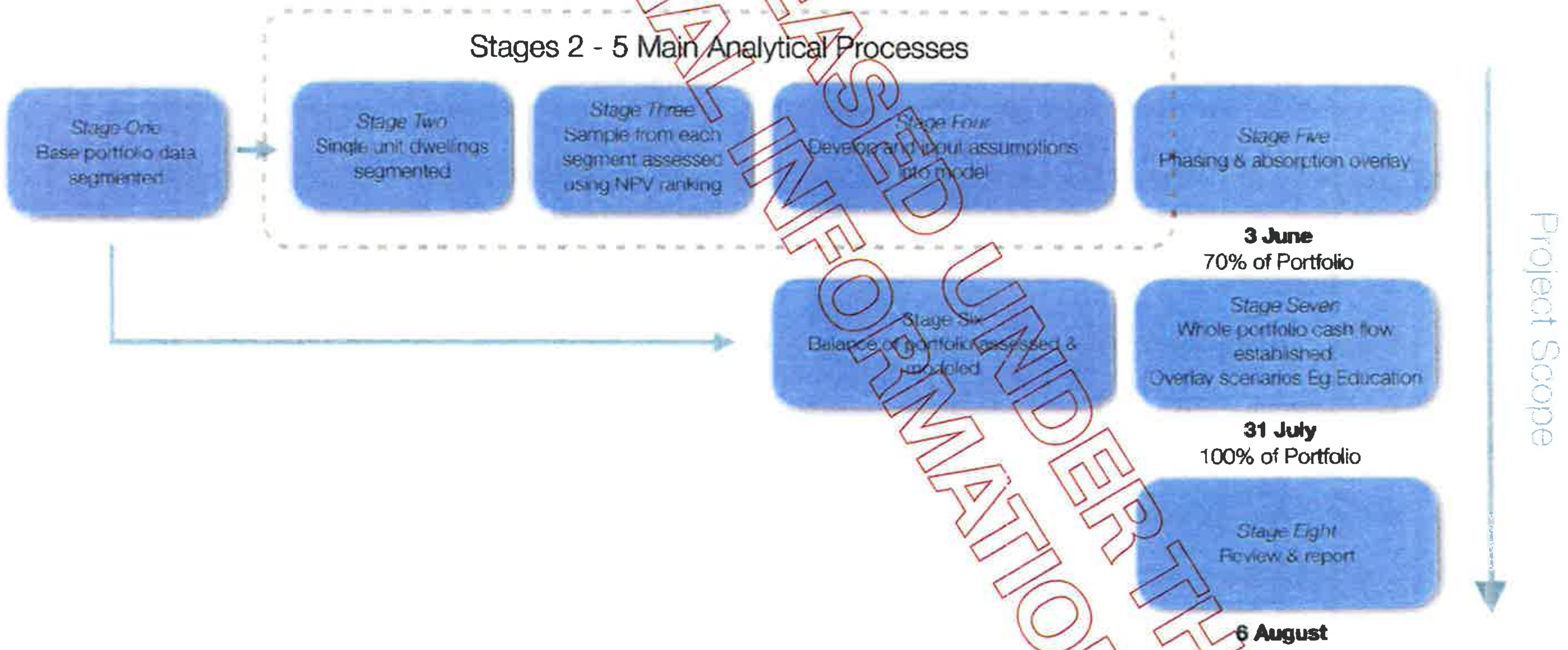
Tamaki

Counterfactual Cash Flows
Update 4 April 2012

Background

- ABL engaged to assist HNZC in establishing the terms on which HNZC would be indifferent between undertaking the development of its Tamaki portfolio and a third party undertaking that development.
- This requires understanding the value to and impact on HNZC in undertaking this development.
- ABL has identified a high level framework and process to model the portfolio cash flows - refer 23 March slide pack and 28 March memorandum.
- The framework uses detailed analysis work for about 150-200 sample assets to extrapolate to the larger population.
- In April ABL has:
  - Identified base data and requirements for all Tamaki stock to facilitate segmentation for sampling
  - Established initial segmentation
  - Constructed an early stage valuation model
- This slide pack presents a detailed framework and process

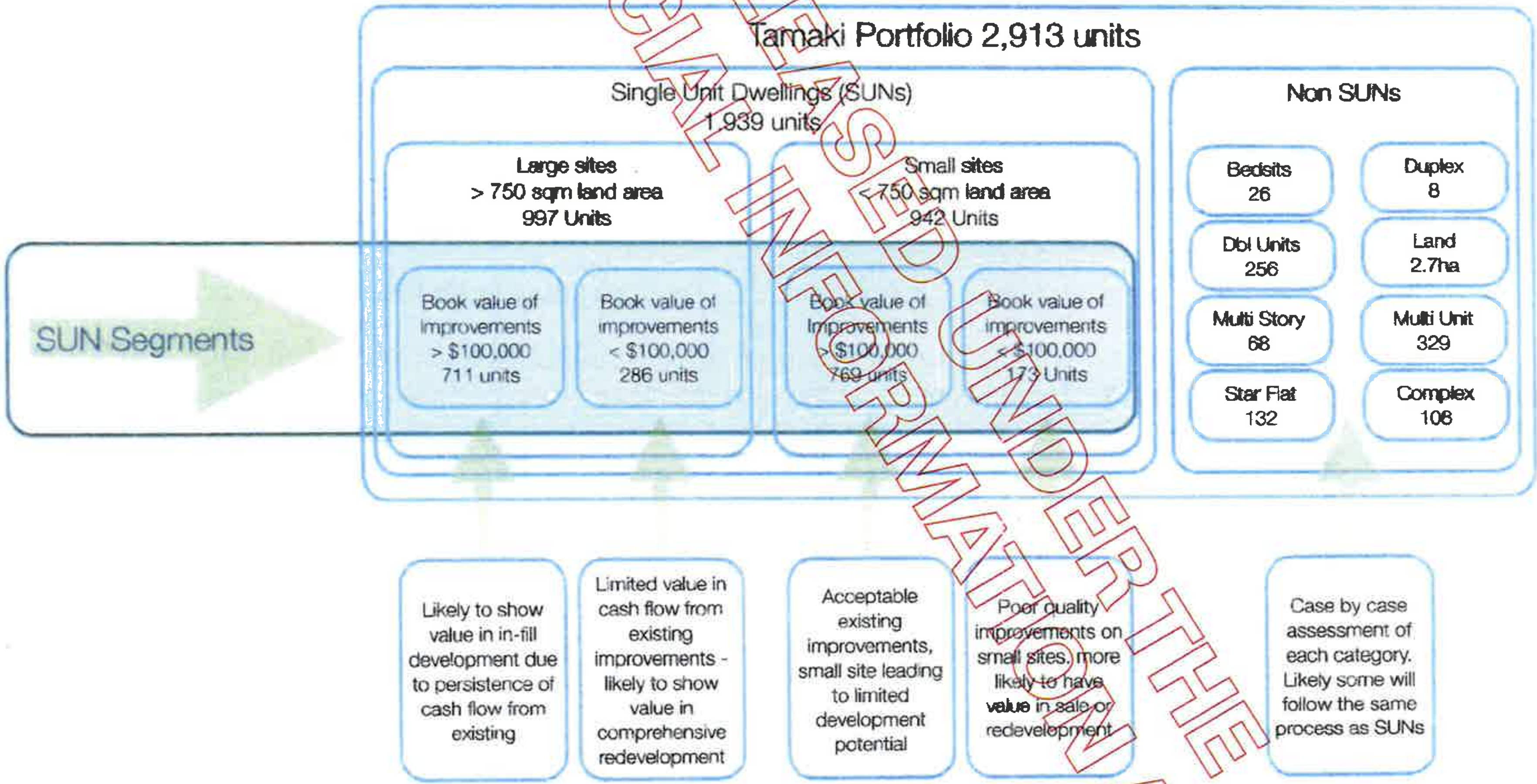
Tamaki Counterfactual Cash Flows



Stage One & Two
Portfolio Segmentation

- Single Unit Dwellings (SUNs) account for around 70% of the portfolio and can be separated out from the balance of the portfolio.
- SUNs lend themselves to segmentation into relatively homogeneous groupings that 'behave' similarly from a value perspective.
- Key to our analysis is good segmentation based on strongest relationships that give high correlation around value.
- Initial high level results show good correlation, we will be testing the impact of further segmentation. Zoning and contiguity are important and may form the basis for further segmentation.
- Non SUNs dealt with separately at stage six.
- The following slide depicts portfolio segmentation.

Stage One & Two
Segmentation



Stage Three
NPV Ranking & Segment Review

- Stage three sets up a sample of randomly selected assets from each segment for modeling and analyses them using high level generic assumptions for inputs such as: build costs; subdivisional expenses; and valuation metrics.
- Within this stage is a feedback loop to check our segmentation is giving good results.
- The table below provides a summary of NPV rankings for four example assets. Condensed examples of the analysis framework for two of these are included as appendices.

s9(2)(a)

Example Asset	[redacted]			
TYPE	Large Site Low Value Improvements	Large site Higher Value Improvements	Small Site Higher Value Improvements	Small Site Lower Value Improvements
Demolish & rebuild	419,563	559,418	279,709	279,709
Retain Infil & sell existing	389,854	565,574	Not Applicable	Not Applicable
Retain as existing - PV of HNZC cash flow	193,359	383,207	413,272	213,858
Sell into open market	358,666	389,033	397,900	304,450

- Early indications are, not surprisingly, that in many instances there is significant economic value in existing improvements and large scale redevelopment is difficult when compared to high quality infill development.
- Intuitively this makes sense as it is always tough to economically justify demolishing any asset that has significant future cash generating capacity. This analysis is consistent with the behavior of much of the private sector market when change of use is not a driver.

Stage Four & Five
Detailed Actual Data & Phasing

- Once sample assets are set up and we are happy that our segmentation is working well using high level assumptions, live data can but sourced and inputed.
    - Current and new build valuations - Typical examples only, possibly updated from previous HNZC work
    - Construction & Subdivisional costs - Again typical examples only, likely to be able to be updated from previous HNZC work
- This is the bulk of the work load for the 'SUNs' and on completion we will have a base case scenario for c70% of the portfolio.
- Stage five involves a timing overlay where the cash flows are remodeled to incorporate phasing and absorption. We need to understand the base case prior to phasing as the extent of redevelopment will influence our view on timing.

Stage Six
Non-SUN Assets

- These includes the likes of:
  - Bedsits
  - Multi-units
  - Surplus Land
  - Star Flats
- All have unique characteristics and each subset will need to be dealt with individually.
- This accounts for c.30% of the portfolio and we anticipate some will be covered by the same methodology as for the SUNs detailed above.
- This is the other significant and resource hungry piece of work and the area with the most uncertainty as to timing.
- External advice will be required - Potentially planning, valuation, cost etc.

Stage Seven & Eight
Summing Up, Overlays, Reporting

- Final steps involving summing up the the portfolio cash flows.
- Incorporating target typology mix.
- Reviewing and refining conclusions.
- Scenario analysis of different overlays such as the potential impact of an educational outcome (refer below) - this is an important area and while for process purposes it is identified here, it is ongoing through the life of the work.
- Timing - Remains 6 August as per previous and [redacted] s9(2)(ba)(ii)

Matters for Further Consideration

There are some underlying issues that we are coming across in our work that we want to bring to your attention.

The items below form our current list.

We haven't decided how to deal with them in our analysis but we do think that they need to be considered within our work.

1. Freehold versus leasehold

We provided you with a note on 28 March on the benefits of offering leasehold tenure rather than freehold. Leasehold tenure creates the opportunity to lower the price of the product, encourages the alignment of the vendor and purchaser economic interests in developments with new value propositions and preserves the redevelopment opportunity in larger blocks of land.

Leasehold tenure could be combined with sensitive infill development to create more affordable housing and make Tamaki more attractive to a wider range of demographic groups. As a consequence it could be more valuable than not using these tools.

2. Schools

In our 23 March slide pack we made the comment that a key to reducing the cost of social housing in Tamaki is increasing the land values to their full potential value.

Achieving this objective will involve widening the target market demographics for Tamaki to attract purchasers who are able and willing to pay more for dwellings in Tamaki. There is probably a natural process of widening the demographics which involves risk taking "early adopter" owner-occupiers purchasing properties at prices that reflect the risks they are taking.

Early adopters will need to believe that higher income purchasers will be prepared to purchase from them. The quality of schools in the area will heavily influence purchasers' views about the target market demographics for the people to whom they are on-selling their dwellings.

We have talked briefly with the Ministry of Education about understanding how they think about decisions they make about schools. [redacted] s9(2)(g)(i)

[redacted] s9(2)(g)(i)

3. Externalities

We expect that when we have completed the financial analysis for Tamaki we will find that the economics drive HNZC towards focusing its Tamaki activities on infill and rehabilitation rather than comprehensive development.

This is because the additional revenue less costs to HNZC generated from comprehensive redevelopment will be less than the additional revenue less costs from infill/rehabilitation.

However this analysis reflects only HNZC's "private" revenues and costs. It does not reflect the revenues and costs that other parties face as a result of the redevelopment choices that HNZC makes in Tamaki (externalities).

Research commissioned by HNZC suggests that concentration of social housing is a determinant of externalities.

- Market Economics Ltd (2007). *Sustainable Communities and Economic Development: A quantitative investigation of four communities in the Auckland region*. Report to Housing New Zealand Corporation.
- Gravitas Research and Strategy Ltd (2008). *Sustainable Communities and Economic Development. Policy Direction*. Report to Housing New Zealand Corporation.
- Gravitas Research and Strategy Ltd (2008a). *Sustainable Communities and Economic Development. Key Informant Interviews in Four Auckland Communities*. Research Report to Housing New Zealand Corporation.

As a consequence we expect that there will be areas within Tamaki where HNZC's private cash flows suggest that comprehensive redevelopment is not the most valuable option but when the relatively higher level of externalities arising from concentration are taken into account the socially best outcome is to undertake comprehensive redevelopment.

Matters for Further Consideration

The areas that we would expect to have this problem are where there is a high concentration of social housing on relatively small sections (eliminating the possibility of infill housing). Maybury Street is an example of a precinct in the category.

We can put a switch into our model to allow us to force a particular outcome for the property. We need to consider whether we do this for the situation described above.

Appendices

- Example Cash Flows - 1
- Example Cash Flows - 2

Segment Example - One

- Single Unit dwellings, large sites, acceptable improvements.
  - Population of 711
  - Accounts for 30% of the total portfolio
  - 80%+ older than 50 years
  - Improvements Book Value > $100K
  - Not surprisingly characterised by significant economic value in cash flows from existing improvements
- Often forces decision tree to retain existing assets.
- Leads to infill development as most economic outcome for a significant proportion of the portfolio.
- A simplified cash flow for a typical asset in this sample demonstrates the economics.
- Consistent with the approach to private residential development where change of use is not a primary driver.

Segment Example - One

Excel File Edit View Insert Format Tools Data Window Help

120501 Example Cashflows for Update to HNZC.xlsx

Home Layout Tables Charts SmartArt Formulas Data Review

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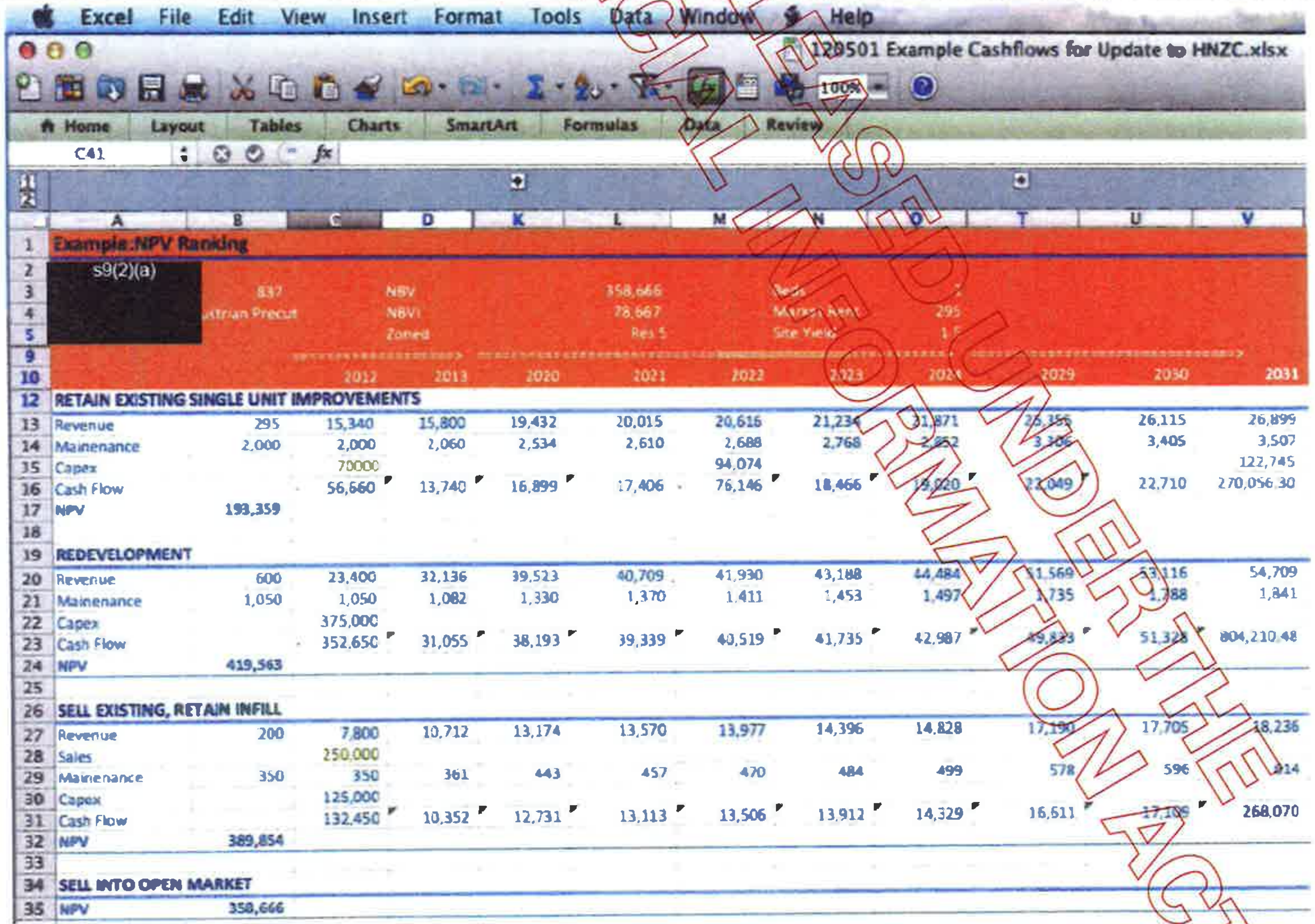
	A	B	C	D	K	L	M	N	O	T	U	V
1	Example:NPV Ranking											
2	[redacted] s9(2)(a)											
3		865	NBV			389,033		Beds	3			
4		Anh Bd/T	NBVi			116,033		Market Rent	351			
5			Zoned			Resba 1 375		Site Yield	2			
9												
10			2012	2013	2020	2021	2022	2023	2024	2029	2030	2031
12	RETAIN EXISTING SINGLE UNIT IMPROVEMENTS											
13	Revenue	351	18,252	18,800	23,121	23,815	24,529	25,265	26,023	30,168	31,073	32,005
14	Mainenance	2,000	2,000	2,060	2,534	2,610	2,688	2,768	2,852	3,306	3,405	3,507
15	Capex		25000				33,598					43,838
16	Cash Flow	-	8,748	16,740	20,588	21,205	11,757	22,497	23,171	28,862	27,668	424,195.56
17	NPV	383,207										
18												
19	REDEVELOPMENT											
20	Revenue	800	31,200	42,848	52,698	54,279	55,907	57,584	59,312	68,758	70,821	72,946
21	Mainenance	1,400	1,400	1,442	1,773	1,827	1,881	1,938	1,996	2,314	2,383	2,455
22	Capex		500,000									
23	Cash Flow	-	470,200	41,406	50,924	52,452	54,025	55,646	57,316	66,444	68,438	1,072,280.64
24	NPV	559,418										
25												
26	SELL EXISTING, RETAIN INFILL											
27	Revenue	400	15,600	21,424	26,349	27,139	27,953	28,792	29,656	34,379	35,412	36,473
28	Sales		280,000									
29	Mainenance	350	350	361	443	457	470	484	499	578	596	614
30	Capex		250,000									
31	Cash Flow		45,250	21,064	25,905	26,683	27,483	28,308	29,157	33,801	34,815	536,754
32	NPV	565,574										
33												
34	SELL INTO OPEN MARKET											
35	NPV	389,033										

Segment Example - Two

- Single Unit dwellings, large site, lower standard improvements
  - Population of 286
  - Accounts for 12% of the total portfolio
  - 90%+ older than 50 years
  - Improvements Book Value < $100K
  - Includes poorer standard improvements such as Austrian Precuts
  - Often in Residential 5 Zoning => Limits development to 1:500 ie. often only yielding 1.5 dwelling units per site.
- In the following example there is limited economic value in the existing improvements - economically obsolete.
- We expect many examples in this category will be more marginal and sales into the open market may be preferable.

Segment Example - Two



	A	B	C	D	K	L	M	N	O	T	U	V
1	Example NPV Ranking											
2	s9(2)(a) [redacted]											
3		837		NBV		358,666		Nets				
4		...strian Precut		NBVI		78,667		Market Rent	295			
5				Zoned		Res 5		Site Yield	1.5			
9												
10			2012	2013	2020	2021	2022	2023	2024	2029	2030	2031
12	RETAIN EXISTING SINGLE UNIT IMPROVEMENTS											
13	Revenue	295	15,340	15,800	19,432	20,015	20,616	21,234	21,871	25,356	26,115	26,899
14	Mainenance	2,000	2,000	2,060	2,534	2,610	2,688	2,768	2,852	3,306	3,405	3,507
15	Capex		70000				94,074					122,745
16	Cash Flow		56,660	13,740	16,899	17,406	76,146	18,466	19,020	22,049	22,710	270,056.30
17	NPV	193,359										
18												
19	REDEVELOPMENT											
20	Revenue	600	23,400	32,136	39,523	40,709	41,930	43,188	44,484	51,569	53,116	54,709
21	Mainenance	1,050	1,050	1,082	1,330	1,370	1,411	1,453	1,497	1,735	1,788	1,841
22	Capex		375,000									
23	Cash Flow		352,650	31,055	38,193	39,339	40,519	41,735	42,987	49,833	51,328	804,210.48
24	NPV	419,563										
25												
26	SELL EXISTING, RETAIN INFILL											
27	Revenue	200	7,800	10,712	13,174	13,570	13,977	14,396	14,828	17,190	17,705	18,236
28	Sales		250,000									
29	Mainenance	350	350	361	443	457	470	484	499	578	596	614
30	Capex		125,000									
31	Cash Flow		132,450	10,352	12,731	13,113	13,506	13,912	14,329	16,611	17,109	268,070
32	NPV	389,854										
33												
34	SELL INTO OPEN MARKET											
35	NPV	358,666										