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## Estimating the Seasonal Effects of Residential Property Markets – A Case Study of Adelaide

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**Abstract:** This paper examines the seasonal effects in the detached housing markets in Adelaide, South Australia. Residential markets are generally considered to exhibit slight seasonal effects. Anecdotal evidence suggests that this is often observed in the form of variations in the volume of sales, with less noticeable effects on price levels. It is also suggested that there are significant variations in the seasonal effect in different locations particularly beachside and hill locations. This paper attempts to quantify the seasonal effects in the volume of transactions and the achieved prices of detached dwellings. Hedonic price models and time series models are developed for a range of locations across Adelaide to examine the effects in different locations. The results suggest that there are significant seasonal effects on the volume of detached dwelling transactions in Adelaide particularly in beachside and hills locations where summer and autumn show statistically significant seasonal effects. There is little evidence of any seasonal effect on prices of detached dwellings. If there is any seasonality in these property prices, it is too small to quantify at sub-market level, however there is some evidence that property prices may be around 1% lower in winter than in other seasons.

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**Introduction:** This paper examines the seasonal effects of residential property markets in Adelaide, South Australia. Several different techniques are used to quantify the seasonal effects on the volumes of detached houses sold in Adelaide and on their prices. The metropolitan area of Adelaide and 30 suburban submarkets are examined to see if there is locational variation in the seasonal effects. The study uses traditional time series analysis and hedonic price functions to estimate the effect of seasonality.

The purpose of this research is to test the usually untested assumption that residential property markets exhibit significant variations in prices and volumes of transactions at different times of the year. Anecdotally, real estate agents often talk about the “spring rush”, a period in spring when it is believed that purchasers “emerge” from winter slumber to madly purchase residential properties. It may also be considered as the best time to sell because gardens are at their best during spring. This is when plant growth is at its maximum in Mediterranean climates such as Adelaide’s where cool wet winters and hot dry summers, inhibit growth. Any seasonal effect may have regional differences. The Adelaide topography is largely flat but with significant beachside areas, foothills and a small suburban area in the Adelaide Hills. It might be expected that the beachside areas would become more popular in spring and summer because of beach activities. Similarly, locations in the Adelaide Hills and foothills that are generally cooler may be more likely to be attractive during summer and less attractive in winter.

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**Methodology:** There does not appear to be a generally accepted methodology for estimating the seasonal effect of the volumes of property transactions nor of property prices. Transaction volumes present little difficulties. Basic methodologies suggested in most major forecasting and econometric texts (for example Mendenhall & Sincich (1996), Hanke & Reitsch, 1998, Wilson & Keating, 1999) would seem perfectly adequate for this analysis. Classical methods such as the ratio to moving average estimates used in classical time series decomposition will provide evidence of the seasonal effects. The disadvantage with this method is the lack of statistical testing. A more robust method is to use a series of seasonal dummy variables in a linear regression.

This enables significance testing of the dummy variable coefficients to determine if the seasonal effect is statistically different from other seasons.

Estimating the seasonal effects of residential prices is somewhat more difficult. It is possible to use basic time series methods on a mean or median price series, however while this might produce reasonable estimate for a very large sample, it is likely that smaller samples will exhibit substantial sample bias for each period. There is also likely to be a problem over time with changes to housing quality. These are similar issues which were addressed by Bailey et al. (1963) when discussing a regression method for price indexing and later expanded by Goodman (1978). The principle methods to overcome these problems were based on hedonic price functions, and were the focus of a great deal of literature in the early 1990's. (Case & Shiller, 1989 and Mankiw & Weil, 1989 are important examples) This involves analysing individual transactions rather than time series data. The advantage of this methodology is that the effect of time and a variety of property characteristics can be considered jointly. The effects of time (e.g. seasonality in this case) can then be considered with all other factors being held constant. This approach as well as a basic time series approach will be used to estimate if the seasons affect residential property prices. The difficulty with this method is isolating the seasonal influences from the trend, cyclical and irregular components.

The data for this research is from the South Australian Department of Environment, Heritage and Aboriginal Affairs. This data set is derived from property transactions at the Lands Titles Office. All property transactions are recorded with sale price, date and significant legal information. This data is then amalgamated with data from the Valuer Generals Office, which provides data about valuations, property characteristics and circumstances of sale. Sales of detached dwellings were extracted for the Adelaide metropolitan area for the period from January 1982 to the end of June 1999. Probable non-market transactions were excluded, as were sales that included multiple parcels or titles. The final data set contained 279,103 probable market transactions of detached residential properties. The data was then analysed at metropolitan area and 30 suburban subsets were created. The suburbs used in this analysis were those used in former residential market studies in Adelaide. These suburbs were used by Rossini (1998) as a representative sample of Adelaide suburbs and had been found to be suitable for analysis at suburban level. The locations of these are shown in Figure 1. Of the 30 suburbs used, 4 are beachside suburbs, 1 is in the Adelaide Hills and 6 in the foothills. The remaining 19 suburbs are distributed across the Adelaide plains.

Temporal boundaries for seasons were chosen to reflect the probable time of purchase decision. Sale dates recorded relate to settlement dates. Residential property transactions generally, settle within 4 weeks of final contract. For example, sales recorded in December were most likely contracted during November. On this basis the seasons were allocated as follows. Summer is the January to March quarter, autumn the April to June quarter, winter the July to September quarter and spring the October to December quarter. Basic statistics for each quarter were calculated for the metropolitan area and for each suburb. The statistics were the number of probable market transactions and price indicators including the mean, standard deviation, median, mode, maximum and minimum values. The time series for the volume of transactions for each suburb and the metropolitan area are attached as Table 4. The median price series for each suburb and the metropolitan area are attached as Table 5. These series were used as the base time series for the time series analysis. Cross-sectional transaction data was also grouped for each suburb to enable hedonic modeling and the creation of a constant quality price index for each suburb. Because of a lack of data relating the physical characteristics of properties prior to 1985, only sales after this data were used for this analysis.

### **Models: Property Transaction Volumes**

The models to test for seasonality in the volumes of transactions for detached dwellings are based on the quarterly time series data. The time series for the metropolitan area and for each suburb were analysed separately. The starting point was to calculate seasonal indices based on the ratio to moving average method. This uses basic moving averages to compare each quarterly figure with the annual figure for which the quarter is the centre. This is a well-established method for calculating seasonal indices. The disadvantage with this method is that there is no robust statistical testing of the indices and that it will be adversely affected by the sample size for each suburb that results in highly variable estimates. On this basis it was considered that it might provide a reasonable indication for the seasonal effects in over the metropolitan area, but might produce some unusual results for individual suburbs. To provide better statistical testing, a regression-based method was used. Since the series were basically stationary (due to fixed housing volumes) variations in the volumes would most probably be the result of seasonality or random error thus

$$V_t = f(S_1, S_2, S_3)$$

Where  $V_t$  is the volume of transaction at time  $t$  and  $S_1$  to  $S_3$  are the seasonal dummy variables.

Regression models were used, to test this function using (for each series) the log of the series as the dependent variable and three dummy variables for the seasons.

The models were specified as

$$\ln V = \ln \beta_0 + S_1 \ln \beta_1 + S_2 \ln \beta_2 + S_3 \ln \beta_3$$

Where  $V$  = observed volume of transactions

$\beta_0$  = constant volume over time

$S_1$  = dummy variable if the quarter was in summer

$\beta_1$  = seasonal index for season 1 (summer)

$S_2$  = dummy variable if the quarter was in autumn

$\beta_2$  = seasonal index for season 2 (autumn)

$S_3$  = dummy variable if the quarter was in winter

$\beta_3$  = seasonal index for season 3 (winter)

Models for each suburb and the metropolitan area were estimated twice. In the first estimate, the seasonal indices were excluded if they did not satisfy a two-tailed test of the coefficients at a 95% confidence interval. In the second estimate all seasonal indices were jointly estimated regardless of their significance, but were tested at a 90% level of confidence. The resulting seasonal indices relate the volumes in the season to spring (which was excluded from the model). To allow comparison with the ratio to moving average figures, all the ratio to moving average estimates were adjusted to a spring base of 100.

### Models: Property Transaction Prices

Seasonal indices for detached dwelling transaction prices were calculated using both time series and cross sectional data. The time series analysis mirrored the approach used for the transaction volumes. The time series was based on median prices for each quarter. Unlike the transaction data, the price data displayed significant trend so first differences were used to remove the underlying trend component. Otherwise the indices were calculated in the same manner using both ratio to moving averages and regression analysis with dummy variables. While this approach might be considered adequate, the inherent problems of using a median price series based on a small sample (suburb level) were considered to justify the use of a hedonic approach similar to that used by Bailey et al. (1963) and other subsequent authors. The aim of this analysis was to jointly estimate the effects of physical characteristics, time and seasonality. Cross sectional analysis was used in two ways. In each case the approach required two stages.

The first approach involved the calculation of a hedonic price index for each suburb and for the metropolitan area and then the same ratio to moving average and dummy variable regression analysis to test for seasonality in the index. The hedonic price index relates prices to the properties physical attributes and the quarter in which it was sold.

$$Y = f(X_1 \dots X_n, d_1 \dots d_n)$$

Where  $Y$  is the transaction price,  $X_1$  to  $X_n$  is an array of property characteristics and  $d_1$  to  $d_n$  is an array of dummy variables for each quarter

The models were specified as

$$\ln Y = \ln \beta_0 + d_1 \ln \beta_1 \dots d_n \ln \beta_n + X_1 \ln \theta_1 \dots X_n \ln \theta_n$$

Where  $Y$  = observed transaction price

$\beta_0$  = a constant

$d_1$  = dummy variable for quarter 1

$d_n$  = dummy variable for quarter n

$\beta_1$  = price index for quarter 1

$\beta_n$  = price index for quarter n

$X_1$  = 1<sup>st</sup> physical attribute variable

$X_n$  = n<sup>th</sup> physical attribute variable

$\theta_1$  = price index for physical attribute 1

$\theta_n$  = price index for physical attribute n

The estimates of  $\beta_1$  to  $\beta_n$  are then used to form the price index. The resultant indices are shown in Table 6.

The second approach attempted to jointly estimate the effect of physical characteristics, and the trend and cyclical components over time as the systematic component of the regression model, leaving the seasonal and irregular effects in the residual term. The residual term was then modeled for any seasonal component.

$$Y = f(X_1 \dots X_n, y_1 \dots y_n, q, S_1, S_2, S_3)$$

Where  $Y$  = the transaction price  
 $X_1$  to  $X_n$  = an array of property characteristics  
 $y_1$  to  $y_n$  = an array of dummy variables for each year  
 $q$  = the quarter number in which the property sold (1 to 4)  
 $S_1$  to  $S_3$  = seasonal dummy variables.

All seasonal indices were calculated with a base in the spring season.

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**Results:** The results from this research support the hypothesis that there is some seasonal variation in both transaction volumes and achieved prices within the detached housing market in Adelaide but that the affect on prices is very small.

Table 1 shows the results of the seasonal indices of property transactions. The most stringent of tests (the regression indices @95%) show that there is no statistically significant variation in volumes across the metropolitan area. While the simple moving average indices and the regression analysis show that summer and autumn have on average around 5 percentage, more sales than spring, and winter has 1% less sales, none of these figures can be considered to be statistically different from the spring figure. The figures for the individual suburb markets do show some statistically significant differences. Three of the four beachside suburbs and the one hills suburb show statistically significant increases in sales during Summer and Autumn. There is no statistically significant evidence of any seasonal variation in any of the foothills suburbs as regards transaction volume. There is little evidence of variations in the suburbs on the Adelaide plains with the exception of 4 suburbs which show a considerable decrease in sales in the winter quarter. A further two suburbs show some increase in sales in autumn while one suburb shows a significant decrease in autumn. Generally there would appear to be little statistically significant variation in the volumes of transactions except that in beachside and hills suburbs there is a tendency to higher volumes in summer and autumn. These higher volumes are considerable, generally in the range of 15% to 45 % above those in spring and winter. Some suburbs on the Adelaide plains show significant decreases in sales volumes during winter in the range of 15% to 22% below other seasons.

Table 2 shows the seasonal indices based on median prices of detached dwellings. The expectation of these indices was that any variation would be small and difficult to measure at a suburban level because of the high degree of sample bias. The figures for the whole metropolitan area should however be reasonably reflective given the large sample size. The most rigorous of analysis of these data (the dummy variable models tested at a 95% level of confidence) showed variable results for individual suburbs that probably reflect the sample bias. The more reliable figure for the Adelaide Metro area shows that there is a statistically significant decrease of just over 2% in achieved prices in winter compared to all other seasons. This figure is supported by the less rigorous regression model for the metropolitan area that suggests a decrease of around 1.5% in winter as being the only statistically significant difference. This is largely supported by the moving average ratio analysis that shows summer and autumn prices being on average about 1% above spring figures with those in winter being about ½% below spring.

The figures in Table 3 are the result of seasonal analysis of prices using the cross sectional transaction data. This table suggests some consistency of results. The moving average ratios show that any variation that might be expected will be very small. Even with small sample sizes these (statistically untested) indices show that generally there is little or no seasonal effect with almost no seasonal indices showing values of more than 1 or 2 % difference between seasons. The statistically tested dummy variable regression analysis did not show any significant differences across seasons in any of the individual suburbs but did show a statistically significant decrease in achieved prices in winter across the whole metropolitan area. The metropolitan model shows that on average detached dwelling prices across Adelaide might be expected to be about 1% below prices in other seasons. This figure is the only statistically significant result from the seasonal analysis of the constant quality price indices. This analysis is somewhat supported by the results from the analysis of residuals from the trend analysis of the cross sectional data. Across all 30 suburbs and the metropolitan area, there are few statistically significant differences in prices that might be attributed to seasonal variations. Significantly, three of these indexes show reduced values in winter including the index for the metropolitan area. While there are some inconsistencies in all of these models, this is expected with the relatively low levels of variation that are being suggested. It might be safe to make two conclusions from the analysis of prices. If there a seasonal variation in the achieved prices for detached dwellings in Adelaide, then the variation is extremely small. The most probable seasonal effect is for prices to be about 1 to 2% lower in winter than in the other seasons.

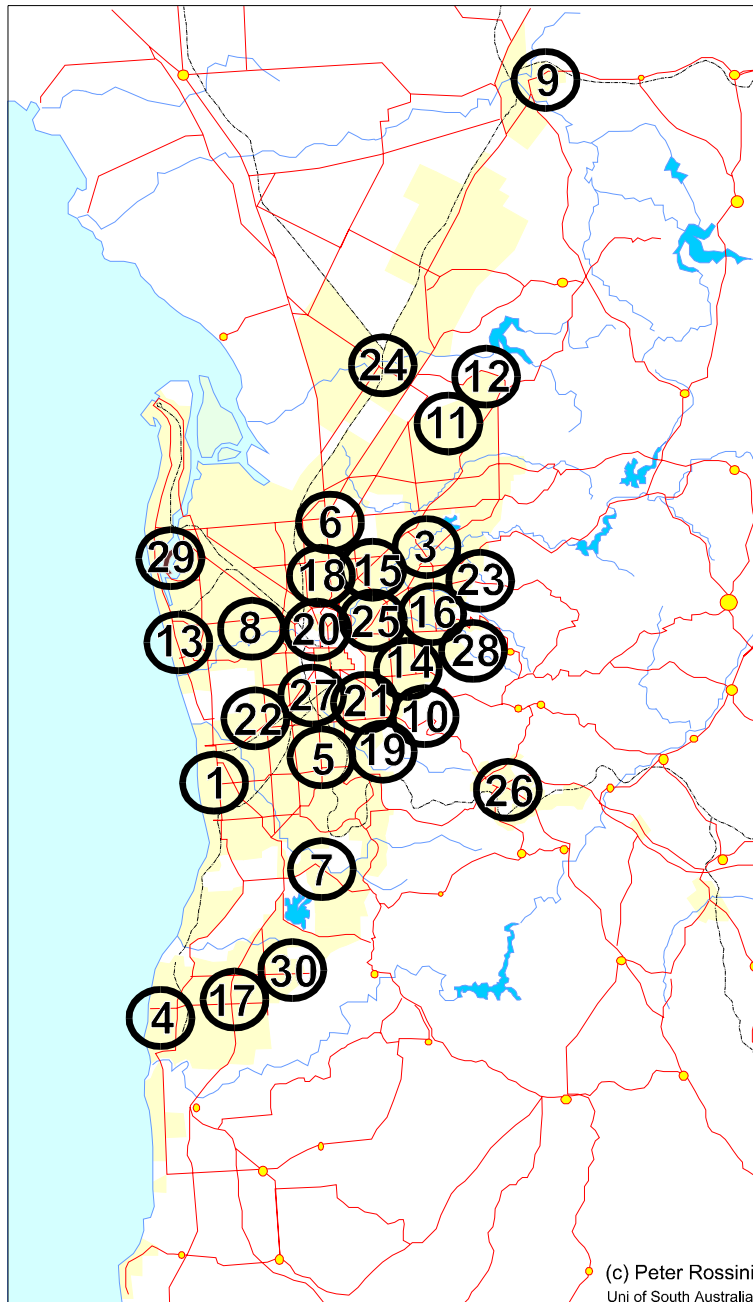


Figure 1 - Map of Suburbs Selected for Study

Reference	Suburb	Location
1	Brighton	Beachside
2	Burnside	FootHills
3	Campbelltown	Plains
4	Christies Beach	Beachside
5	Colonel Light Gardens	Plains
6	Enfield	Plains
7	Flagstaff Hill	FootHills
8	Flinders Park	Plains
9	Gawler East	Plains
10	Glen Osmond	FootHills
11	Golden Grove	Plains
12	Greenwith	Plains
13	Henley Beach	Beachside
14	Kensington Park	Plains
15	Klemzig	Plains
16	Magill	Plains
17	Morphett Vale	Plains
18	Nailsworth	Plains
19	Netherby/Springfield	FootHills
20	North Adelaide	Plains
21	Parkside	Plains
22	Plympton	Plains
23	Rostrevor	FootHills
24	Salisbury	Plains
25	St. Peters	Plains
26	Stirling	Hills
27	Unley	Plains
28	Wattle Park	FootHills
29	West Lakes	Beachside
30	Woodcroft	FootHills

**Conclusions:** The results from this research suggest that there are clear seasonal variations within the detached housing market in Adelaide. In beachside and hills suburbs there are significantly more sales in summer and autumn than in winter or spring. This could result in 15 to 40 % more transactions during these seasons. There are generally a lower number of detached dwelling sales on the Adelaide plains in winter than during other seasons. This is especially noticeable in some of the suburbs on the plains where about 20% fewer transactions seem to occur. The number of transactions of detached dwellings in the Adelaide foothills remains reasonable consistent across all the seasons. While there is a tendency across Adelaide for the greatest number of transactions to be in summer and autumn, and the smallest number in winter, this trend can not be proven with a reasonable level of statistical probability.

Prices for detached dwellings show very little seasonal variation. There is reasonable evidence that across the metropolitan area; detached dwellings sell for approximately 1% less during winter than during the other seasons. There is no evidence to suggest that this varies with location. While the so-called “spring rush” in the residential markets may possibly result in more human activity, there is no evidence to suggest compared to summer and autumn, there is more transactions or higher prices. However the evidence does suggest that on average, winter is the period with the least sales and very marginally lower prices. On this basis the return to “normal” during spring may well be interpreted as a spring rush.

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**Recommendations and Limitations:** This research is clearly limited in a number ways. The data used relates only to property transactions at point of settlement. The research would be greatly enhanced by considering not only what sales were achieved but also what properties were available for sale during each season. The summer and autumn increases in volumes in the beachside and hills locations may simply be the result of a greatly increased volume of listed properties in spring, with sales being achieved at the later time. Certainly an analysis of listed properties would be very worthwhile. Unfortunately this data is not available over an extended period of time. The research would also be enhanced by reference to vendors and purchasers attitudes. A survey of vendor and purchaser motivations and attitudes would assist in the understanding of the seasonal variation and its causes. Similarly a survey of other market functionaries, particularly real estate agents, would be useful. The use of a large number of individual tests in the various tables, probably creates a classic Bonferoni problem and comparison of these tests would need to be corrected for this. The study will be extended using the data from this research. The analysis of these data at suburb level has proven to be somewhat difficult. The relatively small sample sizes in each time period, makes statistically significant results difficult. Further research will involve dividing the metropolitan area into logical regional sectors for analysis. Such sectors would include all beachside suburbs, all hills suburbs etc. It is anticipated that this small number of sectors would provide sample sizes that make it easier to identify any seasonality across the whole sector. These results will be presented in a subsequent paper.

**Table 1 - Seasonal Indices - Detached Dwelling Transactions Volume**

Suburb	Location	Regression Seasonal Indices				Regression Seasonal Indices				Moving Average Seasonal Indices			
		Significant @95%				Bold figures significant @ 90%							
		Spring	Summer	Autumn	Winter	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn	Winter
Brighton	Beachside	100%	<b>144%</b>	<b>136%</b>	100%	100%	<b>134%</b>	<b>127%</b>	93%	100%	136%	141%	97%
Christies Beach	Beachside	100%	100%	100%	100%	100%	106%	108%	99%	100%	106%	110%	101%
Henley Beach	Beachside	100%	<b>125%</b>	100%	100%	100%	<b>118%</b>	91%	92%	100%	117%	95%	95%
West Lakes	Beachside	100%	<b>116%</b>	<b>115%</b>	100%	100%	<b>117%</b>	<b>116%</b>	102%	100%	120%	118%	108%
Burnside	Foothills	100%	100%	100%	100%	100%	102%	103%	102%	100%	105%	104%	103%
Flagstaff Hill	Foothills	100%	100%	100%	100%	100%	107%	107%	94%	100%	114%	110%	98%
Glen Osmond	Foothills	100%	100%	100%	100%	100%	<b>130%</b>	<b>140%</b>	115%	100%	128%	146%	121%
Netherby/Springfield	Foothills	100%	100%	100%	100%	100%	98%	85%	86%	100%	105%	90%	88%
Rostrevor	Foothills	100%	100%	100%	100%	100%	101%	105%	92%	100%	103%	108%	95%
Wattle Park	Foothills	100%	100%	100%	100%	100%	96%	93%	99%	100%	100%	98%	104%
Woodcroft	Foothills	100%	100%	100%	100%	100%	81%	100%	93%	100%	121%	103%	108%
Stirling	Hills	100%	<b>136%</b>	<b>130%</b>	100%	100%	<b>136%</b>	<b>130%</b>	101%	100%	142%	136%	106%
Campbelltown	Plains	100%	100%	100%	<b>84%</b>	100%	93%	98%	<b>80%</b>	100%	96%	101%	82%
Colonel Light Gardens	Plains	100%	100%	100%	100%	100%	114%	109%	97%	100%	121%	113%	103%
Enfield	Plains	100%	100%	<b>120%</b>	100%	100%	<b>126%</b>	<b>137%</b>	<b>121%</b>	100%	125%	134%	126%
Flinders Park	Plains	100%	100%	100%	100%	100%	116%	118%	93%	100%	112%	117%	94%
Gawler East	Plains	100%	100%	100%	100%	100%	113%	102%	112%	100%	113%	106%	113%
Golden Grove	Plains	100%	100%	100%	100%	100%	93%	98%	86%	100%	103%	92%	105%
Greenwith	Plains	100%	100%	100%	100%	100%	100%	98%	105%	100%	97%	93%	86%
Kensington Park	Plains	100%	100%	100%	100%	100%	87%	99%	84%	100%	92%	95%	82%
Klemzig	Plains	100%	100%	100%	100%	100%	90%	98%	87%	100%	94%	99%	90%
Magill	Plains	100%	100%	100%	100%	100%	101%	92%	99%	100%	102%	93%	101%
Morphett Vale	Plains	100%	100%	100%	100%	100%	100%	96%	91%	100%	102%	96%	93%
Nailsworth	Plains	100%	100%	100%	<b>78%</b>	100%	89%	91%	<b>73%</b>	100%	92%	92%	74%
North Adelaide	Plains	100%	100%	100%	100%	100%	96%	101%	85%	100%	99%	101%	86%
Parkside	Plains	100%	100%	100%	100%	100%	97%	107%	91%	100%	101%	113%	94%
Plympton	Plains	100%	100%	100%	<b>82%</b>	100%	116%	119%	91%	100%	117%	122%	94%
Salisbury	Plains	100%	100%	100%	100%	100%	99%	100%	91%	100%	98%	101%	91%
St. Peters	Plains	100%	100%	<b>128%</b>	100%	100%	90%	115%	<b>81%</b>	100%	91%	116%	82%
Unley	Plains	100%	100%	<b>82%</b>	<b>85%</b>	100%	100%	<b>82%</b>	<b>85%</b>	100%	103%	81%	86%
<b>Average</b>		<b>100%</b>	<b>101%</b>	<b>102%</b>	<b>97%</b>	<b>100%</b>	<b>103%</b>	<b>105%</b>	<b>94%</b>	<b>100%</b>	<b>107%</b>	<b>106%</b>	<b>96%</b>
<b>Metro Area</b>		<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>104%</b>	<b>106%</b>	<b>98%</b>	<b>100%</b>	<b>105%</b>	<b>106%</b>	<b>99%</b>

**Table 2 - Seasonal Indices - Detached Dwelling Prices – Based on Median Prices**

Suburb	Location	Ratio to Moving Averages (Median Prices)				Regression Based @95% (Median Prices) <b>Bold figures significant @ 95%</b>				Regression Based (Median Prices) <b>Bold figures significant @ 90%</b>			
		Spring	Summer	Autum	Winter	Spring	Summer	Autum	Winter	Spring	Summer	Autum	Winter
Brighton	Beachside	100%	106.79%	104.32%	101.06%	100%	100.00%	100.00%	100.00%	100%	100.12%	100.66%	99.14%
Christies Beach	Beachside	100%	96.59%	99.65%	95.96%	100%	<b>93.68%</b>	100.00%	<b>92.59%</b>	100%	<b>97.60%</b>	99.28%	<b>96.55%</b>
Henley Beach	Beachside	100%	100.67%	98.70%	97.58%	100%	100.00%	100.00%	100.00%	100%	94.86%	98.34%	99.27%
West Lakes	Beachside	100%	101.12%	99.58%	103.57%	100%	100.00%	100.00%	100.00%	100%	98.30%	97.04%	<b>98.85%</b>
Burnside	FootHills	100%	104.29%	100.84%	95.63%	100%	100.00%	100.00%	100.00%	100%	96.14%	95.15%	95.91%
Flagstaff Hill	FootHills	100%	98.66%	98.10%	100.09%	100%	100.00%	100.00%	100.00%	100%	97.19%	96.48%	99.26%
Glen Osmond	FootHills	100%	100.59%	93.27%	97.42%	100%	100.00%	100.00%	100.00%	100%	101.53%	99.86%	96.93%
Netherby/Springfield	FootHills	100%	113.17%	106.08%	101.85%	100%	100.00%	100.00%	100.00%	100%	96.38%	97.84%	97.49%
Rostrevor	FootHills	100%	103.07%	102.03%	105.51%	100%	100.00%	100.00%	100.00%	100%	<b>96.57%</b>	<b>97.78%</b>	<b>100.11%</b>
Wattle Park	FootHills	100%	101.91%	101.31%	101.09%	100%	100.00%	100.00%	100.00%	100%	99.42%	100.43%	98.31%
Woodcroft	FootHills	100%	97.04%	103.14%	97.20%	100%	100.00%	100.00%	<b>84.34%</b>	100%	97.12%	99.91%	<b>98.85%</b>
Stirling	Hills	100%	100.16%	100.35%	99.16%	100%	100.00%	100.00%	100.00%	100%	95.59%	97.62%	97.63%
Campbelltown	Plains	100%	96.42%	93.76%	94.19%	100%	100.00%	100.00%	100.00%	100%	<b>95.49%</b>	<b>97.96%</b>	99.12%
Colonel Light Gardens	Plains	100%	103.31%	100.53%	100.30%	100%	100.00%	100.00%	100.00%	100%	96.02%	95.38%	97.31%
Enfield	Plains	100%	103.81%	102.68%	101.58%	100%	100.00%	100.00%	100.00%	100%	<b>99.70%</b>	100.37%	101.24%
Flinders Park	Plains	100%	101.03%	100.65%	99.36%	100%	100.00%	100.00%	100.00%	100%	97.80%	98.99%	99.64%
Gawler East	Plains	100%	102.25%	98.05%	101.38%	100%	100.00%	<b>92.76%</b>	100.00%	100%	96.42%	96.06%	96.66%
Golden Grove	Plains	100%	97.22%	101.22%	101.42%	100%	100.00%	<b>105.75%</b>	100.00%	100%	99.12%	<b>99.19%</b>	100.89%
Greenwith	Plains	100%	99.52%	97.27%	103.26%	100%	100.00%	100.00%	100.00%	100%	98.33%	98.05%	<b>97.44%</b>
Kensington Park	Plains	100%	99.02%	97.05%	96.96%	100%	100.00%	100.00%	100.00%	100%	98.48%	98.65%	102.69%
Klemzig	Plains	100%	101.95%	100.29%	101.02%	100%	100.00%	100.00%	100.00%	100%	97.64%	97.13%	96.92%
Magill	Plains	100%	100.07%	96.26%	95.79%	100%	100.00%	100.00%	100.00%	100%	<b>95.23%</b>	<b>96.81%</b>	<b>97.86%</b>
Morphett Vale	Plains	100%	100.48%	100.55%	99.24%	100%	100.00%	100.00%	100.00%	100%	98.56%	99.14%	99.64%
Nailsworth	Plains	100%	99.94%	97.78%	98.90%	100%	100.00%	100.00%	100.00%	100%	93.92%	93.07%	96.72%
North Adelaide	Plains	100%	106.70%	120.03%	116.92%	100%	<b>117.60%</b>	<b>125.92%</b>	100.00%	100%	<b>95.17%</b>	<b>96.09%</b>	100.05%
Parkside	Plains	100%	95.33%	96.67%	98.48%	100%	<b>94.22%</b>	100.00%	100.00%	100%	<b>92.23%</b>	94.33%	98.71%
Plympton	Plains	100%	100.52%	102.06%	100.19%	100%	100.00%	100.00%	100.00%	100%	97.16%	97.71%	100.84%
Salisbury	Plains	100%	100.74%	101.87%	101.21%	100%	100.00%	100.00%	100.00%	100%	96.08%	97.66%	97.26%
St. Peters	Plains	100%	110.43%	104.62%	105.87%	100%	<b>114.23%</b>	100.00%	100.00%	100%	<b>93.25%</b>	97.39%	97.58%
Unley	Plains	100%	98.73%	98.42%	98.50%	100%	100.00%	100.00%	100.00%	100%	96.49%	96.68%	100.91%
<i>Average</i>		<i>100%</i>	<i>101.30%</i>	<i>100.46%</i>	<i>100.26%</i>	<i>100%</i>	<i>104.93%</i>	<i>108.15%</i>	<i>88.47%</i>	<i>100%</i>	<i>96.93%</i>	<i>97.70%</i>	<i>98.66%</i>
<b>Metro Area</b>		<b>100%</b>	<b>101.33%</b>	<b>101.21%</b>	<b>99.44%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>97.71%</b>	<b>100%</b>	<b>96.86%</b>	<b>98.23%</b>	<b>98.66%</b>



**Table 3 - Seasonal Indices - Detached Dwelling Prices Based on Constant Quality Indices**

Suburb	Location	Ratio to Moving Averages (Quality Adjusted Price Index)				Regression Based @95% (QA Price Index) <b>Bold figures significant @ 95%</b>				Regression Based @95% (Residuals) <b>Bold figures significant @ 95%</b>			
		Spring	Summer	Autum	Winter	Spring	Summer	Autum	Winter	Spring	Summer	Autum	Winter
Brighton	Beachside	100%	97.32%	97.90%	100.62%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Christies Beach	Beachside	100%	95.34%	98.14%	97.23%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	<b>97.47%</b>
Henley Beach	Beachside	100%	99.37%	98.94%	98.97%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
West Lakes	Beachside	100%	102.42%	102.13%	102.79%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Burnside	FootHills	100%	99.43%	103.31%	101.41%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Flagstaff Hill	FootHills	100%	102.20%	102.24%	102.08%	100%	100.00%	100.00%	100.00%	100%	100.00%	<b>98.01%</b>	100.00%
Glen Osmond	FootHills	100%	95.68%	96.86%	101.79%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Netherby/Springfield	FootHills	100%	100.63%	101.90%	101.60%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Rostrevor	FootHills	100%	100.87%	100.46%	99.80%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Wattle Park	FootHills	100%	97.44%	98.82%	100.14%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Woodcroft	FootHills	100%	100.76%	101.14%	101.79%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Stirling	Hills	100%	98.22%	100.56%	99.10%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Campbelltown	Plains	100%	99.68%	99.00%	99.08%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Colonel Light Gardens	Plains	100%	101.25%	102.38%	102.54%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Enfield	Plains	100%	98.25%	98.17%	98.93%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Flinders Park	Plains	100%	100.28%	101.26%	100.78%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Gawler East	Plains	100%	99.04%	103.08%	100.18%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Golden Grove	Plains	100%	97.64%	97.72%	98.13%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Greenwith	Plains	100%	98.26%	97.71%	96.64%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	<b>98.37%</b>
Kensington Park	Plains	100%	102.99%	98.11%	99.84%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Klemzig	Plains	100%	98.76%	99.48%	100.71%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Magill	Plains	100%	100.10%	102.44%	100.84%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Morphett Vale	Plains	100%	99.45%	98.84%	99.84%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Nailsworth	Plains	100%	101.93%	105.33%	104.26%	100%	100.00%	100.00%	100.00%	100%	100.00%	<b>97.12%</b>	100.00%
North Adelaide	Plains	100%	100.86%	100.69%	100.80%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Parkside	Plains	100%	103.30%	102.38%	99.65%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Plympton	Plains	100%	101.93%	100.38%	100.89%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Salisbury	Plains	100%	99.17%	100.12%	99.01%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
St. Peters	Plains	100%	98.12%	98.62%	98.31%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
Unley	Plains	100%	102.79%	99.99%	100.49%	100%	100.00%	100.00%	100.00%	100%	100.00%	100.00%	100.00%
<b>Average</b>		<b>100%</b>	<b>99.76%</b>	<b>100.25%</b>	<b>100.26%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100.00%</b>	<b>97.57%</b>	<b>97.92%</b>
<b>Metro Area</b>		<b>100%</b>	<b>99.13%</b>	<b>99.71%</b>	<b>99.73%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>98.66%</b>	<b>100%</b>	<b>99.44%</b>	<b>100.00%</b>	<b>99.40%</b>

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**Table 4 - Detached Dwelling Transaction Volumes**

Transaction Volumes

Quarter	Brighton	Burnside	Campbelltown	Christies Beach	Colonel Light Gardens	Enfield	Flagstaff Hill	Flinders Park	Gawler East	Glen Osmond	Golden Grove	Greenwith	Henley Beach	Kensington Park	Klemzig	Magill
Mar-82	19	12	14	31	16	14	34	17	22	11			25	7	10	28
Jun-82	7	14	11	34	27	12	47	13	8	6			12	14	14	29
Sep-82	15	7	19	20	20	6	24	9	11	3			20	12	12	28
Dec-82	9	7	21	25	14	9	29	15	13	3			25	14	10	20
Mar-83	16	6	19	21	18	19	43	19	11	11			26	8	20	24
Jun-83	23	10	21	34	21	19	46	13	17	8			28	9	10	19
Sep-83	7	12	17	24	12	14	30	14	12	4			15	5	15	21
Dec-83	12	20	30	38	17	15	39	15	17	9			24	13	12	32
Mar-84	13	10	37	43	20	20	44	18	10	12			21	15	23	30
Jun-84	10	13	28	30	16	14	41	14	14	9			19	12	13	32
Sep-84	9	18	22	33	21	18	34	14	13	8			22	7	9	31
Dec-84	5	9	28	29	21	16	35	18	17	4			19	9	14	24
Mar-85	22	12	26	26	22	19	49	12	13	6			25	10	15	26
Jun-85	12	10	28	35	18	13	40	10	15	9			25	6	16	29
Sep-85	13	7	23	20	20	8	31	7	14	6			11	8	13	25
Dec-85	9	11	18	27	11	9	44	12	10	3			16	4	11	25
Mar-86	9	11	20	21	14	8	30	7	7	3			17	6	11	24
Jun-86	16	16	12	14	12	7	29	9	6	4			9	8	11	18
Sep-86	9	9	17	28	21	13	33	8	13	7			12	4	14	23
Dec-86	11	8	10	24	10	5	32	7	5	5			13	8	11	26
Mar-87	20	12	18	19	18	10	47	13	13	6			17	5	13	23
Jun-87	7	8	12	21	15	17	25	14	18	5			12	12	16	24
Sep-87	10	9	21	27	13	7	28	9	12	6			16	9	15	26
Dec-87	10	9	22	31	21	13	52	9	13	8			16	12	23	40
Mar-88	14	12	28	32	23	12	43	12	15	9			21	8	10	31
Jun-88	23	12	32	36	17	14	61	16	19	10			17	13	16	22
Sep-88	12	15	20	36	11	9	55	15	16	14			17	8	14	32
Dec-88	10	12	31	33	18	9	62	12	17	7			18	12	13	30
Mar-89	13	18	28	27	20	14	51	10	21	7			26	15	14	28
Jun-89	13	11	27	25	14	15	47	11	14	5			11	12	16	25
Sep-89	16	12	13	23	24	9	38	10	21	7			17	10	11	23
Dec-89	11	10	17	21	14	9	40	7	12	4			16	16	21	20
Mar-90	11	16	14	31	17	14	57	22	15	5			16	13	15	26
Jun-90	21	5	23	27	8	13	46	19	11	5			14	8	14	20
Sep-90	10	7	12	15	7	6	35	3	15	3			9	11	9	29
Dec-90	8	14	21	21	25	10	40	5	21	9			17	9	11	25
Mar-91	12	8	16	19	13	12	42	13	23	9			19	15	6	28
Jun-91	13	8	18	26	15	10	61	11	21	3			15	11	15	20
Sep-91	5	10	20	21	14	21	43	9	14	8			22	8	10	31
Dec-91	12	12	15	26	15	7	34	9	15	8			10	12	11	25
Mar-92	9	12	9	19	11	10	36	11	11	8			15	10	10	32
Jun-92	17	9	26	28	23	10	44	9	22	9			21	11	10	29
Sep-92	7	16	27	29	15	16	45	8	25	9			20	13	9	32
Dec-92	8	18	26	28	18	18	42	30	14	8	0	0	12	18	18	38
Mar-93	16	11	15	23	12	10	48	8	31	3	21	17	17	6	6	28
Jun-93	12	14	19	24	23	16	43	19	20	14	21	17	12	6	11	31
Sep-93	15	12	17	28	17	20	37	20	18	10	17	21	15	8	15	30
Dec-93	10	6	24	24	11	10	42	13	21	3	26	20	28	12	14	35
Mar-94	15	10	13	31	18	12	61	14	21	7	28	29	17	16	14	30
Jun-94	10	9	18	22	22	13	68	19	16	11	31	25	18	8	14	23
Sep-94	8	18	16	20	19	16	52	21	22	6	37	22	14	6	14	21
Dec-94	15	13	24	17	14	16	50	12	21	6	26	18	14	5	12	35
Mar-95	11	11	15	21	22	10	36	12	27	7	27	29	20	12	12	23
Jun-95	17	16	22	29	12	11	39	19	21	11	34	38	21	13	10	26
Sep-95	7	10	11	23	10	13	42	11	19	3	23	54	26	9	8	28
Dec-95	12	10	12	17	18	7	43	15	17	6	33	34	17	12	14	26
Mar-96	15	11	16	19	24	10	46	13	23	7	38	37	21	5	13	22
Jun-96	14	11	13	18	19	16	45	12	14	8	29	31	9	8	11	17
Sep-96	12	10	7	22	13	15	42	9	25	12	18	35	11	17	8	23
Dec-96	13	12	15	18	16	11	35	18	17	3	29	39	9	13	11	20
Mar-97	17	7	19	27	17	14	45	16	24	7	24	32	20	11	12	21
Jun-97	11	21	14	20	12	21	50	16	24	11	24	40	13	15	16	26
Sep-97	12	14	14	25	10	15	57	20	25	10	25	36	13	10	15	21
Dec-97	12	15	20	15	12	9	52	13	19	9	26	39	15	12	16	23
Mar-98	17	12	13	26	14	11	52	19	23	10	30	59	15	11	12	31
Jun-98	17	12	15	25	18	13	38	19	17	12	36	47	12	10	12	30
Sep-98	9	10	8	14	12	14	53	9	28	3	39	39	12	10	13	27
Dec-98	17	12	21	25	10	12	44	11	19	7	37	49	24	11	17	27
Mar-99	18	16	25	24	12	16	56	10	33	8	29	49	22	4	13	30
Jun-99	15	13	20	21	11	23	54	7	26	8	33	44	22	16	14	29

Transaction Volumes

Quarter	Morphett Vale	Nailsworth	Netherby Springfield	North Adelaide	Parkside	Plympton	Rostrevor	Salisbury	St. Peters	Stirling	Unley	Wattle Park	West Lakes	Woodcroft	Metro Area
Mar-82	91	9	6	19	21	16	27	28	11	17	13	8	24		3761
Jun-82	91	8	4	25	26	18	15	21	15	12	19	9	26		3685
Sep-82	45	9	11	19	28	18	23	23	11	6	24	8	18		3271
Dec-82	79	18	7	20	20	11	17	25	17	10	18	8	22		3292
Mar-83	74	14	10	27	24	10	27	21	19	19	17	9	25		3690
Jun-83	94	12	9	23	15	13	23	33	16	18	17	13	24		4008
Sep-83	79	5	7	22	28	14	18	16	6	17	18	5	18		3410
Dec-83	99	16	8	24	26	13	24	23	8	15	12	8	14		4168
Mar-84	131	8	8	26	27	20	32	38	20	22	23	8	22		4704
Jun-84	111	11	6	21	35	11	23	25	16	23	16	8	21		4476
Sep-84	134	9	11	20	25	6	36	32	17	24	20	7	23		4116
Dec-84	142	4	9	19	37	9	35	40	11	12	21	10	22		4164
Mar-85	119	12	8	9	26	8	27	23	12	12	22	8	24		4114
Jun-85	89	8	9	16	26	12	30	24	13	16	26	12	15		3904
Sep-85	90	9	7	6	24	6	15	21	7	7	14	12	24		3731
Dec-85	102	13	8	7	15	7	24	28	10	14	16	8	17		3206
Mar-86	64	6	6	10	13	11	20	19	11	16	13	9	22		2914
Jun-86	95	15	3	13	26	11	28	13	12	18	17	11	22		3255
Sep-86	81	5	4	7	21	6	15	17	15	12	11	11	21		3163
Dec-86	70	6	11	15	20	6	15	25	11	12	18	10	15		2968
Mar-87	88	8	13	13	20	7	22	25	9	25	16	11	18		3597
Jun-87	69	10	9	9	21	10	13	21	20	16	16	7	17		3252
Sep-87	99	11	9	10	22	15	16	21	14	12	19	15	19		3500
Dec-87	112	13	7	19	19	11	33	19	19	10	26	6	18		4167
Mar-88	109	21	14	18	20	13	28	25	20	14	16	11	23		4317
Jun-88	103	12	8	16	30	14	24	33	20	24	16	9	29		4621
Sep-88	114	7	8	20	27	11	23	27	12	17	12	11	25		4634
Dec-88	135	12	10	14	25	17	33	20	17	16	15	10	16		4526
Mar-89	145	9	12	14	31	13	32	30	22	25	19	4	16	9	4599
Jun-89	105	12	9	17	19	19	28	30	18	17	17	11	17	8	4212
Sep-89	80	7	6	13	24	8	27	16	16	13	15	6	18	5	3427
Dec-89	91	9	9	13	18	7	28	32	16	13	17	4	17	10	3593
Mar-90	139	8	11	10	21	18	28	13	13	14	14	10	23	13	4064
Jun-90	107	3	6	12	18	8	30	17	16	16	10	9	22	12	3749
Sep-90	76	3	4	8	12	17	24	15	7	10	14	5	7	21	2732
Dec-90	112	12	5	12	24	10	18	18	21	15	12	8	23	24	3857
Mar-91	126	9	6	14	19	9	27	15	12	17	17	7	20	27	3897
Jun-91	117	7	6	10	23	14	24	15	23	14	11	3	20	18	4002
Sep-91	105	13	19	10	17	9	25	29	19	11	14	9	25	25	3951
Dec-91	114	14	5	16	17	8	13	12	8	8	16	11	12	29	3463
Mar-92	86	7	5	8	20	10	11	11	6	19	18	6	26	24	3491
Jun-92	126	7	8	11	22	16	31	15	12	12	18	8	21	51	4304
Sep-92	121	13	7	12	10	12	20	15	10	13	16	7	21	32	4194
Dec-92	118	6	10	12	20	12	34	28	18	10	12	10	22	36	3897
Mar-93	116	7	5	14	17	10	22	20	6	17	15	3	16	25	3971
Jun-93	112	16	11	10	17	13	24	30	15	19	8	5	25	36	4362
Sep-93	130	5	7	10	35	12	23	16	12	23	12	9	16	65	4265
Dec-93	101	10	12	11	22	19	22	19	19	20	16	6	20	28	3983
Mar-94	138	8	9	11	30	17	27	29	11	28	21	13	28	32	4677
Jun-94	119	12	11	14	25	10	29	30	14	21	10	4	24	54	4509
Sep-94	132	9	4	14	19	6	23	24	11	18	13	4	16	44	4083
Dec-94	104	12	11	15	23	10	19	20	22	7	18	6	16	41	3802
Mar-95	87	14	10	10	18	11	16	20	13	12	18	6	11	28	3636
Jun-95	87	11	5	14	24	11	17	16	9	12	10	6	18	47	3820
Sep-95	84	7	7	11	17	9	14	18	17	9	10	12	13	32	3679
Dec-95	100	9	7	11	27	10	25	14	8	9	15	9	26	38	3494
Mar-96	87	8	9	8	17	13	20	22	13	17	15	11	14	38	3562
Jun-96	75	6	7	12	30	13	25	14	14	16	11	11	13	32	3529
Sep-96	77	5	6	11	16	7	19	15	9	16	15	11	19	38	3307
Dec-96	80	9	9	9	16	14	23	21	14	23	15	7	16	37	3607
Mar-97	92	11	10	19	18	21	17	12	16	17	20	5	23	43	3792
Jun-97	87	10	4	12	21	13	24	23	19	14	10	9	16	60	4024
Sep-97	99	10	9	9	11	10	26	18	7	13	10	6	16	43	3708
Dec-97	94	9	8	13	22	12	26	21	12	21	19	13	15	46	4006
Mar-98	87	7	9	14	21	9	18	17	13	15	14	7	18	45	4000
Jun-98	94	7	12	11	25	11	26	15	13	25	9	4	19	53	4032
Sep-98	85	6	6	8	16	9	21	15	7	13	10	10	14	29	3653
Dec-98	122	6	12	10	23	13	25	18	14	11	17	15	16	59	4145
Mar-99	102	4	5	6	20	16	30	26	6	17	10	19	20	43	4109
Jun-99	103	8	10	8	20	15	31	21	19	15	12	9	20	61	4216







**Table 6 - Detached Dwellings - Constant Quality Price Indices**

Constant Quality Price Indices

Quarter	Brighton	Burnside	Campbelltown	Christies Beach	Colonel Light Gardens	Enfield	Flagstaff Hill	Flinders Park	Gawler East	Glen Osmond
Mar-85	100.00		100.00	100.00	100.00	100.00	100.00	100.00	100.00	
Jun-85	115.76		105.29	91.25	100.08	96.50	98.10	67.06	97.95	
Sep-85	100.46		109.96	97.20	95.63	97.19	104.57	87.58	101.12	
Dec-85	84.83		102.96	99.62	95.05	91.85	100.60	67.43	80.98	
Mar-86	94.56	100.00	102.45	101.39	107.69	98.11	99.35	74.32	96.46	
Jun-86	97.98	95.59	92.30	100.49	102.89	103.75	95.09	77.83	93.71	
Sep-86	90.77	89.92	106.13	96.63	97.16	90.86	101.12	80.84	96.21	100.00
Dec-86	95.18	97.97	100.61	98.71	105.21	99.85	100.58	83.14	102.15	91.38
Mar-87	95.15	91.78	103.09	100.74	102.09	97.25	101.82	87.33	97.36	105.79
Jun-87	102.52	92.60	109.54	93.18	111.28	97.70	101.86	87.28	92.94	92.96
Sep-87	97.10	87.40	103.20	96.66	101.34	88.83	99.25	91.89	101.79	83.44
Dec-87	99.13	99.53	103.68	94.69	115.40	97.95	103.80	96.48	107.66	106.26
Mar-88	126.53	96.20	107.14	98.85	112.33	102.12	102.65	97.42	94.95	93.03
Jun-88	116.69	102.17	111.25	107.64	115.65	106.60	106.33	102.44	94.29	99.01
Sep-88	112.62	105.08	119.35	96.10	124.14	106.90	115.16	102.24	114.08	110.46
Dec-88	105.12	121.92	122.68	108.72	132.98	111.04	114.53	110.30	109.96	128.08
Mar-89	128.14	135.66	123.13	112.54	138.56	113.26	124.87	107.87	105.68	136.58
Jun-89	119.98	123.16	130.76	120.01	147.02	119.18	126.71	104.93	107.63	176.36
Sep-89	137.49	136.63	137.43	111.30	146.29	115.96	133.52	105.24	115.67	141.22
Dec-89	140.82	130.74	133.28	116.40	158.47	114.18	130.04	108.52	124.24	124.42
Mar-90	137.90	141.93	146.67	119.40	151.07	118.44	131.70	107.30	120.48	131.32
Jun-90	147.05	134.13	134.42	121.42	149.45	125.27	127.58	109.57	120.20	145.41
Sep-90	145.49	135.98	138.73	122.75	159.23	142.32	138.94	112.44	120.41	138.31
Dec-90	151.95	135.36	147.81	123.47	166.40	134.25	134.42	108.14	125.68	133.79
Mar-91	139.10	135.10	146.37	114.82	164.54	128.70	139.25	114.72	121.10	141.32
Jun-91	155.19	123.91	147.85	119.61	158.94	132.97	131.67	109.93	120.28	145.09
Sep-91	144.46	119.33	155.46	125.92	162.34	138.03	135.34	109.72	122.79	129.30
Dec-91	160.03	134.14	157.67	124.40	165.51	148.23	147.48	108.52	131.58	139.69
Mar-92	164.95	126.97	150.97	129.36	175.86	142.98	133.36	114.99	126.62	151.57
Jun-92	191.59	124.44	155.71	129.31	167.54	133.31	131.27	113.62	132.85	138.41
Sep-92	160.41	124.89	154.94	117.16	167.37	138.75	142.03	112.05	121.19	132.33
Dec-92	160.80	137.71	146.05	131.30	187.16	137.01	128.92	120.37	135.84	130.38
Mar-93	160.89	125.65	154.33	123.46	174.92	146.63	138.60	111.39	140.88	166.75
Jun-93	170.08	117.33	161.46	129.75	168.35	139.97	139.53	107.66	130.30	125.20
Sep-93	153.44	123.52	148.60	128.52	172.43	136.47	134.33	111.23	135.91	130.36
Dec-93	171.27	136.00	154.52	131.34	181.11	136.96	140.75	105.64	143.35	127.71
Mar-94	164.48	112.12	163.38	136.01	184.68	143.65	137.94	98.35	135.70	140.51
Jun-94	158.69	138.39	158.56	140.05	188.24	140.36	138.92	106.64	142.19	146.72
Sep-94	173.89	134.98	146.60	137.85	193.17	137.52	133.60	108.78	131.81	142.48
Dec-94	157.82	140.53	152.59	118.22	176.60	137.59	135.11	99.52	135.85	109.85
Mar-95	171.07	148.84	138.43	122.80	177.41	125.65	142.08	105.99	139.87	149.08
Jun-95	170.40	142.22	142.33	129.05	179.02	132.76	136.61	109.82	144.77	140.27
Sep-95	153.65	131.75	149.73	117.51	175.09	141.70	122.78	107.11	137.91	123.98
Dec-95	164.28	131.29	139.26	116.53	177.42	128.64	132.38	111.27	132.97	128.81
Mar-96	157.97	129.27	141.55	116.16	176.35	129.77	128.85	109.53	143.61	131.72
Jun-96	160.61	121.75	148.75	125.44	170.47	123.04	131.92	109.01	136.89	122.62
Sep-96	151.33	129.22	141.15	112.06	188.63	132.44	129.48	108.32	138.66	129.10
Dec-96	156.12	128.14	135.33	124.64	176.16	123.37	129.80	102.94	136.76	125.82
Mar-97	176.88	118.60	143.49	118.63	185.17	118.40	133.92	122.62	135.98	137.43
Jun-97	151.94	136.78	140.35	125.46	173.32	136.25	131.10	119.26	137.10	146.39
Sep-97	176.61	142.60	138.01	116.59	198.10	130.15	142.35	123.77	131.14	128.49
Dec-97	183.20	128.78	145.16	128.40	196.07	123.43	139.50	139.50	135.80	159.09
Mar-98	173.02	129.04	144.36	120.24	211.40	140.87	138.09	138.09	136.75	142.14
Jun-98	165.47	128.35	147.45	127.00	189.41	138.31	132.27	132.27	136.79	130.75
Sep-98	188.68	134.37	147.45	124.28	219.84	121.76	139.69	139.69	132.64	135.76
Dec-98	172.07	139.13	152.07	129.03	186.56	127.81	148.67	148.67	144.48	147.04
Mar-99	200.01	154.94	148.37	129.53	220.92	133.27	138.84	138.84	142.54	154.45
Jun-99	183.92	152.59	158.16	132.93	229.58	140.49	132.48	132.48	152.83	158.15
Sep-99	186.58	139.97	164.47	135.44	234.14	150.19	143.57	143.57	145.11	175.60



### Constant Quality Price Indices

Quarter	Golden Grove	Greenwith	Henley Beach	Kensington Park	Klemzig	Magill	Morphett Vale	Nailsworth	Netherby/Springfield	North Adelaide
Mar-85			100.00		100.00		100.00	100.00	100.00	100.00
Jun-85			109.07		102.83	100.00	101.10	99.80	103.96	108.68
Sep-85			101.91		116.04	89.01	101.33	99.71	102.15	112.90
Dec-85			106.16		112.49	94.14	99.03	105.53	109.02	98.92
Mar-86			111.87		114.92	85.93	101.02	96.92	102.79	120.06
Jun-86			99.78	93.66	97.20	88.10	102.31	100.05	98.98	128.20
Sep-86			107.05	92.65	96.67	88.83	99.66	100.86	119.14	132.73
Dec-86			104.76	94.24	102.71	86.65	98.54	97.32	116.55	121.67
Mar-87			102.08	95.29	108.23	92.71	99.11	100.15	99.11	132.94
Jun-87			101.76	93.29	109.38	89.35	100.19	93.81	102.52	144.53
Sep-87			115.89	98.84	93.42	93.31	98.64	95.48	116.50	123.28
Dec-87			110.37	95.36	111.91	93.28	102.26	104.28	114.48	130.28
Mar-88			118.88	118.12	113.89	93.75	103.54	111.53	136.44	148.52
Jun-88			116.73	97.81	113.24	106.86	104.98	111.31	127.19	146.29
Sep-88			119.39	114.01	118.03	107.13	109.55	118.80	133.19	183.86
Dec-88			136.42	106.33	126.98	109.38	108.17	138.36	146.60	183.26
Mar-89			140.43	115.88	133.64	118.92	115.54	139.77	166.92	191.99
Jun-89			134.65	132.42	135.55	119.04	120.16	135.73	173.05	224.19
Sep-89			140.08	138.46	140.10	130.12	118.39	137.49	166.76	202.59
Dec-89	100.00		141.09	143.68	143.05	137.99	119.56	160.67	176.64	204.72
Mar-90	115.53		141.56	141.23	145.30	141.52	123.56	158.17	174.88	190.81
Jun-90	112.67		154.31	158.80	143.99	129.73	128.11	142.64	200.26	206.02
Sep-90	115.13		152.07	157.27	146.79	134.24	127.53	158.47	149.56	231.23
Dec-90	107.72		159.96	140.28	142.26	134.87	130.20	171.92	168.46	220.53
Mar-91	96.93	100.00	151.16	148.25	157.60	133.61	131.77	159.38	160.16	210.86
Jun-91	103.44	95.07	185.97	130.30	162.40	133.59	132.26	157.66	169.54	185.06
Sep-91	112.18	94.29	169.68	167.10	148.86	137.14	134.88	174.47	153.27	206.71
Dec-91	101.52	104.73	169.48	141.83	161.33	145.24	132.53	177.92	177.35	212.94
Mar-92	100.52	89.76	158.13	133.67	136.06	139.97	135.14	181.67	181.17	212.12
Jun-92	101.71	86.85	159.40	137.43	162.09	150.90	133.50	180.98	155.39	218.06
Sep-92	105.71	89.25	160.45	146.44	163.35	147.46	136.28	182.45	159.48	176.44
Dec-92	101.04	97.49	161.53	140.88	151.85	150.62	133.79	196.60	177.62	180.28
Mar-93	104.92	95.89	160.93	140.67	144.48	135.60	134.11	196.84	172.36	200.17
Jun-93	107.62	96.77	162.68	139.33	157.15	142.73	134.12	181.85	160.44	177.27
Sep-93	105.02	93.91	150.56	136.46	157.17	138.65	134.78	181.75	153.83	185.28
Dec-93	104.09	97.82	170.42	135.87	163.16	151.34	134.66	191.92	157.56	183.00
Mar-94	109.62	96.02	173.91	156.07	161.97	150.60	134.83	191.20	164.92	210.96
Jun-94	105.86	98.17	180.04	143.37	162.48	148.05	137.30	196.63	157.26	198.11
Sep-94	105.60	94.39	168.90	156.18	155.55	138.77	135.15	181.48	160.76	219.21
Dec-94	105.78	97.76	159.36	148.89	153.73	155.64	133.34	188.05	170.82	209.67
Mar-95	101.38	92.41	160.83	137.55	156.30	136.98	135.18	193.77	182.00	190.17
Jun-95	100.58	88.70	159.53	144.80	159.97	139.31	128.14	180.06	158.14	167.42
Sep-95	100.28	85.94	170.30	141.25	159.03	134.95	129.60	190.66	160.63	180.75
Dec-95	98.85	89.40	154.41	131.73	143.57	146.79	126.70	185.98	149.78	204.11
Mar-96	97.96	88.69	160.77	131.35	156.01	137.53	126.65	186.11	159.81	179.63
Jun-96	97.55	90.31	160.21	145.94	154.31	135.93	129.87	188.69	169.09	200.44
Sep-96	104.17	89.56	158.92	131.65	154.50	132.77	122.46	176.53	173.93	188.55
Dec-96	100.11	88.83	152.77	142.58	145.09	136.40	125.75	181.14	171.59	224.94
Mar-97	97.10	91.23	164.17	150.59	158.38	146.45	123.72	168.33	162.92	195.06
Jun-97	97.43	91.16	181.47	144.26	142.71	146.33	123.84	186.42	141.71	216.76
Sep-97	100.33	93.29	164.45	155.62	156.34	143.34	124.75	200.09	175.77	219.99
Dec-97	101.55	93.21	190.05	151.17	156.73	141.45	126.52	209.65	163.90	228.71
Mar-98	104.45	94.28	175.85	150.88	151.03	148.03	130.13	203.89	162.61	217.88
Jun-98	105.03	94.29	170.01	154.92	154.25	145.66	127.52	187.62	187.20	241.55
Sep-98	107.67	98.06	209.46	165.66	155.16	152.54	129.99	228.50	186.01	243.06
Dec-98	108.22	99.27	180.48	149.30	162.48	161.58	128.21	201.50	169.22	235.04
Mar-99	113.85	101.50	203.44	155.59	167.94	162.43	130.83	232.62	140.87	274.49
Jun-99	114.53	99.75	228.15	182.29	163.70	156.89	134.18	226.11	180.53	216.66
Sep-99	114.21	99.22	226.05	178.63	163.23	169.26	139.04	280.77	191.83	303.78

### Constant Quality Price Indices

Quarter	Parkside	Plympton	Rostrevor	Salisbury	St. Peters	Stirling	Unley	Wattle Park	West Lakes	Woodcroft	Metro Area
Mar-85	100.00	100.00	100.00	100.00			100.00		100.00		100.00
Jun-85	100.90	97.58	114.86	103.05	100.00	100.00	99.39	100.00	108.92		105.55
Sep-85	106.56	90.07	116.27	102.30	93.18	116.43	115.92	90.80	97.49		107.10
Dec-85	102.77	97.96	108.17	106.75	105.93	117.21	109.81	99.28	98.70		108.41
Mar-86	101.40	93.03	94.98	98.45	98.53	122.70	105.86	107.26	112.12		107.42
Jun-86	98.54	90.17	106.80	106.98	102.14	118.50	112.64	102.27	104.68		107.27
Sep-86	107.60	94.98	110.58	99.99	104.68	115.48	104.89	98.29	104.06		106.67
Dec-86	105.86	94.00	109.12	104.24	95.94	140.76	104.42	99.33	110.54		108.23
Mar-87	100.13	96.64	107.14	95.00	95.15	126.88	111.16	103.72	104.08		107.99
Jun-87	99.96	94.43	103.35	105.95	103.09	131.56	103.79	100.60	107.86		107.68
Sep-87	108.86	102.98	111.50	99.62	118.87	127.08	109.30	100.68	110.52		108.52
Dec-87	119.58	99.52	113.94	101.99	121.45	130.80	117.98	110.49	119.85		111.70
Mar-88	116.96	111.91	120.19	103.99	127.50	141.49	113.51	109.85	116.90		114.36
Jun-88	118.62	106.28	117.93	104.37	133.36	144.83	119.62	114.48	129.59		116.23
Sep-88	125.91	108.18	120.81	109.95	120.65	143.36	150.20	119.06	126.14		119.92
Dec-88	142.23	111.99	125.58	101.64	131.03	136.78	154.75	124.94	133.88		124.05
Mar-89	142.90	122.22	133.80	108.27	141.90	164.46	153.34	133.64	136.54		131.26
Jun-89	162.82	119.75	142.32	109.14	160.50	169.65	153.35	141.21	132.31		134.11
Sep-89	154.26	128.37	140.97	111.57	148.77	187.20	163.37	139.52	143.93		135.74
Dec-89	166.54	155.75	141.83	111.91	177.05	205.64	167.25	176.05	137.67	100.00	137.26
Mar-90	162.25	134.17	152.86	116.92	176.15	176.62	191.29	157.89	139.65	96.17	140.89
Jun-90	164.17	141.36	152.49	120.34	173.20	177.30	171.08	148.79	140.91	105.91	144.31
Sep-90	187.17	137.00	153.83	119.49	169.86	171.86	160.20	145.32	139.78	75.48	143.13
Dec-90	171.04	145.27	148.42	124.40	179.93	170.28	171.00	147.26	155.21	101.21	145.60
Mar-91	161.09	144.54	146.15	125.94	153.63	181.61	177.04	134.45	154.79	106.04	146.20
Jun-91	166.11	143.46	150.93	127.76	166.57	180.40	165.36	125.74	147.84	102.46	149.60
Sep-91	177.11	140.16	153.23	129.99	178.90	182.55	173.32	152.20	159.31	114.77	151.31
Dec-91	171.45	160.66	152.58	126.64	170.13	200.49	155.52	139.48	136.91	104.87	151.83
Mar-92	184.49	152.57	147.41	125.10	182.61	201.68	178.68	132.67	151.09	114.05	151.77
Jun-92	172.50	141.40	157.60	128.79	168.41	221.76	178.01	148.92	145.19	110.52	151.64
Sep-92	185.00	157.58	161.20	128.85	174.57	197.49	182.93	141.74	141.77	111.45	152.29
Dec-92	160.64	138.82	165.45	130.32	162.72	180.36	185.45	141.28	144.49	100.70	154.02
Mar-93	174.03	150.72	159.28	131.44	181.94	187.78	182.19	138.63	162.54	106.53	154.45
Jun-93	176.59	145.59	154.81	126.78	172.24	184.59	182.54	158.08	147.24	108.20	154.91
Sep-93	187.18	148.41	158.75	134.95	177.39	192.31	175.27	138.86	152.05	100.85	153.18
Dec-93	176.60	152.99	162.66	137.38	176.11	196.62	172.99	138.15	148.80	107.09	154.73
Mar-94	176.58	150.33	160.76	129.47	190.22	198.37	188.36	150.09	152.88	104.55	154.71
Jun-94	180.79	158.21	155.25	127.25	184.41	194.08	177.72	136.61	153.99	107.62	156.46
Sep-94	197.65	145.42	169.88	130.10	184.71	198.24	186.80	145.33	169.46	106.99	154.94
Dec-94	196.18	155.12	152.50	129.68	185.38	190.21	178.61	136.91	157.62	104.35	154.30
Mar-95	177.50	162.98	169.10	130.47	180.59	195.18	180.32	152.91	152.10	104.29	152.99
Jun-95	178.14	151.34	153.08	125.85	178.87	211.02	177.34	142.94	137.68	105.74	150.12
Sep-95	179.47	149.43	154.51	117.01	170.06	197.20	180.64	128.61	159.01	98.45	148.70
Dec-95	168.90	148.98	156.78	122.69	169.92	198.72	175.60	137.06	148.39	102.94	148.28
Mar-96	175.42	138.95	147.56	119.80	177.40	199.63	169.11	127.57	146.47	102.45	147.54
Jun-96	183.08	146.89	152.77	120.69	196.54	185.82	181.81	134.51	149.06	101.45	148.11
Sep-96	178.89	163.94	156.54	129.66	188.68	182.82	197.24	131.05	148.90	105.09	147.02
Dec-96	180.29	137.68	158.54	116.04	195.34	195.82	180.81	128.67	153.87	101.47	149.32
Mar-97	178.62	134.37	145.91	113.73	174.63	193.88	186.65	150.46	149.50	101.42	151.68
Jun-97	196.65	137.24	165.79	117.26	188.59	195.92	200.59	165.21	142.02	104.37	152.30
Sep-97	182.26	146.61	153.25	107.90	180.57	219.42	214.35	136.29	144.19	98.66	150.40
Dec-97	202.52	142.09	153.98	119.86	186.53	209.07	211.39	157.74	142.63	106.42	153.26
Mar-98	206.36	150.31	160.49	124.16	179.38	194.06	199.61	139.49	155.70	104.94	155.17
Jun-98	206.84	169.36	163.25	114.91	209.82	206.19	209.19	142.36	148.64	105.58	156.88
Sep-98	218.50	179.70	156.36	110.17	199.66	201.01	229.04	152.71	161.97	110.30	156.65
Dec-98	226.89	154.14	166.83	118.06	212.46	229.61	210.50	139.81	164.88	110.73	159.02
Mar-99	216.88	160.65	173.97	115.16	225.60	205.25	211.18	159.85	165.05	110.93	160.97
Jun-99	225.64	173.23	172.95	121.42	233.68	232.45	253.51	163.63	162.26	113.12	167.03
Sep-99	255.86	186.06	188.46	131.66	241.65	220.91	273.09	171.82	148.79	114.93	168.31