

Energy Efficiency Rating of Dwellings – Effects on ACT Sale Prices and Building Stock



2024 Asia-Pacific Solar Research Conference

3 December 2024

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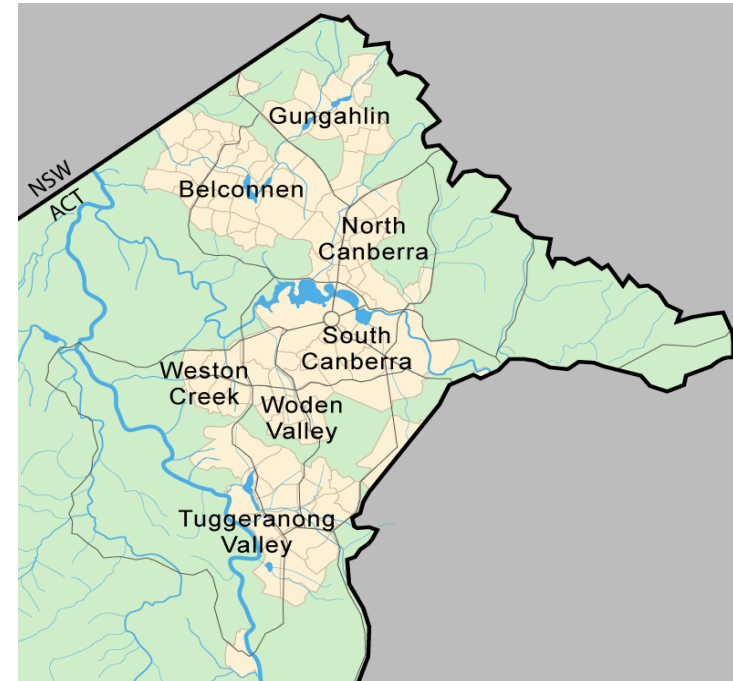
Introduction

- ▶ Energy Efficiency Ratings (Sale of Premises) Act 1997
- ▶ Requirement for EERs in effect in 1999
- ▶ Civil Law (Sale of Residential Property) Act 2003
- ▶ Initially studied across 153 months in quarterly intervals until 2012, and on a monthly basis thereafter
 - ▶ Relationship between EER and prices was weak
 - ▶ Proximity of worst rating dwellings to the city centre
 - ▶ Mean price used instead of median price
 - ▶ Best rating dwelling-type (apartments) priced low with less land cost included



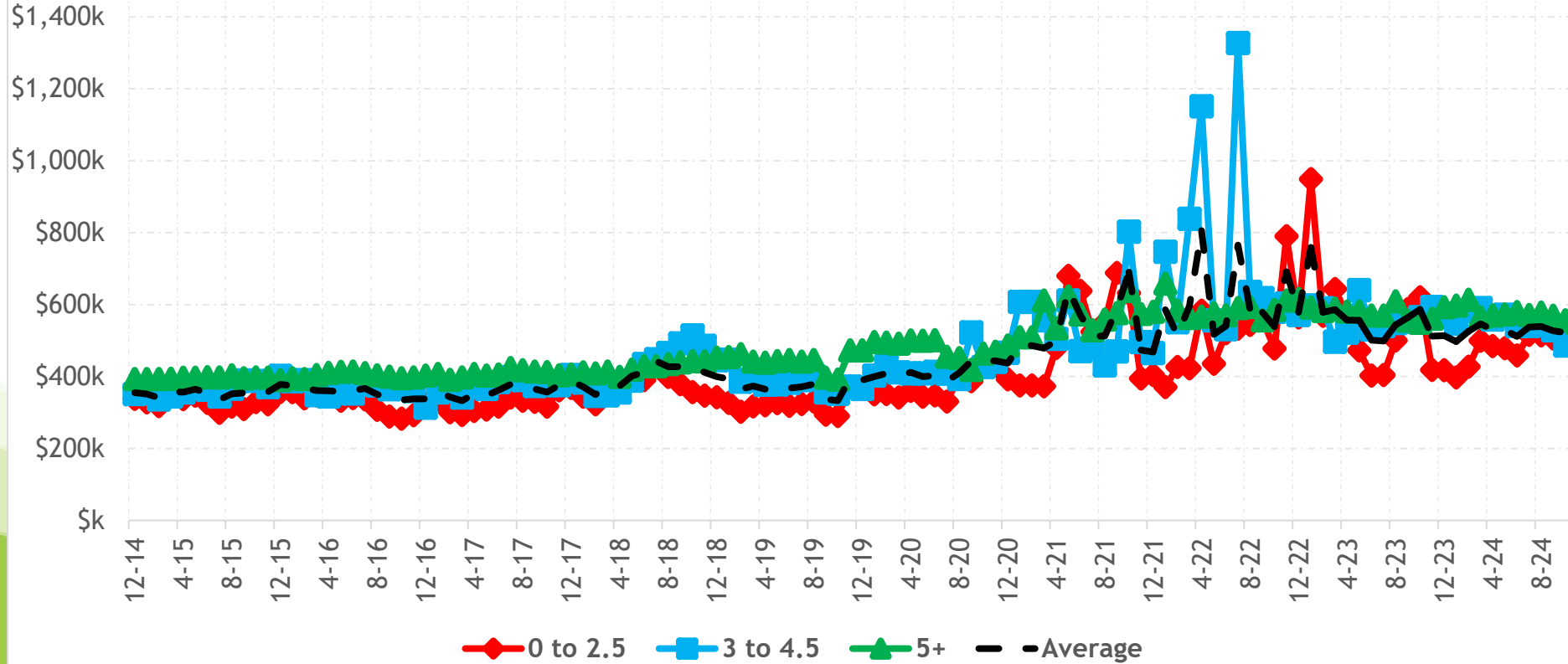
Revised Methodology and Rationale

- ▶ Properties in each suburb are grouped to 6 larger suburb regions (Gungahlin, Belconnen, Inner North, Inner South, Woden/Weston Creek and Tuggeranong)
- ▶ Weston Creek is expanding to its west with extensive medium density green-fields development of Molonglo
- ▶ Properties in each suburb region are grouped
 - ▶ Dwelling classification (Apartment/Units, Houses, Townhouses)
 - ▶ EER groups (0-2.5 star, 3-4.5 star, 5+ star)
 - ▶ Median prices
- ▶ Better data representation
 - ▶ Account for occasional outstandingly high advertised price
 - ▶ Price of each dwelling type differs significantly
 - ▶ More inefficient housing located in inner regions still obscuring \$/EER trends



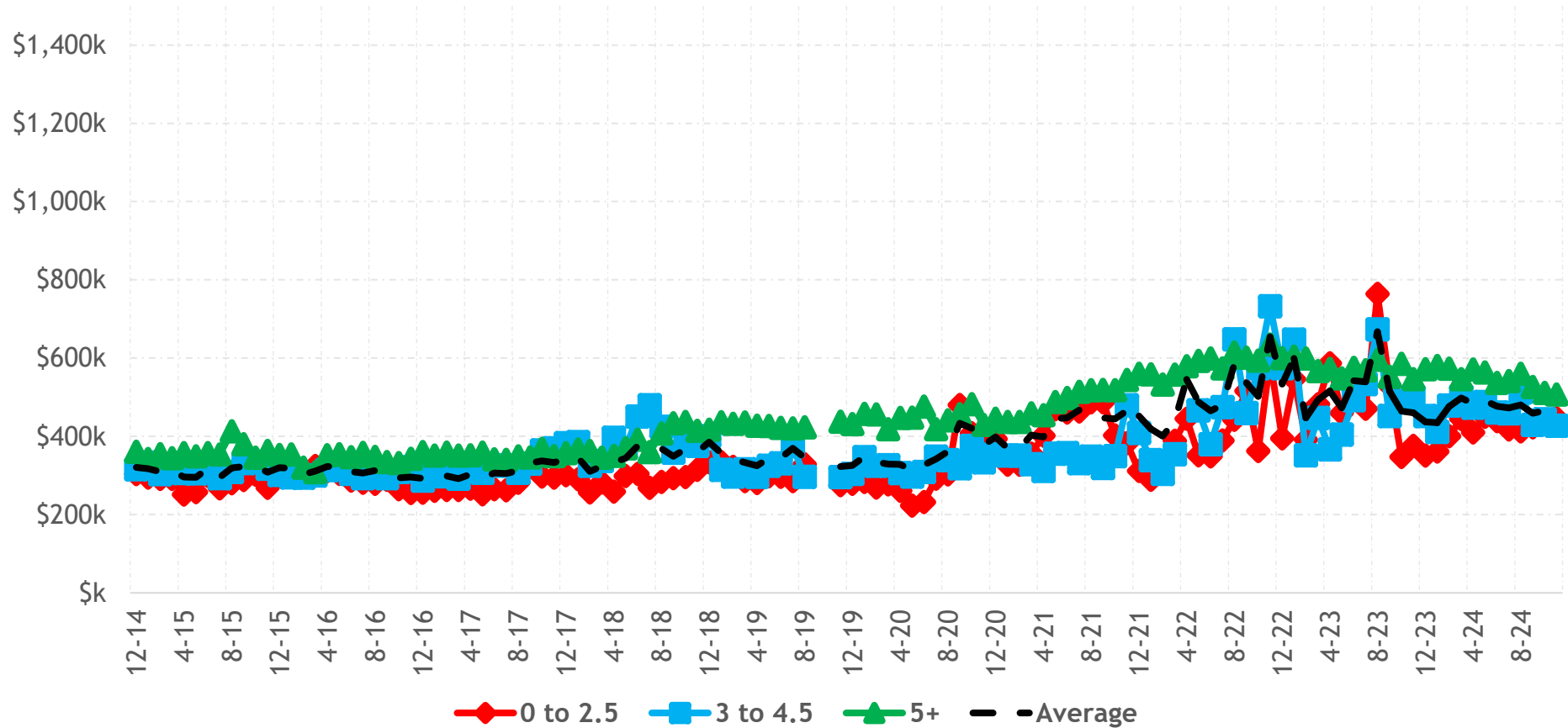
Key Results - Apartments/Units

Median Price for Apartments and Units in Whole of Canberra



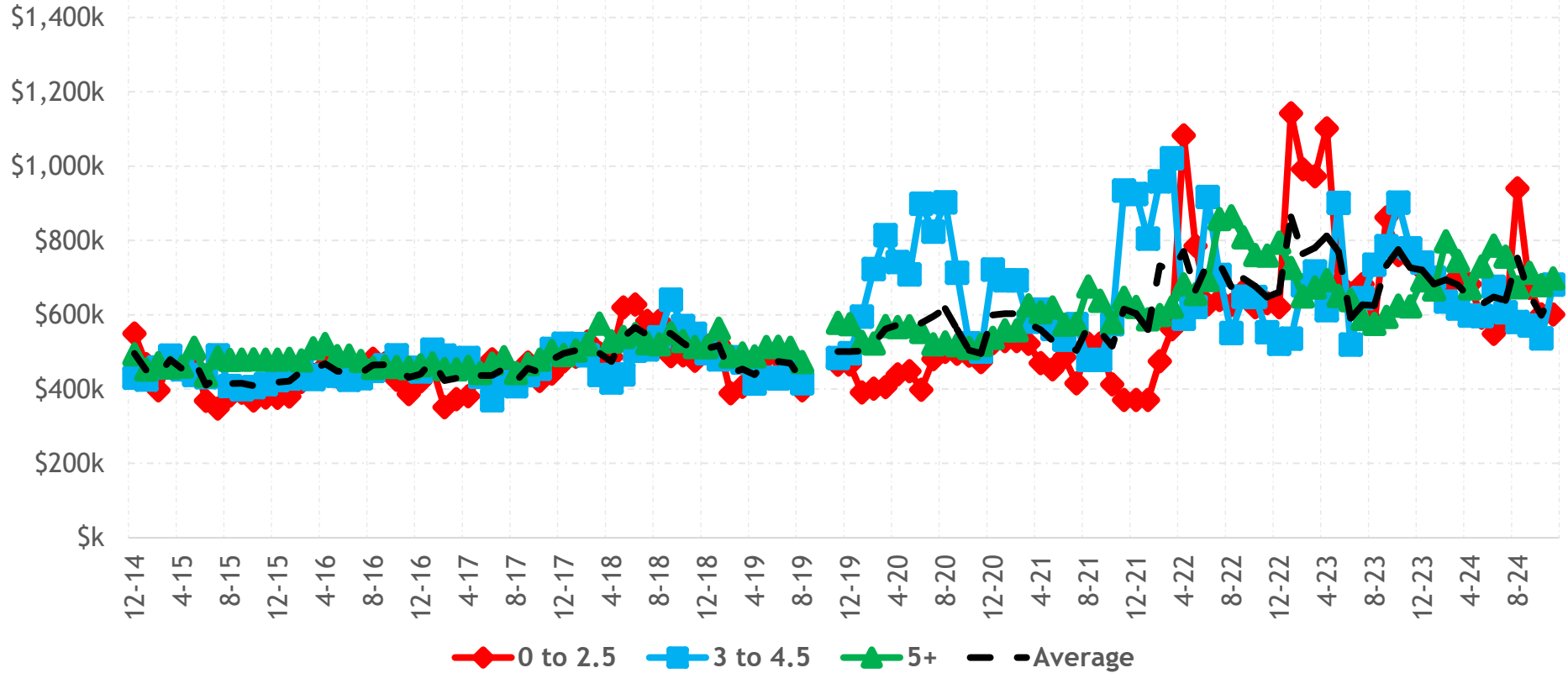
Key Results - Apartments/Units

Median Price for Apartments and Units in Woden/Weston



Key Results - Apartments/Units

Median Price for Apartments and Units in Inner South



Key Results - Apartments/Units

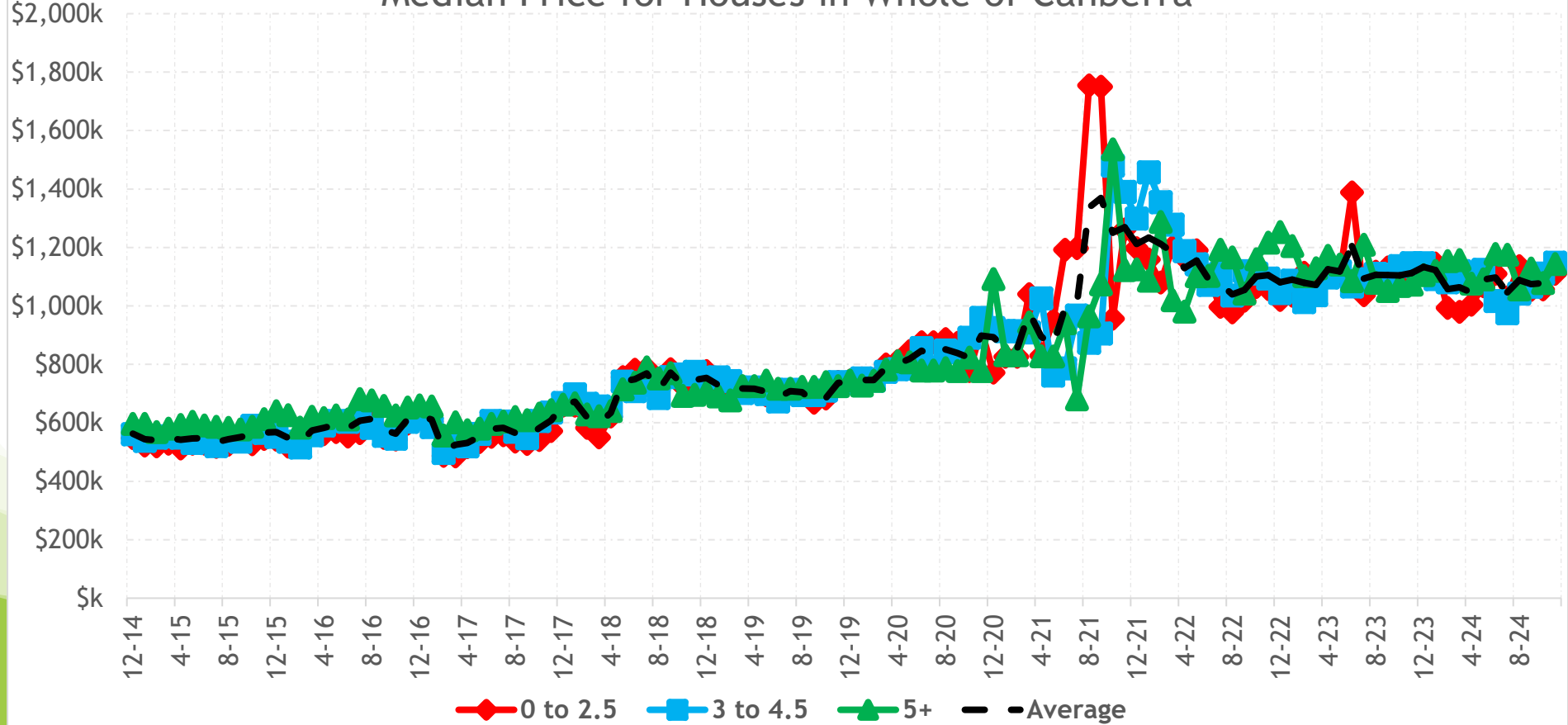
Average sale premiums for Apartments and Units in the past 12 months

Property Type	Suburb Region	Description	Average Sale Premium in the Past 12 Months
Houses	Belconnen	3 to 4.5 star - 5+ star	-1.15%
		0 to 2.5 star - 5+ star	1.58%
		0 to 2.5 star - 3 to 4.5 star	2.76%
	Gungahlin	3 to 4.5 star - 5+ star	2.48%
		0 to 2.5 star - 5+ star	12.57%
		0 to 2.5 star - 3 to 4.5 star	9.84%
	Inner North	3 to 4.5 star - 5+ star	-5.46%
		0 to 2.5 star - 5+ star	6.96%
		0 to 2.5 star - 3 to 4.5 star	13.14%
	Inner South	3 to 4.5 star - 5+ star	13.71%
		0 to 2.5 star - 5+ star	15.99%
		0 to 2.5 star - 3 to 4.5 star	2.00%
	Tuggeranong	3 to 4.5 star - 5+ star	-2.89%
		0 to 2.5 star - 5+ star	-0.81%
		0 to 2.5 star - 3 to 4.5 star	2.14%
	Woden/Weston Creek	3 to 4.5 star - 5+ star	11.62%
		0 to 2.5 star - 5+ star	29.51%
		0 to 2.5 star - 3 to 4.5 star	16.03%
Canberra	3 to 4.5 star - 5+ star	3.51%	
	0 to 2.5 star - 5+ star	4.98%	
	0 to 2.5 star - 3 to 4.5 star	1.42%	



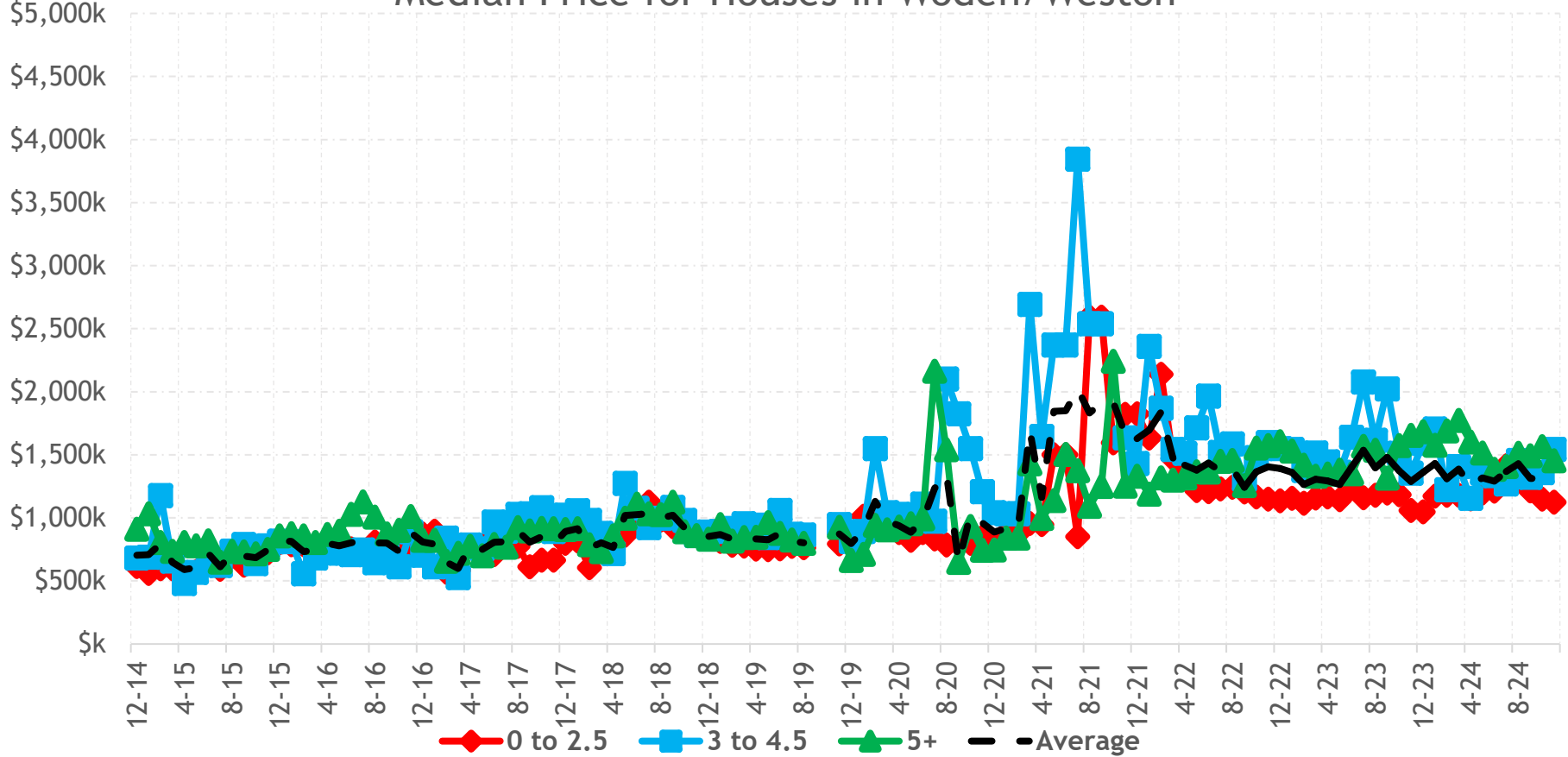
Key Results - Houses

Median Price for Houses in Whole of Canberra



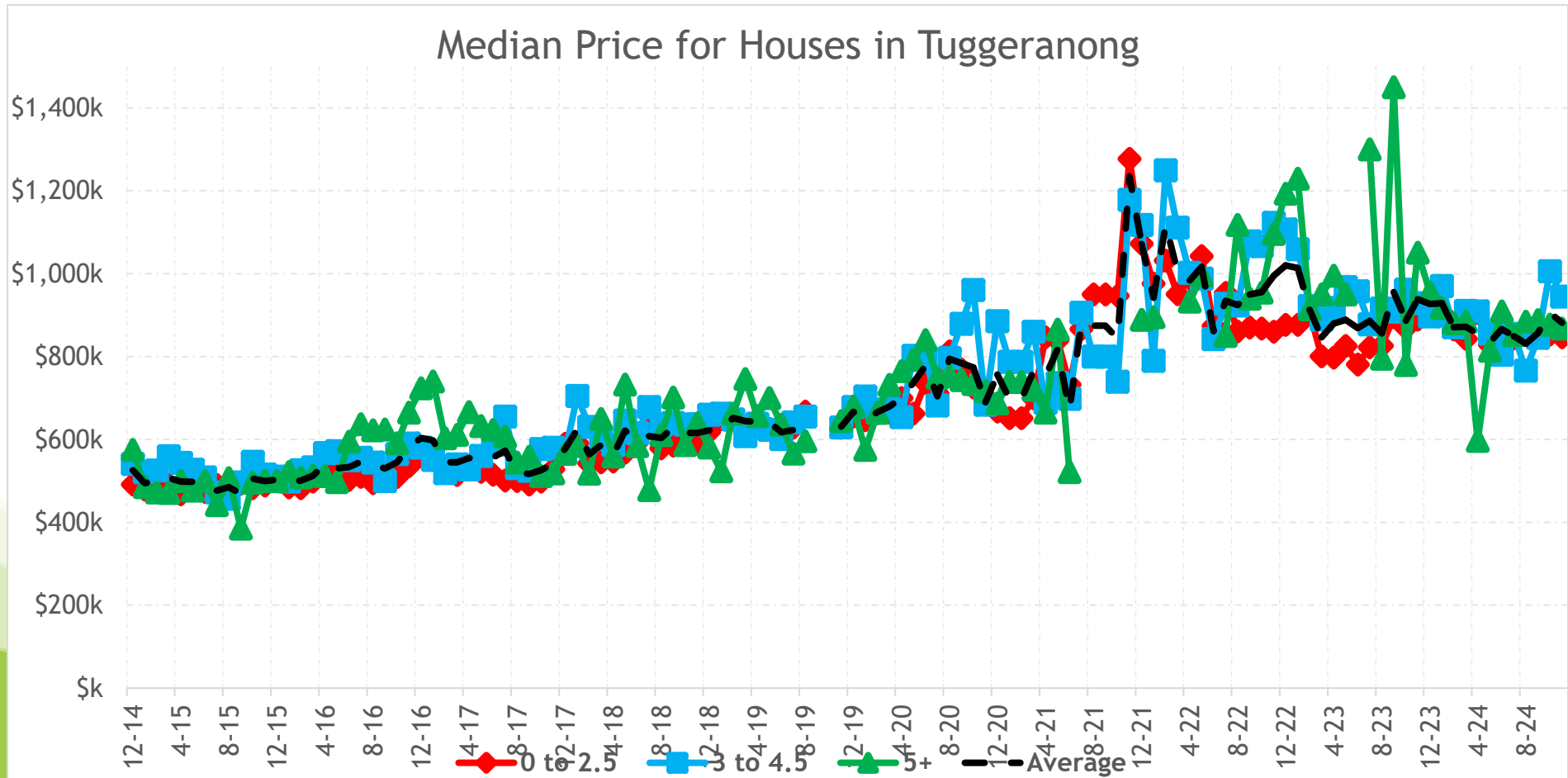
Key Results - Houses

Median Price for Houses in Woden/Weston



Key Results - Houses

Median Price for Houses in Tuggeranong



Key Results - Houses

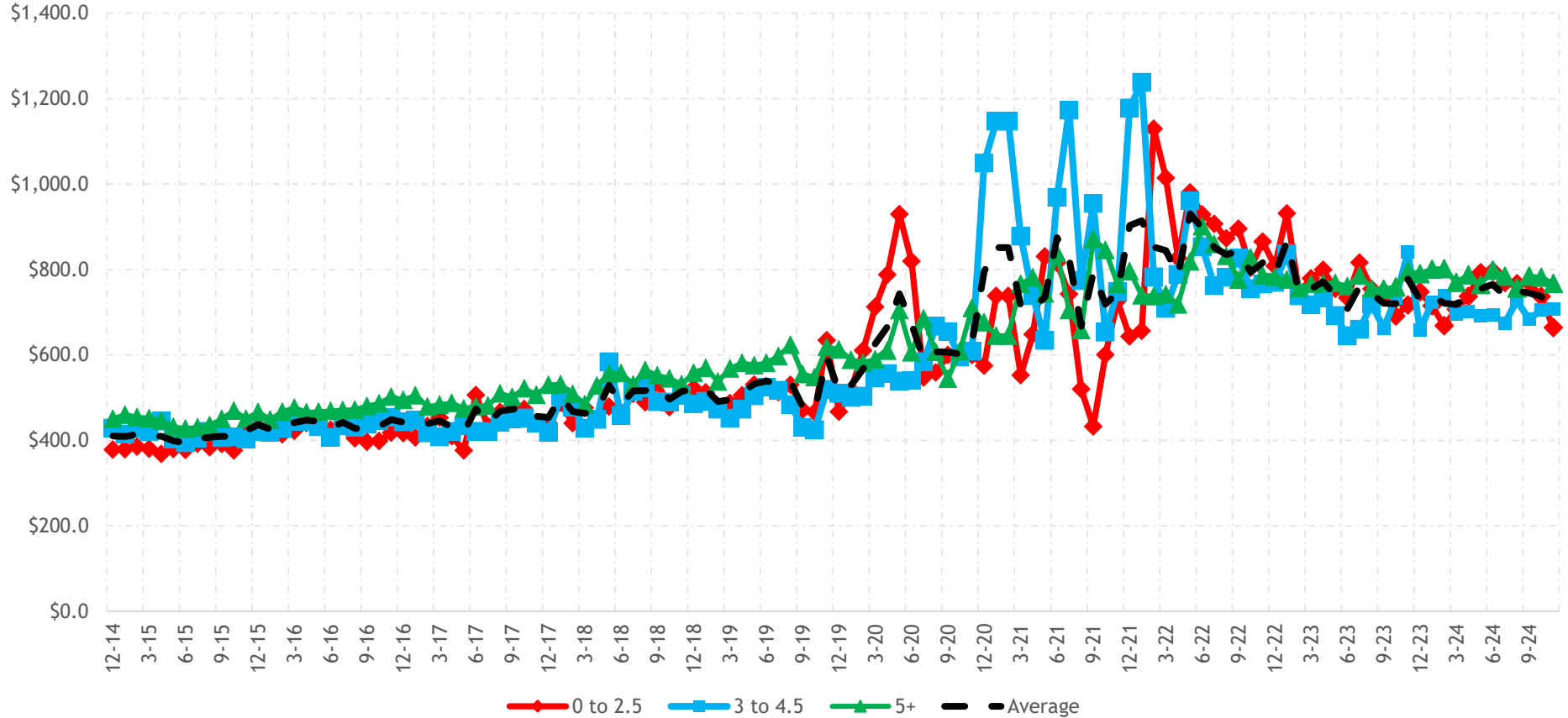
Average sale premiums for Houses in the past 12 months

Property Type	Suburb Region	Description	Average Sale Premium in the Past 12 Months
Houses	Belconnen	3 to 4.5 star - 5+ star	-1.15%
		0 to 2.5 star - 5+ star	1.58%
		0 to 2.5 star - 3 to 4.5 star	2.76%
	Gungahlin	3 to 4.5 star - 5+ star	2.48%
		0 to 2.5 star - 5+ star	12.57%
		0 to 2.5 star - 3 to 4.5 star	9.84%
	Inner North	3 to 4.5 star - 5+ star	-5.46%
		0 to 2.5 star - 5+ star	6.96%
		0 to 2.5 star - 3 to 4.5 star	13.14%
	Inner South	3 to 4.5 star - 5+ star	13.71%
		0 to 2.5 star - 5+ star	15.99%
		0 to 2.5 star - 3 to 4.5 star	2.00%
	Tuggeranong	3 to 4.5 star - 5+ star	-2.89%
		0 to 2.5 star - 5+ star	-0.81%
		0 to 2.5 star - 3 to 4.5 star	2.14%
	Woden/Weston Creek	3 to 4.5 star - 5+ star	11.62%
		0 to 2.5 star - 5+ star	29.51%
		0 to 2.5 star - 3 to 4.5 star	16.03%
Canberra	3 to 4.5 star - 5+ star	3.51%	
	0 to 2.5 star - 5+ star	4.98%	
	0 to 2.5 star - 3 to 4.5 star	1.42%	



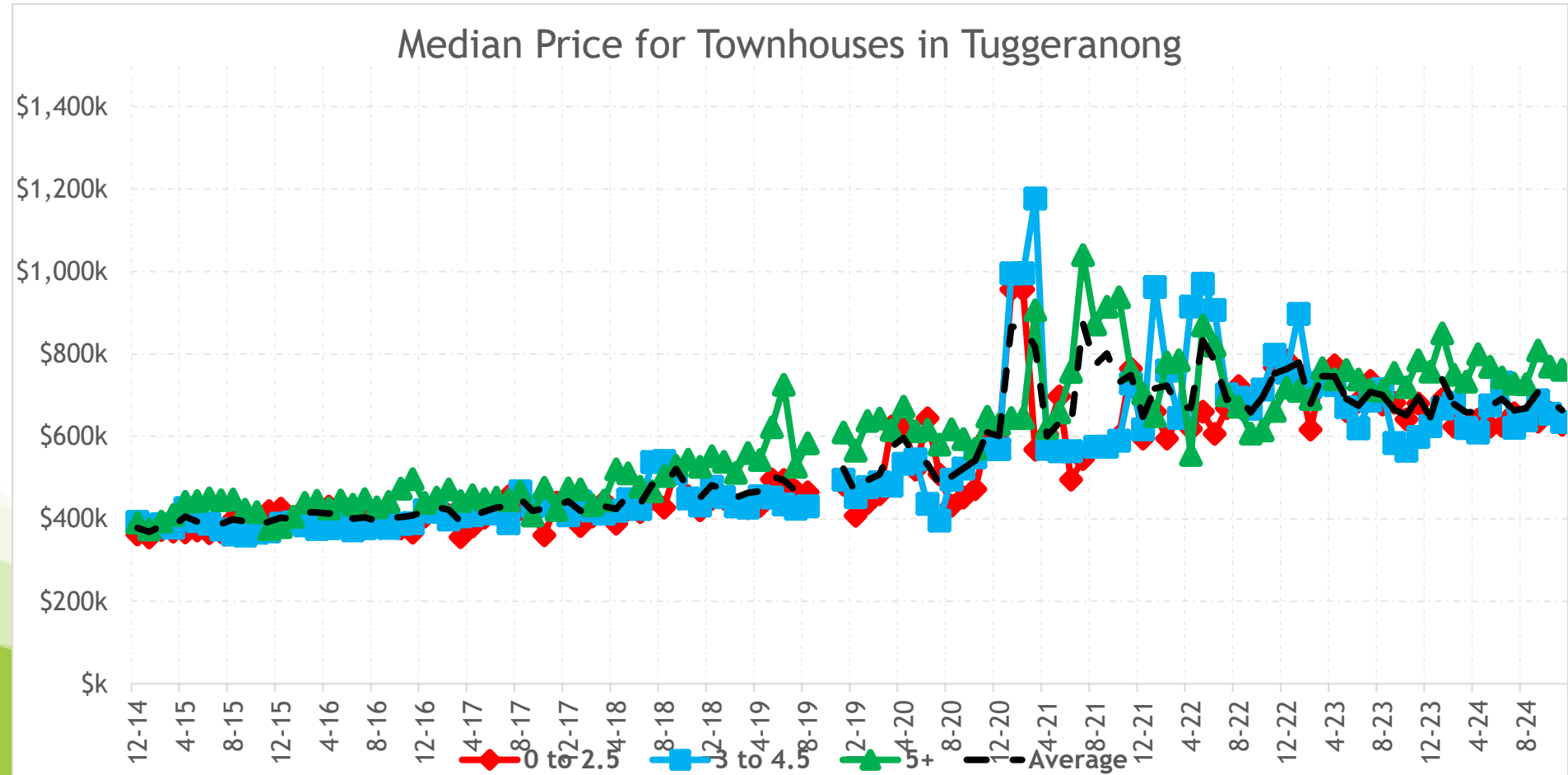
Key Results - Townhouses

Median Price for Townhouses in Whole of Canberra



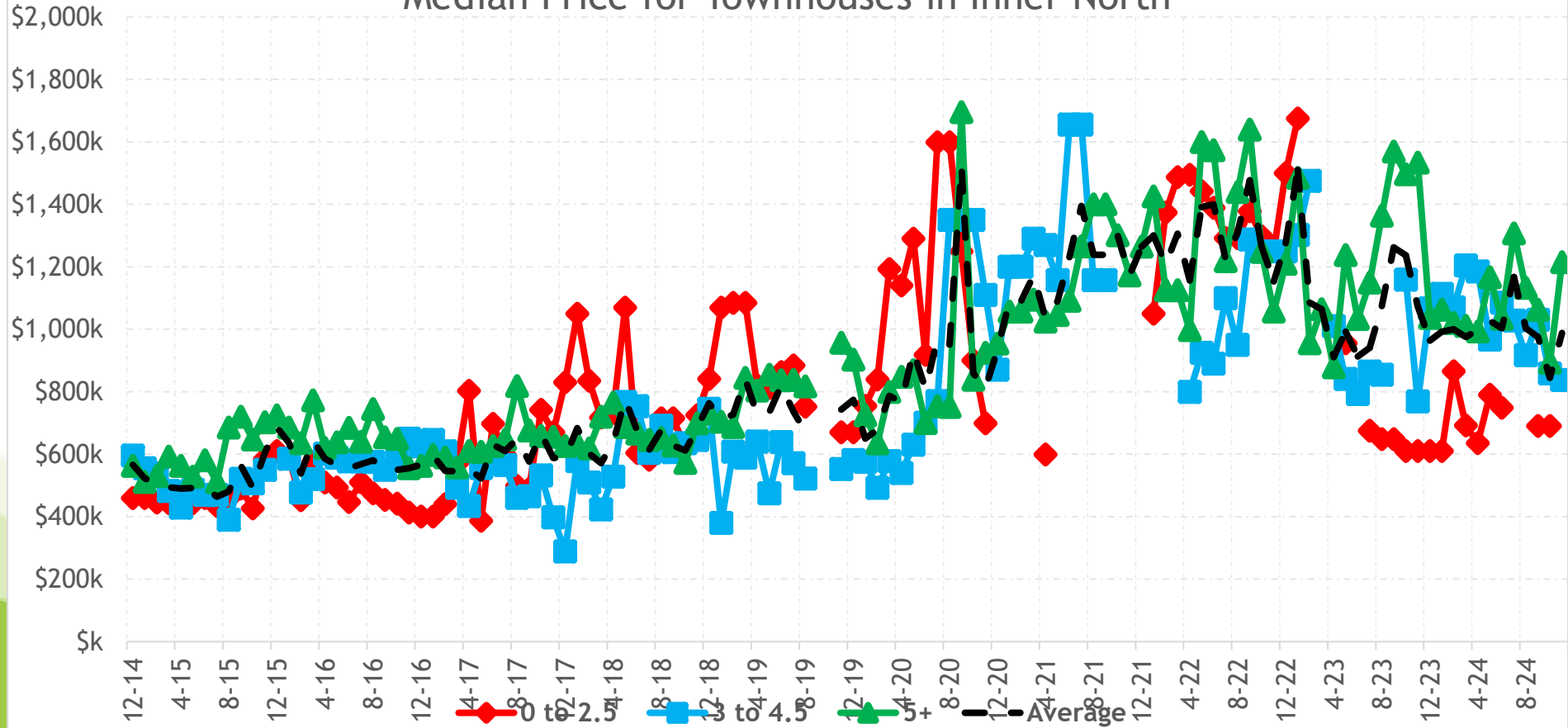
Key Results - Townhouses

Median Price for Townhouses in Tuggeranong



Key Results - Townhouses

Median Price for Townhouses in Inner North



Key Results - Townhouses

Average sale premiums for Townhouses in the past 12 months

Property Type	Suburb Region	Description	Average Sale Premium in the Past 12 Months
Townhouses	Belconnen	3 to 4.5 star - 5+ star	5.12%
		0 to 2.5 star - 5+ star	3.11%
		0 to 2.5 star - 3 to 4.5 star	-1.92%
	Gungahlin	3 to 4.5 star - 5+ star	7.85%
		0 to 2.5 star - 5+ star	12.21%
		0 to 2.5 star - 3 to 4.5 star	4.04%
	Inner North	3 to 4.5 star - 5+ star	6.38%
		0 to 2.5 star - 5+ star	49.49%
		0 to 2.5 star - 3 to 4.5 star	40.52%
	Inner South	3 to 4.5 star - 5+ star	21.38%
		0 to 2.5 star - 5+ star	52.63%
		0 to 2.5 star - 3 to 4.5 star	25.75%
	Tuggeranong	3 to 4.5 star - 5+ star	16.82%
		0 to 2.5 star - 5+ star	20.36%
		0 to 2.5 star - 3 to 4.5 star	3.03%
Woden/Weston Creek	3 to 4.5 star - 5+ star	17.99%	
	0 to 2.5 star - 5+ star	-1.12%	
	0 to 2.5 star - 3 to 4.5 star	-16.20%	
Canberra	3 to 4.5 star - 5+ star	11.72%	
	0 to 2.5 star - 5+ star	5.94%	
	0 to 2.5 star - 3 to 4.5 star	-5.18%	



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Effects on Building Stock

- ▶ Energy Efficiency Ratings (Sale of Premises) Act 1997 and later aimed to achieve:
 - Price signals to the buying and rental markets to monetise Energy Efficiency along with a list of improvements and an estimate of their EER significance
 - Buyers and Sellers to be motivated to improve the EER around the time of sale to either get a better price now or get the better performance now (in cost and in comfort terms) and the higher sale price at the time of subsequent sale
- ▶ Over a decade ago, Exemplary published an interactive ready reckoner to assist lay and naïve buyers to estimate the running costs for heating and cooling energy

https://www.exemplary.com.au/energy_rating_services/10star-challenge.php

		Home Energy Rating Stars (EER)									
		Star	1	2	3	4	5	6	7	8	9
Gas Furnace and Air Conditioner Energy Rating Stars	1	\$5,320	\$3,675	\$2,600	\$1,906	\$1,443	\$1,100	\$801	\$513	\$237	
	2	\$4,585	\$3,167	\$2,240	\$1,642	\$1,244	\$948	\$691	\$442	\$204	
	3	\$3,941	\$2,722	\$1,926	\$1,412	\$1,069	\$815	\$594	\$380	\$176	
	4	\$3,341	\$2,308	\$1,632	\$1,197	\$906	\$690	\$503	\$322	\$149	
	5	\$2,764	\$1,909	\$1,351	\$990	\$750	\$571	\$416	\$267	\$123	
	6	\$2,203	\$1,521	\$1,076	\$789	\$598	\$455	\$332	\$212	\$98	

Annual Energy Costs for a **200 m²** single storey home

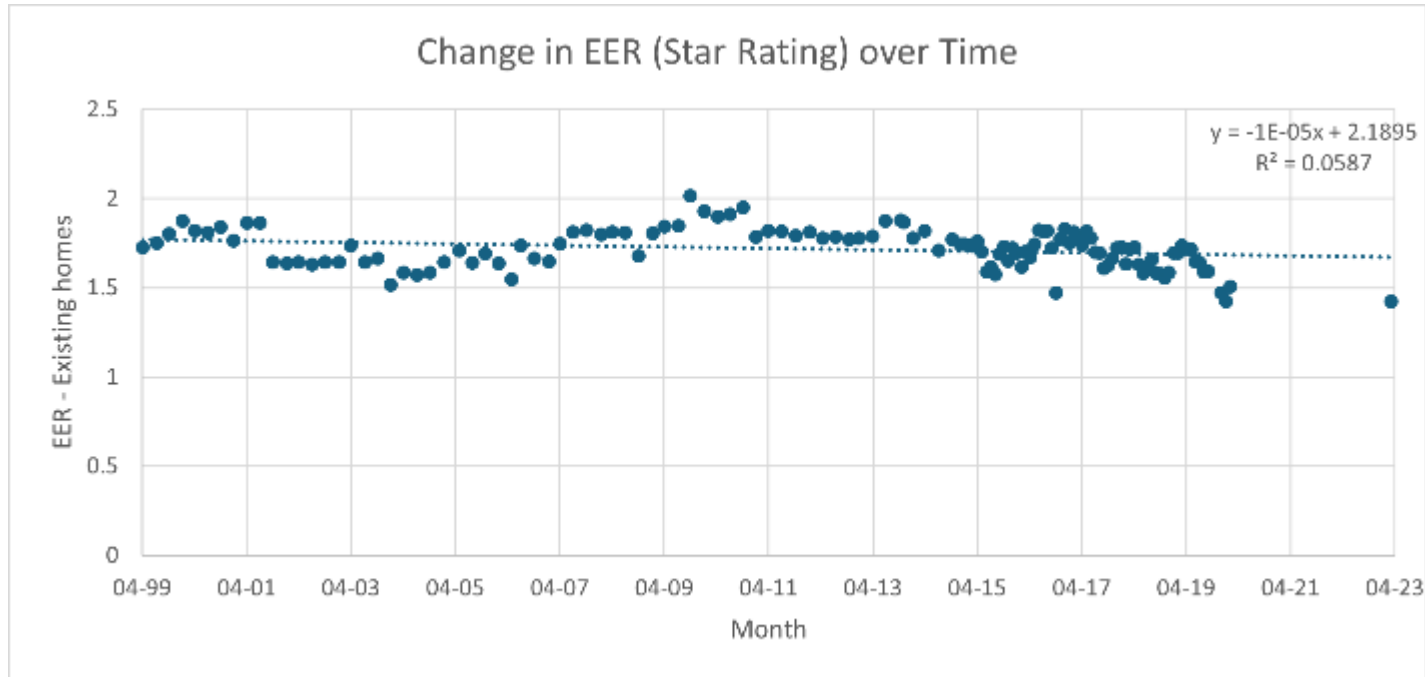


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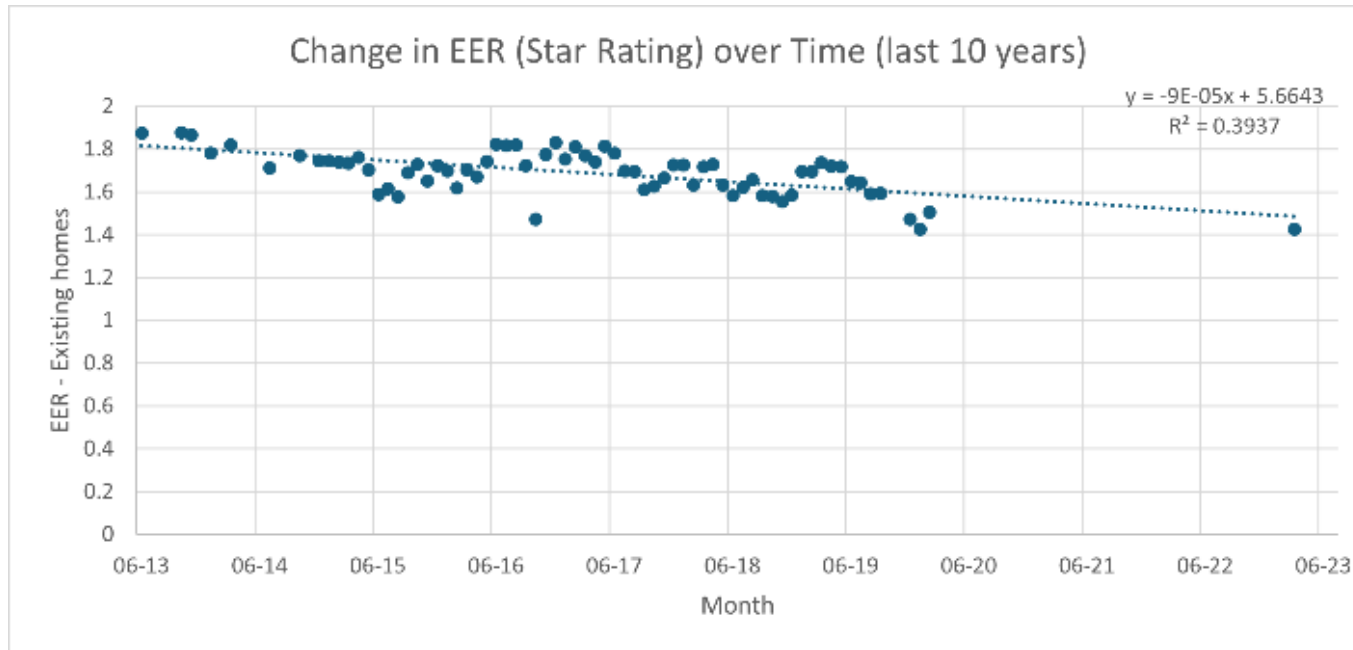
Effects on Building Stock

- ▶ Despite the preliminary findings in the Recent 'Independent Review' entitled *Review of the ACT Energy Efficiency Rating Disclosure Scheme*, Common Capital, March 2023, Exemplary Energy's data shows a slow and uncertain decline of EER in established suburbs over **the last quarter century** - $R^2 = 0.0587$



Effects on Building Stock

- ▶ Exemplary Energy's data shows a steeper and more certain decline of EER in established suburbs over **the last decade** as analysed by EnergyFit - $R^2 = 0.3937$
- ▶ Detailed statistical analysis of results for established suburbs showed the only discernible improvement was in the 2008-2010 subsidisation of added roof/ceiling insulation (now misleadingly known by its derogatory name "The Pink Batts affair/debacle")



Conclusions

- ▶ Our results support the existence of positive effects of energy efficiency and property prices, albeit to a lesser extent for houses
- ▶ Price discounts and premiums progression may not be linear
- ▶ EER affects positively with property prices up to a certain price point in which other market variables appear to take effect
- ▶ In our case, effects of EER diminishes as listing price goes above \$800,000
- ▶ Labor/Greens Agreement (2016) - reviewing the Energy Efficiency Rating Scheme not implemented by the 9th Assembly and the commitment was not continued in the 10th Assembly
- ▶ Recent “Independent Review” was with the then Minister’s office at the time of the election in October but the 11th Assembly has formed a minority Labor Government - dependent on 4 Greens (previously 6) to pass legislation
- ▶ It is uncertain which new minister will carry this forward:
Suzanne Orr - Minister for Climate Change, Environment, Energy and Water
Yvette Berry - Minister for Homes and New Suburbs
Chris Steel - Minister for Planning and Sustainable Development



Acknowledgements

- ▶ The authors record their thanks to:
 - Dr Neville Hurst, RMIT School of Property, Construction and Project Management (PCPM), for his helpful review of the early draft; and
 - EnergyFit for the detailed statistical analysis of our results and records for established suburbs
 - Recent former members of the project team: Dr David Ferrari, Yoke Fung, Emily Huynh, Yuelin Wang and Chun Yin Wu.

Questions?

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