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Byron Bay STRA cap evaluation – Technical Annex

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Executive summary

This technical annex contains additional detail on the methodology used to derive conclusions on the effect of the Byron Shire's STRA regulation, along with individual interview summaries conducted by SEC Newgate. In all, this document contains sections providing:

- An overview of the conceptual framework used to assess the effects of the short-term rental cap,
- The impact of the policy on the long-term rental market,
- The impact of the policy on the short-term rental market,
- An appendix containing a summary of each interview undertaken by SEC Newgate, and
- An appendix containing a detailed methodology and results breakdown.

1 Conceptual framework

In this section we set out the underlying economic framework, and how we might expect the two relevant markets to respond to the intervention.

Baseline static model

There are two markets: STRA and LTRA. Demand in the STRA market consists of visitors, while the demand in the STRA market consists of workers and local residents. There is some degree of interconnectedness between the two markets: supply in both markets consists of property owners, who can divide their properties between STRA and LTRA (and other uses).

In the initial equilibrium, demand equals supply in both markets, which is illustrated in Figure 1 and Figure 2, by intersection point **c** in STRA and point **e** in LTRA. Specifically, property owners maximize their profit via an optimal allocation of property supplied subject to demand. The equilibrium price and quantity is (p^*_{ST}, q^*_{ST}) in the STRA market and (p^*_{LT}, q^*_{LT}) in the LTRA market.

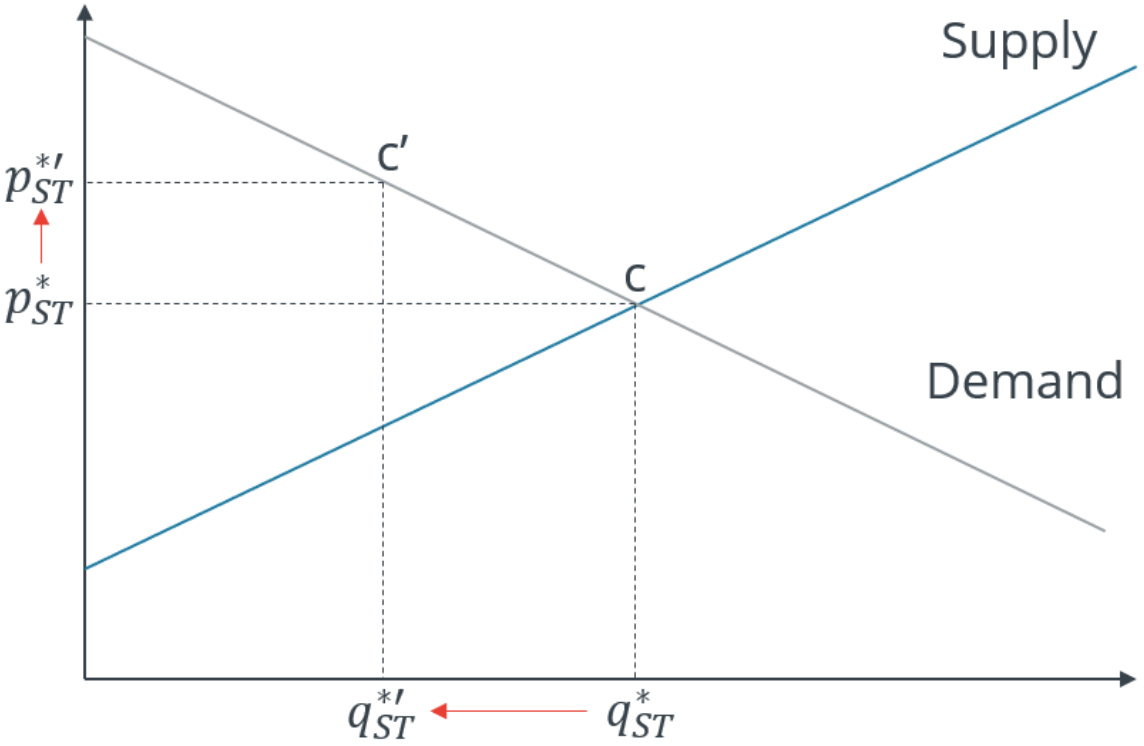
Imposing an STRA quantity cap rations the STRA market to a supply of $q^{*\prime}_{ST}$. If price had stayed the same, STRA profit would have shrunk considerably. However, property owners could respond by raising the price to $p^{*\prime}_{ST}$, since consumers have higher marginal willingness to pay for the rationed quantity. The new equilibrium is point **c'**, with price-quantity pair $(p^{*\prime}_{ST}, q^{*\prime}_{ST})$. Compared with the old equilibrium:

- Visitors' welfare (consumer surplus) shrinks.
- Effect on STRA profit (producer surplus) is ambiguous – it depends on the extent of price increase.

In response to the cap, property owners also supply more property for LTRA. The new equilibrium in the STRA market is **e'**, with price-quantity pair $(p^{*\prime}_{LT}, q^{*\prime}_{LT})$: price reduces and quantity increases. Compared with the old equilibrium:

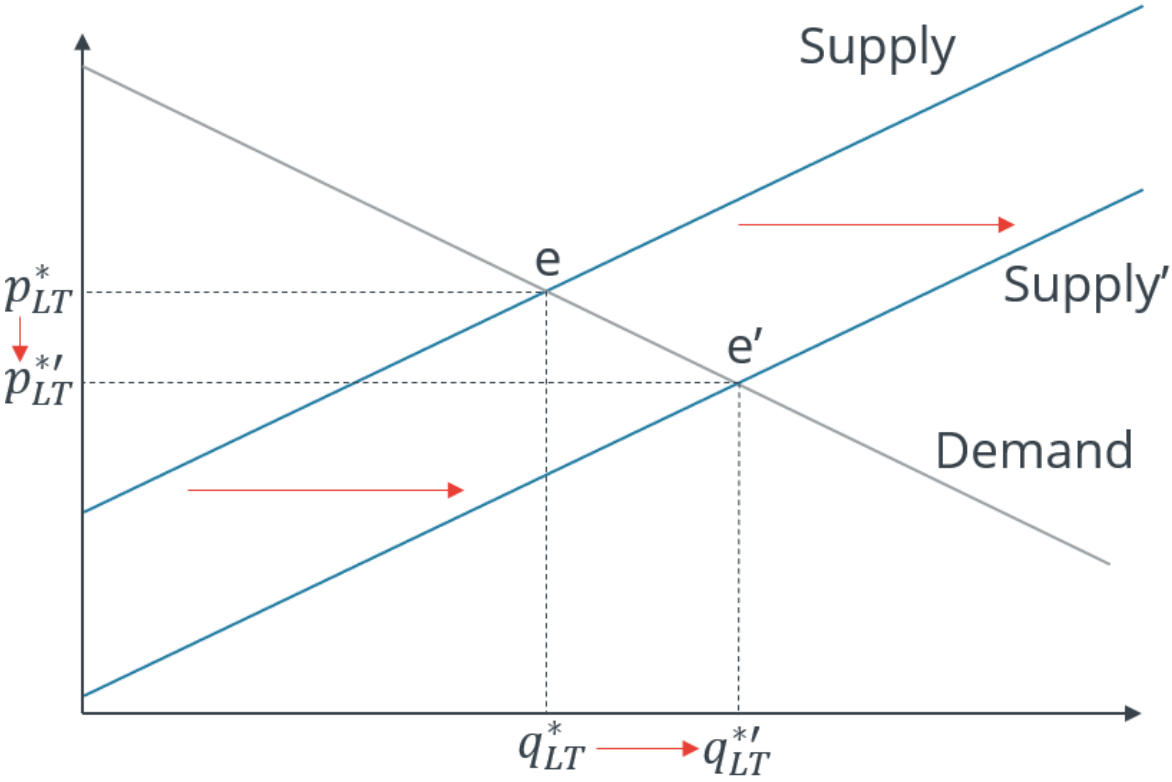
- Workers'/residents' welfare increases
- LTRA profit increases.

Figure 1: Supply and demand – STRA market



Source: Frontier Economics analysis

Figure 2: Supply and demand – LTRA market



Source: Frontier Economics analysis

This conceptual framework can be readily extended to incorporate many other characteristics. We discuss a few below.

Seasonality in demand

Demand, especially those of visitors, fluctuate throughout the year. This is illustrated by upward and downward shifts in the green demand curve in the STRA market. Without the cap, price and quantity move in tandem with demand. STRA profit margin is high when STRA demand is high.

Under the cap, distortions occur. Property owners preserve STRA supply for periods with the highest profit margin, i.e., when STRA demand is high. They cut supply by the largest extent when STRA demand is low. In summary, relative to the no-cap equilibrium in STRA:

- Periods of high demand: modest increase in price and modest reduction in quantity.
- Periods of low demand: larger increase in price and larger reduction in quantity.

Uncertainty

Supply does not always meet demand due to probabilistic matching, luck, and other idiosyncratic factors. With uncertainty, property owners maximise their expected profit subject to their allocation plan. Plans may be adjusted periodically, but uncertainty is likely to increase friction cost. Hence uncertainty is likely to dampen the overall responsiveness of price and quantity to the cap.

The baseline model abstracts from intrinsic cost differences among property owners. In the absence of the cap, due to cost differences some property owners may prefer to supply little STRA – they are inframarginal to the cap, while others may prefer to supply STRA – they are constrained by the cap. Without uncertainty, the cap affects the latter group. Uncertainty blurs the distinction between both groups. Because those who prefer to supply little may end up supplying more due to distinct forces (and vice versa), they also take the cap into consideration pre-emptively when they make decisions.

Exemptions

Not all properties are subject to the cap – either by geographic location (some areas of Byron Bay and Brunswick Heads are exempt) or by property type – hosted stays are exempt. Further, STRA stays of duration more than 21 days would not count towards the cap.[1]

Dynamics

The cap is annual: property owners approach this cap as they supply STRA property sequentially throughout the year. Owners may become more conservative as they approach the gap. Hence the effect may be more prominent toward the end of the cap cycle.

While the cap is annual, the 12 months to which the cap applies is not the same for all properties – the 12-month period starts when the property commences a new registration. This means that for some properties only a small portion of the 12-month period following the intervention in September 2024 was directly impacted by the intervention.[2]

[1] See https://www.planning.nsw.gov.au/sites/default/files/2023-09/changes-rules-stra-byron-shire-faq.pdf

[2] This consideration was noted by Cr Ndiaye, see https://www.abc.net.au/news/2025-09-23/60-day-caps-in-byron-bay-results-uncertain-after-one-year/105799696

Vacancy and other uses

Instead of converting STRA to LTRA one-to-one, owners may prefer to make the property vacant or retain it for personal use. We define this as the residual category. For each unit of STRA, the owner can either convert it to LTRA, or to the residual category. They will do the former if its net benefit is higher than the latter. The net benefit to LTRA is LT-rent minus conversion cost. The net benefit to the residual category is personal utility (zero if vacant) and there is no conversion cost. Owners will only convert to LTRA if LT-rent is high, and/or if conversion cost is low.

Other sectors and areas

Hotels, as well as STRA in neighbouring areas, are close substitutes to STRA in Byron Bay. These substitutes make the STRA demand curve more elastic. Under the cap, the price effect on STRA in Bryon Bay will be smaller. However, the cap will also increase the demand for hotels and demand for STRA in neighbouring areas, potentially increasing their price.

2 Impact on long term rental accommodation market

The stated objective of this policy is to increase availability of long-term rental accommodation. In this section we evaluate changes in the long-term rental market to examine if the intervention has had the desired effect of moving properties from the STRA market to the LTRA market increasing availability.

We note that there may be a limited extent to which STRA caps can lead to owners moving properties from STRA to LTRA. Recent research has suggested that only 12% of owners would move their property to the LTRA market in response to a cap.[3]

As noted in Section 3, we have observed no material changes in the key indicators of the STRA market considered, consistent with the intervention having no direct impact in that market.

We note that a lack of response in the STRA market would suggest that:

- There is likely to be no impact on the LTRA market
- Any potential impact is likely immaterial in the context of housing affordability/availability

Regardless, we consider the possibility that some of the property owners that ceased to offer STRA may have moved the property to the LTRA market as a consequence of the intervention. Consequently, we examine possible impacts of the intervention on the LTRA market.

- Number of long-term rentals (availability)
- Price of long-term rentals (affordability)
- Length of long-term rentals

2.1 Impact on number of long-term rentals

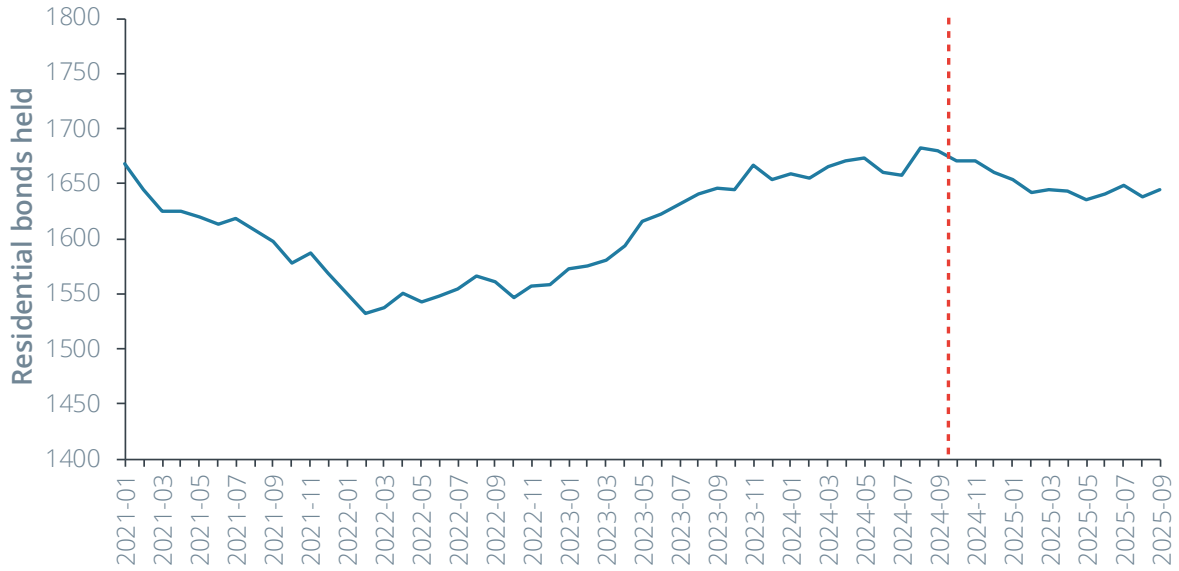
We begin the analysis of long-term rental availability by examining the number of rentals in Byron Bay (2481 postcode) with reference to the number of rental bonds held, i.e. the number of rental properties being rented out.

As shown in Figure 3, the number of rentals decreased somewhat to a low of around 1,500 as at January 2022. The market then increased to 1,700 prior to the introduction of the cap in September 2024. Subsequent to the cap we observe a stagnation of the market, with a small decrease in the number of rentals.[4]

[3] See https://news.airbnb.com/wp-content/uploads/sites/4/2025/08/YouGov-survey-Airbnb-host-survey.pdf.

[4] Similar patterns are observed for postcodes 2482 (Mullumbimby) and 2483 (Brunswick Heads).

Figure 3: Byron Bay rental bonds held



Source: Frontier Economics analysis of NSW bond data

We note that the comparators Ballina and the Coastal areas of Clarence Shire[5] exhibited a similar pattern with increases from late 2022, though Ballina exhibited a moderate increase post September 2024.[6]

This preliminary analysis does not suggest any increase in rentals in Byron Bay, measured by the number of bonds held.

Trends in the number of bonds held would however reflect a number of factors – including how previous leases expire or are renewed. For example, part of the decrease in bonds held may be from leases expiring and the property reverting to personal use by the property owner – leases that commenced well before the intervention. To examine the issue in more detail we evaluate the bond lodgement data to determine the number of new leases.

Examining the bond lodgements in Byron Bay we observe no appreciable increase in bond lodgement activity following the intervention, shown in Figure 4. While there is some degree of seasonality, with relatively low activity during December/January, the intervention is associated with a minor reduction in the level of leasing activity.[7,8]

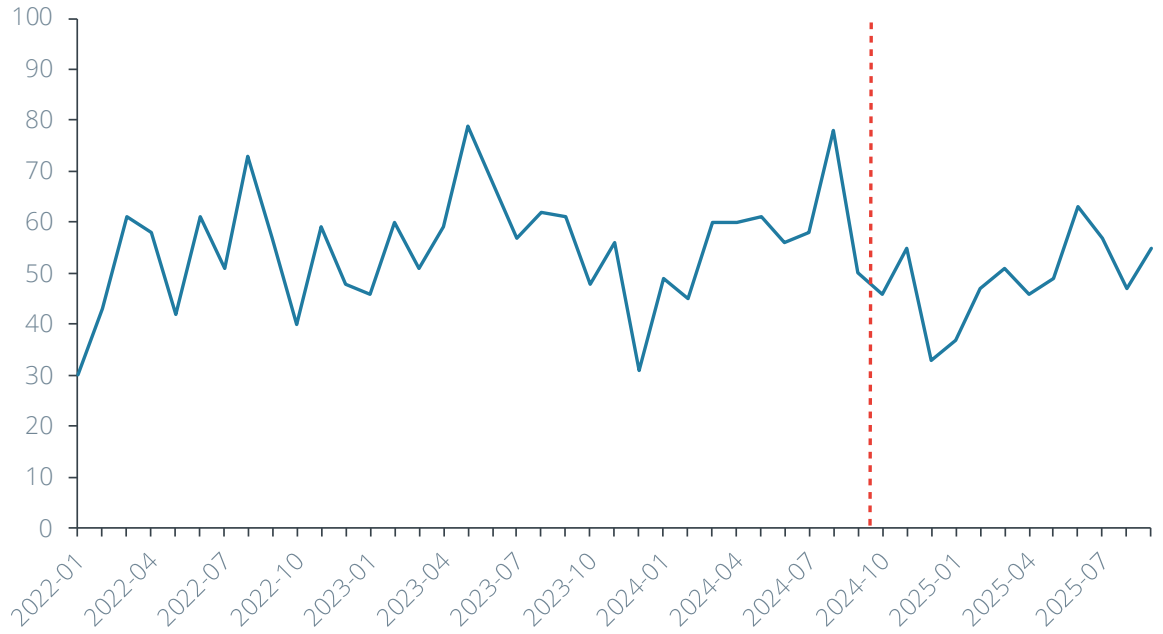
[5] Postcodes 2462, 2463, 2464 and 2466.

[6] See Figure 13 and Figure 14 in Appendix B.1.

[7] Using regression analysis, we find that the intervention is associated with a decrease in rental activity of approximately bond lodgements per month.

[8] We also examined the composition of bond lodgements by property type, finding no systematic shift in the types of properties leased in Byron Bay.

Figure 4: Bond lodgements – Byron Bay



Source: Frontier Economics analysis of NSW bond data

We compare the trend in Byron Bay to the trends in Ballina and Coastal Clarence, and we compare the change in the total number of bond lodgements using the 12 months before and after the intervention. As the impact of the intervention may be delayed due to the timing of 60-night registrations, we also examine the 6 months prior to the intervention and the period 12 months later.

Shown in Table 1, we see that Byron Bay has experienced a 11% reduction in bond lodgements, using both the 12-month periods and the 6-month periods. Comparator Ballina experienced a similar reduction in bond lodgements – a 13% decrease for the 12-month periods and a 7% drop for the 6-month periods (with Coastal Clarence experiencing 5% decreases).

Table 1: **Total bond lodgement comparisons**

Start	End	Ballina	Byron Bay	Coastal Clarence
Oct-23	Sep-24	1094	604	595
Oct-24	Sep-25	957	540	567
Change		**-13%**	**-11%**	**-5%**
Apr-24	Sep-24	460	303	279
Apr-25	Sep-25	427	271	266
Change		**-7%**	**-11%**	**-5%**

Source: Frontier Economics analysis of NSW bond data

On this basis we conclude that there is no evidence of an increase in bond lodgement activity in Byron Bay attributable to the intervention.

2.2 Impact on price of long-term rentals

To examine the potential impact of the intervention on affordability we examined the data on weekly rents associated with new bond lodgements, using the NSW bond lodgement data.

We use a hedonic regression model to account for factors that may influence rental value. Given the data available this was restricted to the number of bedrooms and the house type.[9] To examine the price trend we include dummies for the quarter of the observation, from 2022 Q1 to 2025 Q3.

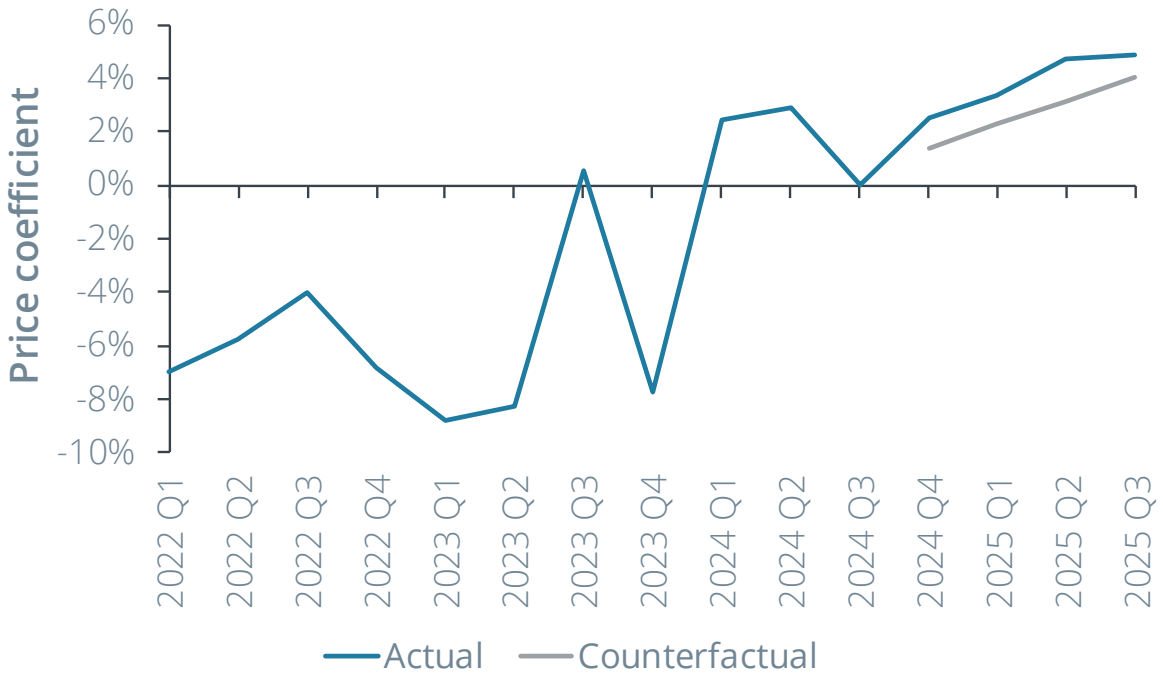
The resulting rent trends by quarter are presented in Figure 5. The coefficient provides the price increase/decrease relative to the reference quarter 2024 Q3 (the quarter prior to the intervention). For example, the coefficient of -7% in 2022 Q1 indicates that rents were typically 7% lower in 2022 Q1 relative to 2024 Q3. We see that rents increase over time (the price coefficient increases over time), with the prices in the four quarters post intervention above the price immediately prior to the intervention.

The price increases are however in line with the expectations of ongoing price increases. Extrapolating the trend from 2022 Q1 to 2024 Q3 provides the 'counterfactual' price trend, roughly in line with the actual price trend.

Based on the price trends, we make two key observations:

- There is no price decrease associated with the intervention; and
- While prices have increased post-intervention, there is little price movement attributable to the intervention itself.

Figure 5: Rent trends by quarter – Byron Bay



Source: Frontier Economics analysis of NSW bond data

[9] Property types were flat/unit, terrace/townhouse/semi-detached and house. The 'Other' category was omitted due to limited data. The bond data did not contain information on property size/bathrooms/car parks etc.

We note that similar observations can be made for Ballina and Coastal Clarence.[10] This again supports a finding of no impact of the intervention on rents in Byron Bay.

As a final check we perform a difference in difference analysis of the rents in Byron Bay as compared to Ballina and Coastal Clarence. We find no significant impact of the intervention on rents in Byron Bay.[11,12]

[10] **See Figure 16 and** Figure 17 in Appendix B.1.

[11] The estimated impact of the intervention was a reduction of 1.6%, or 2.1% if consider the intervention to only have an effect on 2025 Q2 and 2025 Q3. In both cases the estimated impact was highly insignificant with t-statistics of 1.1.

[12] Results for Rent price regressions are provided in Table 3 in Appendix B.1.

3 Impact on short term rental accommodation market

As set out in Section 1, the cap would be expected to first impact the STRA market, leading to quantity reductions and price increases, with subsequent impacts on the LTRA.

In this section we examine the impact the intervention has had in practice on the STRA market.

3.1 Data used

For our analysis, we relied on data sourced from the data broker AirDNA, which scrapes information from listings on Airbnb and Vrbo to compile a dataset of STRA activity across the globe. We analysed monthly releases of STRA activity for Byron Shire, Ballina and Clarence Valley. Byron Shire contains Byron Bay as the site of the 60-day STRA cap, while Ballina and coastal regions of Clarence Valley were used as comparable regions to estimate a counterfactual.

This data was provided for each region in the form of two excel spreadsheets containing information about each STRA found within the designated areas. One datasheet contained information at the property level, while the other tracking month-to-month activity. The property-level spreadsheet contained information about each STRA listing such as the listing name, the maximum number of guests, how many other STRA properties were being managed by the same host and when the listing was created. The month-to-month dataset tracked the activity of these listings, including how many nights were offered each month, how many nights were booked, the number of reservations, the revenue generated by the STRA that month and several other factors. Both datasets shared several variables, such as the STRA ID, the type of listing, and the longitude and latitude of the STRA in question.

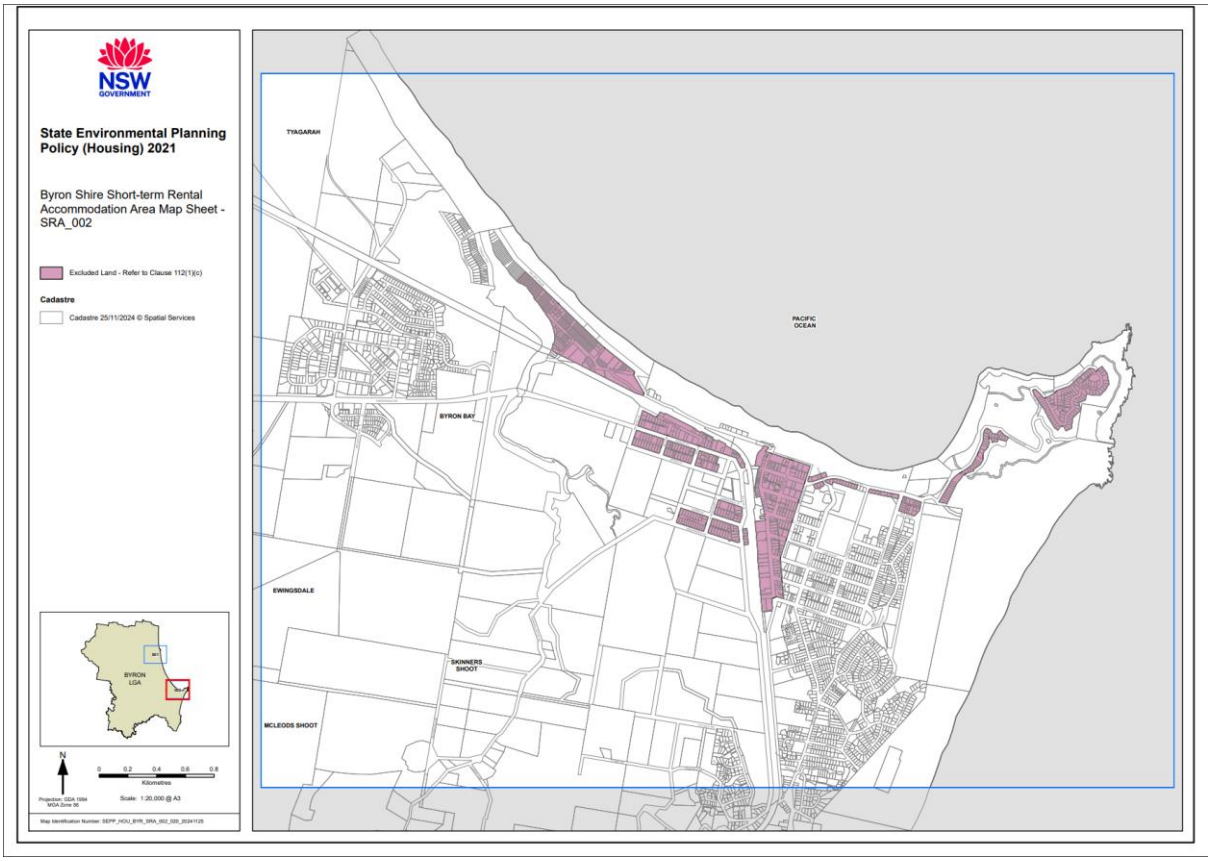
3.2 Approach to cleaning, allocating to exempt areas etc

The provided data contained STRA listings from the selected areas, some of which were exempt from the STRA caps for various reasons. Exemptions were granted due to either the nature of the property itself, or its location.

Some properties were exempt from the caps due to the nature of the STRA listing. For example, hosted STRA listings are not subject to the caps, nor are temporary structures like tents or caravans. To address this, we filtered the dataset to exclude entries where the *Property Type* or *Listing Type* variables indicated that the property was likely to be exempt from the caps.

Other properties were exempt from the caps due to their physical location. In Byron Bay and Clarence Valley, STRA properties in designated areas are exempt from the caps. These areas are laid out on maps provided as part of the regulations, as seen in Figure 6 below.

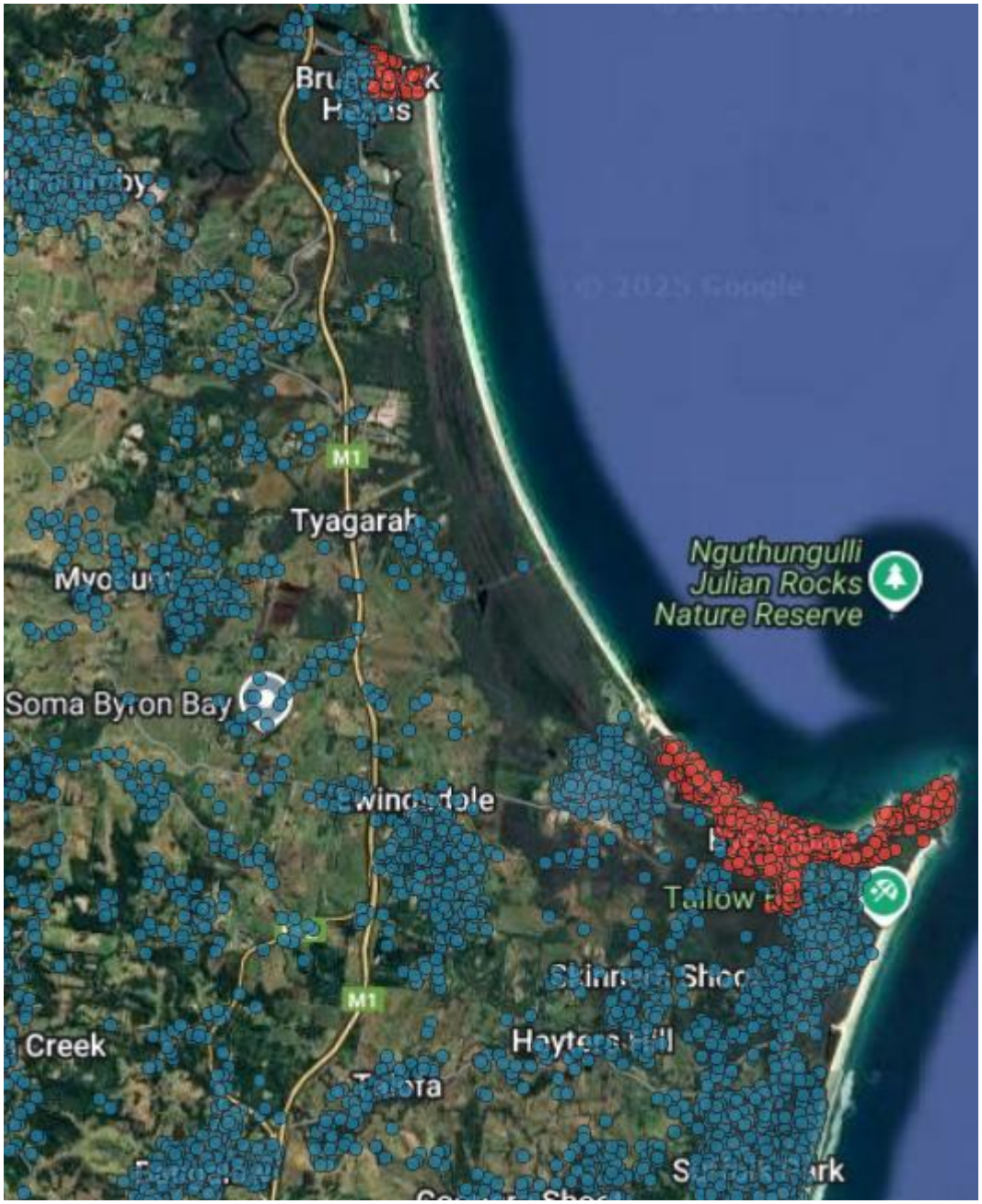
Figure 6: Exempt areas in Byron Bay



Source: https://www.byron.nsw.gov.au/Development-Business/Land-Use-Zoning/Short-Term-Rental-Accommodation

To address these properties, we used the spatial mapping software QGIS to designate any properties that fell within the boundaries of the provided maps as exempt from the STRA caps. This required us to examine the precise location of each listing, to determine if it was exempt or not. To do so, we relied on the coordinates that are included in the AirDNA data. STRA platforms (the ultimate source of the AirDNA data) allows STRA hosts to obscure the exact location of their property. This results in the property being randomly assigned coordinates within a 250-metre radius of their true location, resulting in some exempt properties being placed in the non-exempt areas and vice versa. To mitigate this, we extend out the exemption areas an additional 50 metres. In some instances where properties are placed in incorrect locations, such as being placed in a body of water, and our best judgement is that the likely origin is within an exempt area, we extend out the exempt area to include this property. This minimises the amount of exempt properties still present in the dataset.

Figure 7: Allocation of Byron Shire properties to Exempt and Non-Exempt areas



Source: Frontier Economics analysis of AirDNA, NSW Planning data

Note: properties considered as exempt based on location are red, non-exempt are blue

3.3 Analysis

To analyse the impact of the intervention on the STRA market, we first look at aggregate trends in the Byron Bay postcode (2481). We do this as the Byron Bay postcode accounts for the vast majority of the Byron Shire STRA market.[13,14]

[13] 77.4% of STRA revenue over October 2023 through September 2024, and 72.2% by reservation days over the same period.

[14] We also refine to the 2481 postcode to reduce the scope for compositional effects to impact findings.

Using AirDNA data, we obtain monthly data for properties providing STRA in the Byron Bay area. This includes, at the property level, revenue for the month, nights reserved for the calendar month, nights available. This allows us to calculate the average daily rate for each property over time, as well as the participation of each property in the STRA market.

Participation in the STRA market

We first examine the change in the number of 'active' properties in the Byron Bay STRA market between September 2024 and September 2025. We consider a property as 'active' in September 2024 if it reported availability during the relevant month or earlier, and availability during the relevant month or later. We find that the number of 'active' properties reduced by 23.3% between September 2024 and September 2025.[15,16] This aligns with reported declines in STRA registrations.[17]

The decline in active properties is not however associated with a decline in STRA activity: the number of available days in September 2025 was only 1.4% lower than that in September 2024. This suggests that the properties leaving the STRA market had low levels of participation. Examining the properties that became inactive, we find that the median number of nights provided in the 12-months to 2024 was only 20 nights. That is, the median property was far from being directly impacted by the 60-night cap. It is therefore challenging to attribute the decline in active properties or registrations to the intervention.

Further, we note that if we repeat the analysis for Ballina, we find an even larger decline in active properties: a decline of 27.3%.

STRA pricing

In Figure 8 below we provide the aggregate average daily rate.[18] As we would expect, the average daily rate exhibits strong seasonality prior to the intervention, with peaks in December January (and April to a lesser extent). The overall level of prices was relatively stable over time.

Post-intervention, we observe minimal changes in pricing. Two key observations:

- The overall level of pricing is consistent with that of the pre-intervention period
- The seasonality of pricing is consistent with that of the pre-intervention period

We do not observe the anticipated price rise, and in particular we do not observe a price rise during the low-price period (i.e. winter months). This observation is not consistent with the cap constraining behaviour of property owners and therefore in effect increasing the cost of providing STRA during periods of low demand.

We can also note that the average daily rate is high during peak months of December and January, at around $644 for December 2024 and January 2025. For context, the median weekly rent of a 2-bedroom house in Byron Bay was $808 in the third quarter of 2025, and the median weekly rent over all properties leased was $1,100.

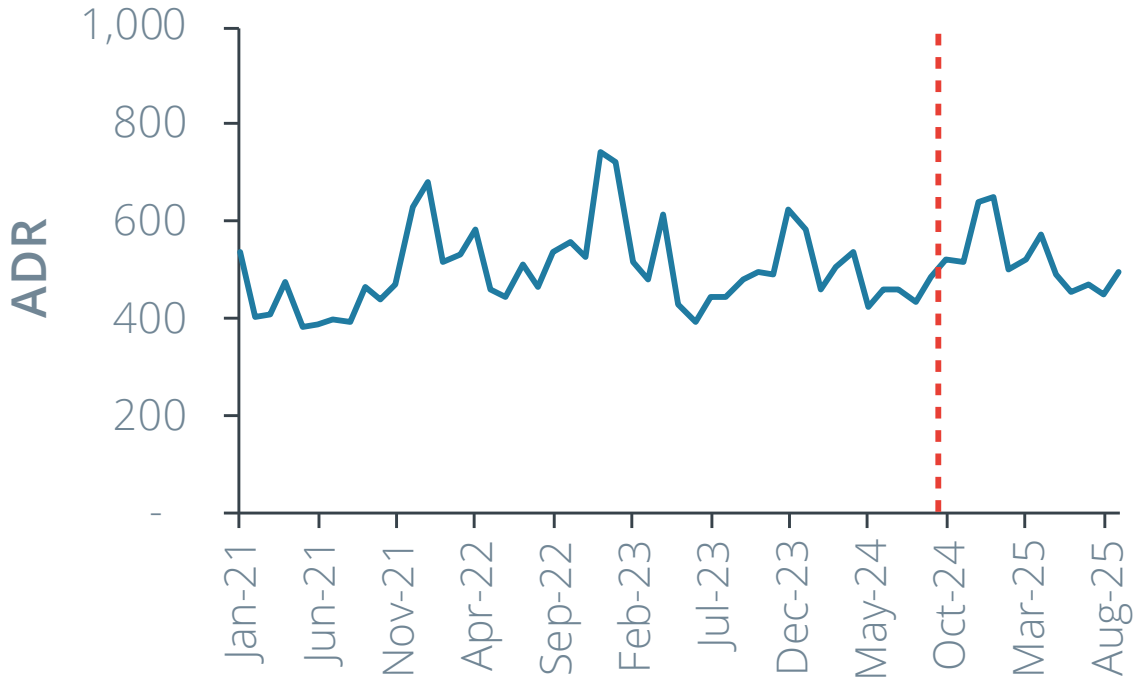
[15] 2,305 active as at September 2024 and 1,767 active as at September 2025.

[16] Under the definition applied some properties are considered as inactive in September 2025 even if they had some nights available in August 2024. Relaxing this strict requirement reduces the percentage decline somewhat.

[17] 15 per cent reduction in Byron Shire, see https://www.abc.net.au/news/2025-10-28/city-of-sydney-investigates-cap-on-short-term-rentals/105940988

[18] Calculated as total revenue in the 2479 for the month divided by total number of nights sold.

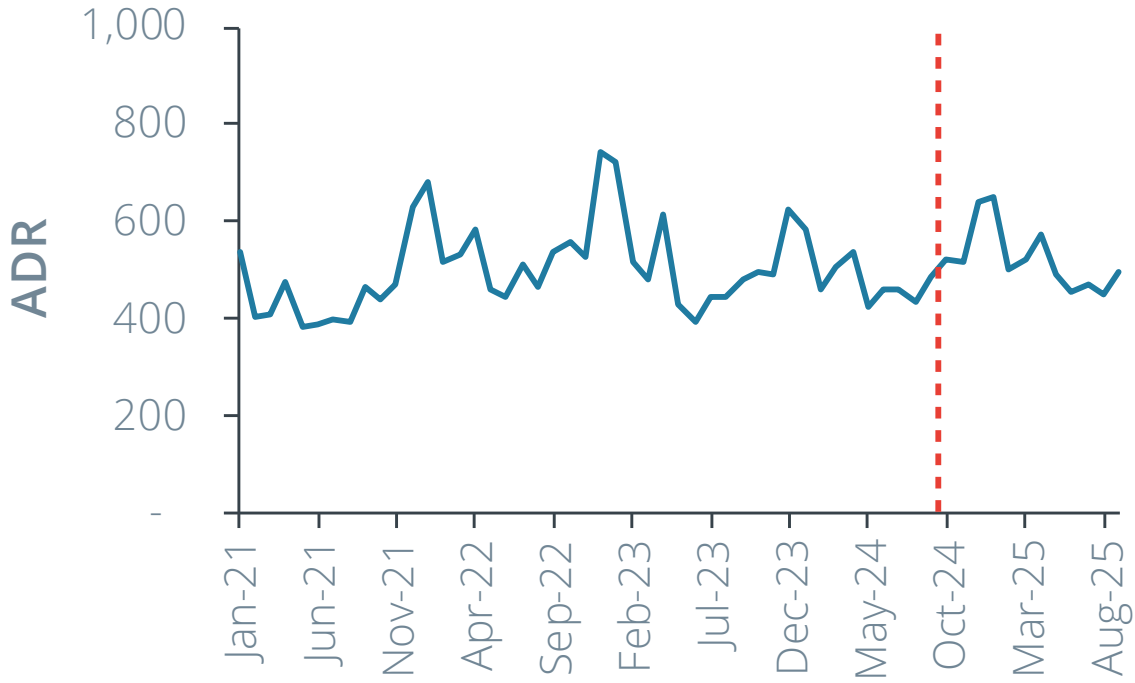
Figure 8: Average daily rate – Byron Bay



Source: Frontier Economics analysis of AirDNA data

We observe similar patterns when restricting to the areas of Byron Bay excluding the exempt areas, shown in Figure 9.

Figure 9: Average daily rate – Byron Bay (non-exempt area)



Source: Frontier Economics analysis of AirDNA data

To further test for possible impact on the STRA market, we examine the prices of STRA accommodation as provided by AirDNA.

For each property/month we obtain the price of accommodation as the total revenue divided by the number of nights, and determine the impact of the intervention on price through the use of a fixed effects regression.[19] Through analysing price trends of impacted properties,[20] compared to those of non-impacted properties, we identify the impact of the intervention.[21]

We perform the regression analysis for the period from January 2022 through to September 2025. We consider three potential samples:

- Properties in Byron Shire, Ballina Shire and Clarence Shire
- Properties in Byron Shire
- Properties in Byron Bay (postcode 2481)

Table 2: Impact of intervention on STRA pricing

Sample	Intervention impact	t-statistic	p-value
Byron, Ballina, Clarence Shires	-2.2%	-3.7	0.0%
Byron Shire only	-0.4%	-0.5	63.0%
Byron Bay only	-0.9%	-1.3	18.3%

Source: Frontier Economics analysis of AirDNA data

A shown in Table 2, we find that the intervention has not had a positive significant impact on the pricing of STRA properties that were subject to the intervention.

While we note that the intervention is associated with a price decrease in the first sample, this is likely a spurious result due to differences is price trends between the three reasons, and is inconsistent with a reduction in supply caused by a cap.[22]

The second and third samples have a negative impact, but the results are not statistically significant.[23]

Nights provided

Similarly, we can examine the nights provided in the Byron Bay area. Shown in Figure 10 and Figure 11, there does not appear to be any substantial response to the intervention in the number of nights provided.

[19] We apply fixed effects at the property level.

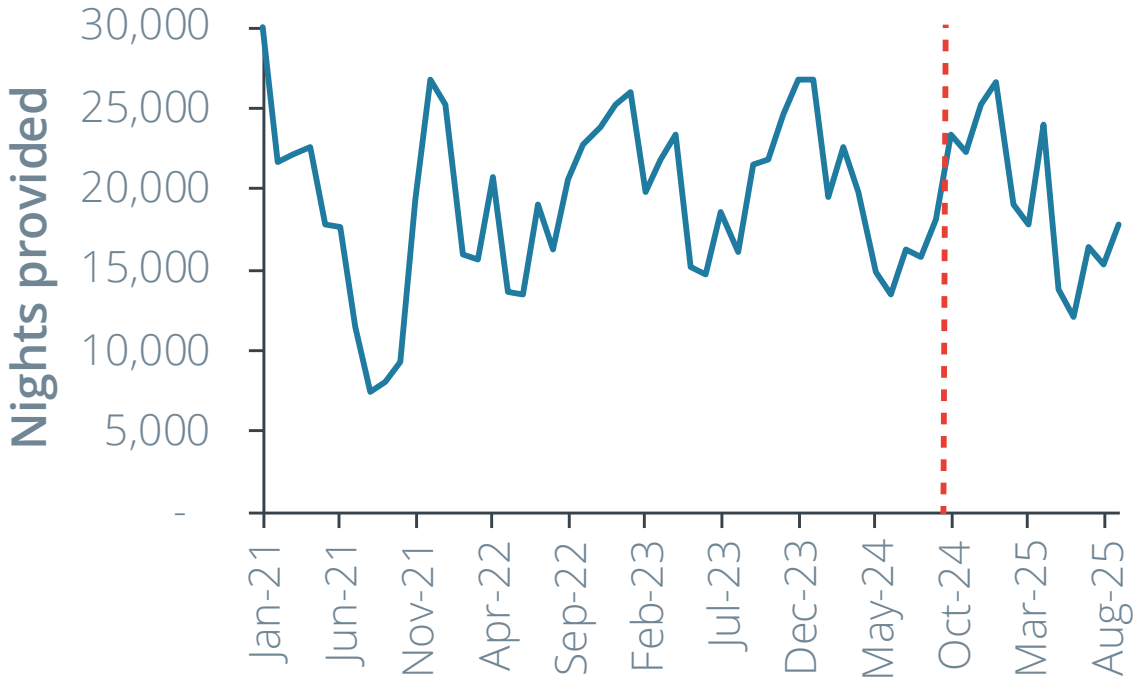
[20] Impacted properties are those in Byron Shire, but not in the exempt areas of Byron Bay and Brunswick Heads. We consider those properties not listed as the entire property to be hosted and therefore exempt. Finally, we consider that some property types e.g. hotels would be exempt.

[21] We control for price trends over time (seasonality etc) though the use of 34 month dummy variables.

[22] We also considered examining the impact of the intervention on pricing during periods of low demand, but found no supporting evidence for a price increase attributable to the intervention.

[23] The t-statistics are smaller than 2.

Figure 10: STRA Nights provided – Byron Bay



Source: Frontier Economics analysis of AirDNA data

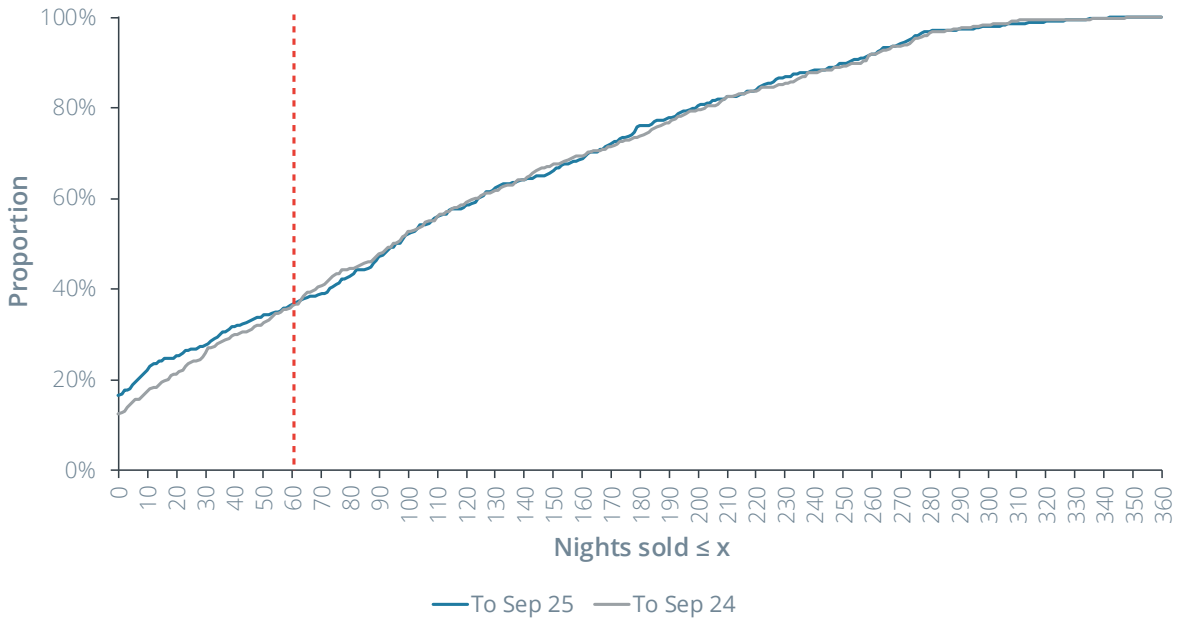
Figure 11: Nights provided – Byron Bay (non-exempt area)

Source: Frontier Economics analysis of AirDNA data

To examine the lack of response, we examine the nights provided by properties in the Byron Bay area, particularly the properties targeted by the intervention.[24] We consider the nights provided in the 12 months to September 2025, compared to the 12 months to September 2024. That is, we are doing a before-and-after analysis of the nights provided at the property level.

We examine the response of the properties that are both active as at October 2023 and active as at September 2025.[25] We do this to remove the distortion caused by properties entering and leaving the STRA market.[26]

Figure 12: Distribution of nights provided – 12 months to Sept 2025 vs 12 months to Sept 2024 – Byron Bay



Source: Frontier Economics analysis of AirDNA data

The resulting distributions of nights provided across properties are provided in Figure 12. Based on this figure we make three observations:

- For both the pre- and post- intervention period, the majority of properties provided more than 60 nights – only around 40 per cent provided fewer than 60 nights
- There is minimal difference between the two period when examining the properties that provided more than 60-nights
- There appears to be a slight reduction in nights provided at the low end of the distribution

The change in the distribution (or the lack thereof) is inconsistent with what would be predicted, as per Section 1. We do not observe a shift to the left above 60 nights, which would be expected as some properties reduce nights to be compliant with the cap. While we acknowledge that not every property in the sample would have been subject to cap, and those that were would not

[24] Not in the exempt area, listing the entire house/apartment, and not of a property type associated with hosted stays. See Table 6 in Appendix B.3 for the classification applied to consider properties as hosted vs non-hosted.

[25] We consider properties that had nights available as active.

[26] We note that properties that exited the market in particular provided much fewer nights. This makes it unlikely that exits were caused by the 60-night cap.

necessarily be constrained to 60-nights over the 12 months to September 2025,[27] we would have expected some shift to the left for some nights sold >60 if the intervention was capping notionally affected properties at 60-nights.[28,29]

The lack of response suggests that either very few properties are notionally affected by the cap (due to the vast majority of properties being considered as hosted and therefore exempt from the cap), or enforcement of the cap is weak. We note that several businesses raised scepticism about the enforcement of the cap during interviews conducted by SEC Newgate, as detailed in Section 2 of the main report. Ultimately the enforcement of the cap is the responsibility of Byron Shire Council, as directed by the Planning Minister.[30]

27 Due to commencing a 60-night cap registration some time after September 2024.

28 We acknowledge that STRA provided for 21 nights or more is not counted towards the cap.

29 We repeated the exercise for properties in Ballina (postcode 2478), and find a similar lack of change in the distribution, with the exception of a slight increase in nights sold in the 120-180 night range. See Figure 19 in Appendix B.3.

30 See https://paulscullymp.com.au/news/media-releases/changes-to-byron-bay-short-term-rental-rules/

A Interview methodology

DISCLAIMER: In preparing this report we have presented and interpreted information that we believe to be relevant for completing the agreed task in a professional manner. It is important to understand that we have sought to ensure the accuracy of all the information incorporated into this report. Where we have made assumptions as a part of interpreting the data in this report, we have sought to make those assumptions clear. Similarly, we have sought to make clear where we are expressing our professional opinion rather than reporting findings. Please ensure that you take these assumptions into account when using this report as the basis for any decision-making. The qualitative research findings included throughout this report should not be considered statistically representative and cannot be extrapolated to the general population. This project was conducted in accordance with AS: ISO20252:2019, to which SEC Newgate Research is accredited.

A.1 Fact sheet used for interviews

Overview

- In September 2024, Byron Shire implemented a 60-day annual cap on non-hosted short-term rental accommodation (STRA) in most residential areas.
- Properties where the owner does not live on-site can only be rented out for up to 60 days per calendar year.

Exemptions

- Visitor accommodation such as hotels and serviced apartments, along with hosted rentals (where the owner resides on the premises during the provision of the accommodation) are exempt and have no cap.
- Some high-tourism precincts, including the town centre, beachfront areas (like Lawson Street and Wategoʼs Beach), and Brunswick Heads, are exempt and can operate short-term rentals year-round without the 60-day limit.

Why?

- The cap aims to address the local housing shortage by encouraging more properties to return to the long-term rental market, improving housing availability and affordability in Byron Shire.
- It is also designed to curb the growth of investment-driven holiday lets that reduce the supply of homes for residents.

Enforcement & Compliance

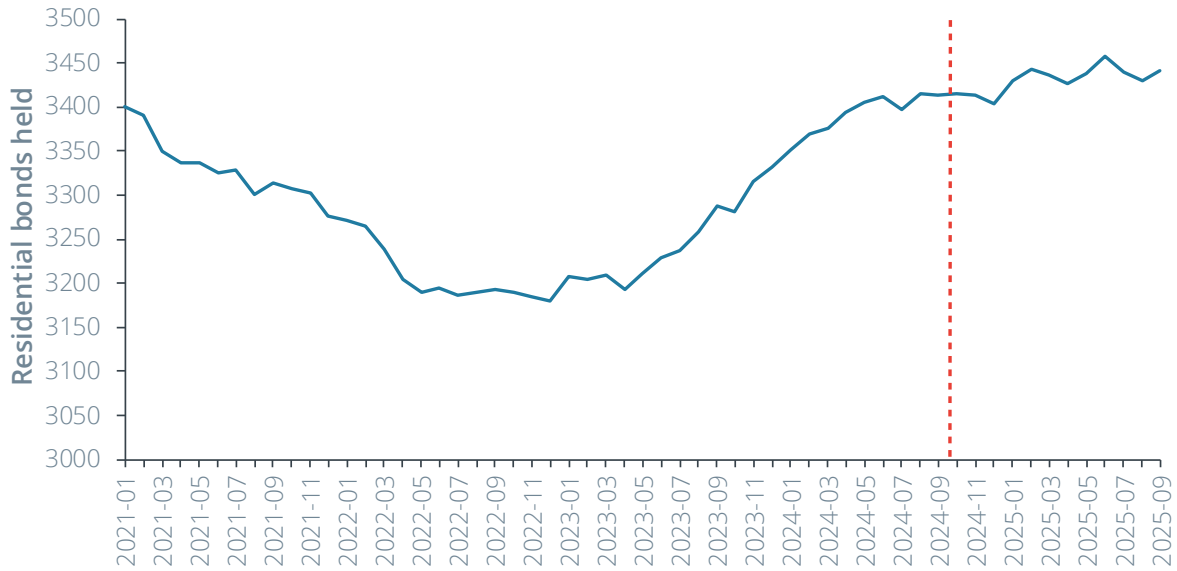
- The cap is monitored via a State Government short-term rental register, requiring all STRA properties to be registered.
- Fines of up to $12,000 can be imposed for breaches of the cap.
- The Council uses data from platforms like Airbnb and Stayz to ensure compliance.

B Methodology and detailed results

This appendix provides a detailed description of the methodology used to evaluate the impact of caps on short term rentals in the Byron Bay shire.

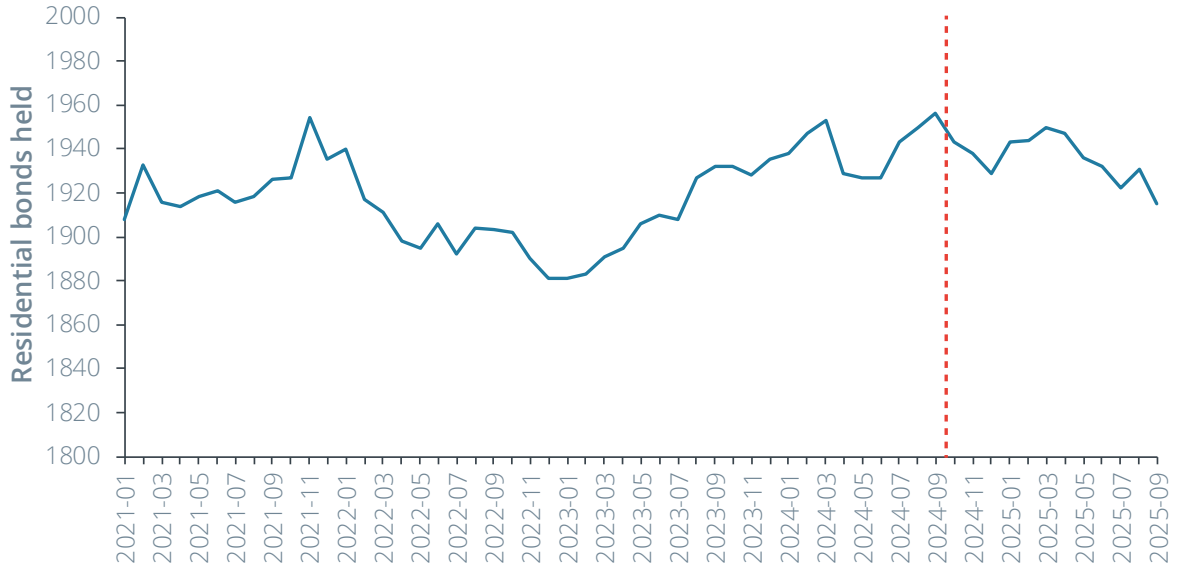
B.1 LTRA effects

Figure 13: Ballina rental bonds held



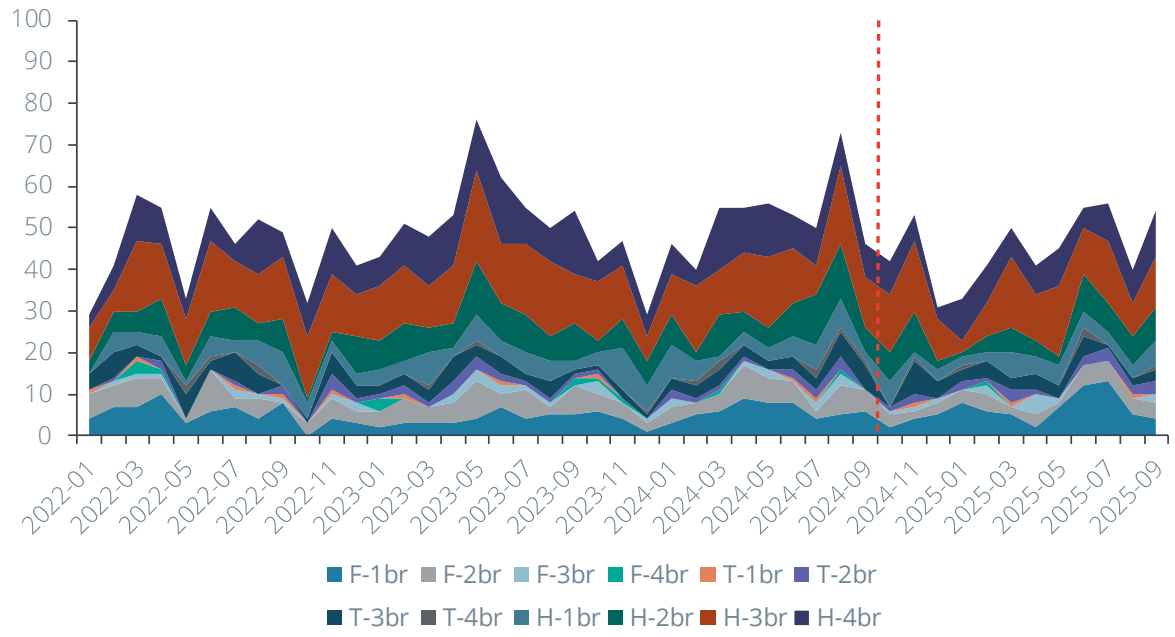
Source: Frontier Economics analysis of NSW bond data

Figure 14: Coastal Clarence rental bonds held



Source: Frontier Economics analysis of NSW bond data

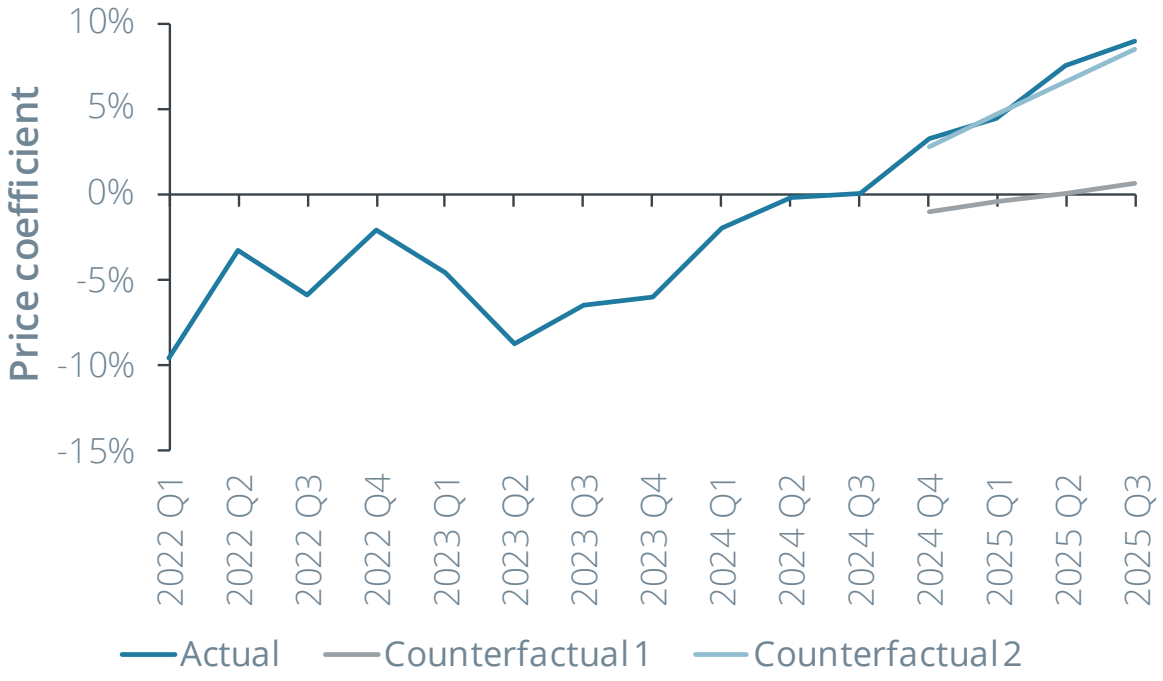
Figure 15: Bond lodgements by property type – Byron Bay



Source: Frontier Economics analysis of NSW bond data

Note: F, T and H denote flat/unit, terrace/townhouse/semi-detached and house respectively

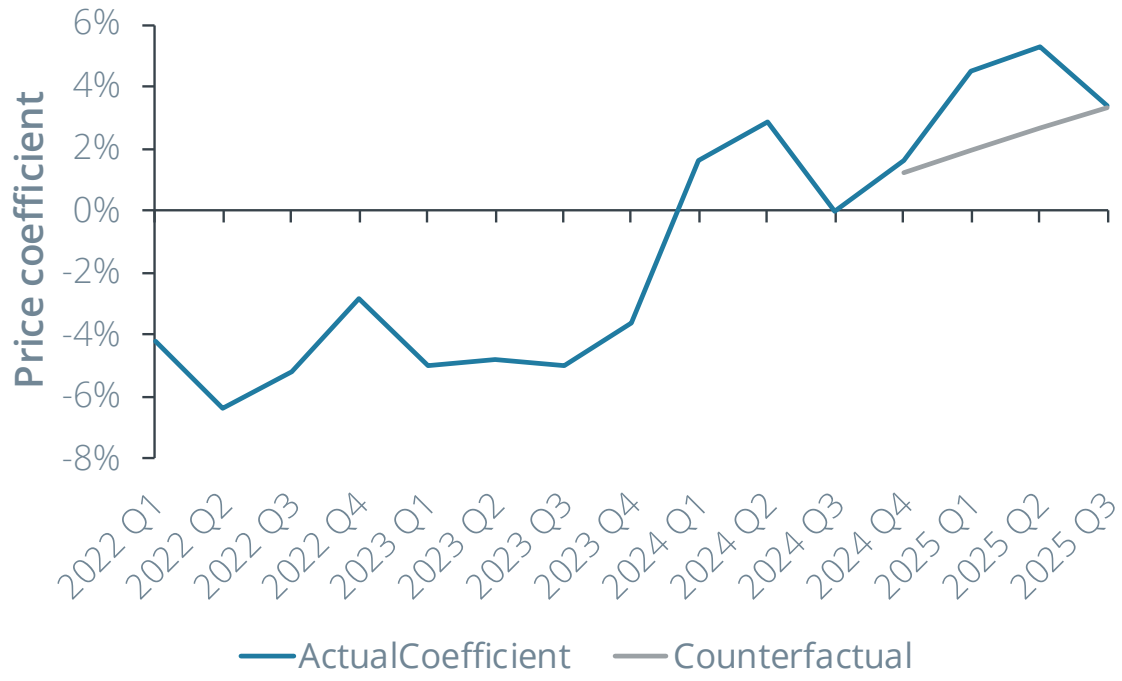
Figure 16: Rent trends by quarter – Ballina



Source: Frontier Economics analysis of NSW bond data

Note that we provide two counterfactuals – the first extrapolates the trend from 2022 Q1 to 2024 Q3, the second extrapolates the trend from 2023 Q2 to 2024 Q3.

Figure 17: Rent trends by quarter – Coastal Clarence



Source: Frontier Economics analysis of NSW bond data

Table 3: Rental price regression results

Variable	Byron Bay	Ballina	Coastal Clarence	All	All
Constant	6.36	6.04	5.78	6.01	6.01
2022 Q1	-7.0%	-9.6%	-4.2%	-7.2%	-7.2%
2022 Q2	-5.8%	-3.3%	-6.4%	-4.6%	-4.6%
2022 Q3	-4.0%	-5.9%	-5.2%	-5.0%	-5.0%
2022 Q4	-6.8%	-2.1%	-2.9%	-3.4%	-3.4%
2023 Q1	-8.8%	-4.6%	-5.0%	-5.5%	-5.5%
2023 Q2	-8.3%	-8.8%	-4.8%	-7.1%	-7.1%
2023 Q3	0.5%	-6.4%	-5.0%	-4.0%	-4.0%
2023 Q4	-7.7%	-6.0%	-3.6%	-5.5%	-5.6%
2024 Q1	2.4%	-2.0%	1.6%	0.4%	0.4%
2024 Q2	2.9%	-0.2%	2.9%	1.6%	1.6%
2024 Q4	2.5%	3.3%	1.6%	3.1%	2.6%

2025 Q1	3.3%	4.4%	4.5%	5.0%	4.6%
2025 Q2	4.7%	7.5%	5.3%	6.7%	6.9%
2025 Q3	4.9%	8.9%	3.4%	6.6%	6.7%
House	6.1%	6.8%	7.4%	6.0%	6.0%
Townhouse	4.4%	8.2%	6.6%	6.5%	6.5%
2 bedrooms	25.6%	25.1%	26.3%	27.7%	27.7%
3 bedrooms	54.0%	48.8%	44.9%	51.3%	51.3%
4 bedrooms	87.7%	66.3%	59.7%	72.6%	72.6%
Byron Bay	n/a	n/a	n/a	38.9%	38.8%
Coastal Clarence	n/a	n/a	n/a	-26.6%	-26.6%
Intervention	n/a	n/a	n/a	-1.6%	-2.1%*

Source: Frontier Economics analysis of NSW Bond data

*Note: * The intervention is considered to apply to Byron Bay for 2025Q2 and 2025Q3 only. All estimated coefficients (other than quarter price impacts) are significant at the 5% level other than the Intervention coefficient (in both models) and the townhouse coefficient (in the Byron Bay only model).*

B.2 Impact on length of long-term rentals

As noted during interviews, one possible impact of the intervention may be to lead owners of properties used for STRA to utilise the 60-night cap during the periods of high demand, and to make the property available for LTRA during periods of low demand. For example, by renting the property for a 6-month fixed term lease during the off season (i.e. May-October as per Figure 8). Such an approach could conceivably maximise revenue for the property owner while complying with the 60-night cap.[31]

We note that there are drawbacks with this approach, including:

- Ensuring that the property meets requirements for long-term rentals[32,33]
- Potential challenges in ensuring that the tenant vacates the property at the end of the fixed term
- Long-term rental precludes the use of the property by the property owner during the rental period

[31] In a similar manner, tenants may be obligated to vacate the property for some period each year so that the landlord may use the property for STRA. This issue was raised during interviews conducted by SEC Newgate. Due to a lack of data, we are unable to examine this issue in detail.

[32] See https://www.nsw.gov.au/housing-and-construction/rules/minimum-standards-for-rental-properties.

[33] As an example, from March 2025 rental properties must contain toilets that are dual-flush with a minimum three-star Water Efficiency and Labelling Standard (WELS) rating, in order for water usage charges to be passed on to tenants. See https://www.nsw.gov.au/departments-and-agencies/fair-trading/news/dual-flush-deadline-for-rental-properties-to-meet-new-water-efficiency-rules.

- Rental yield may be low if demand for relatively short-term fixed term rentals is low during the off season

Moreover, we note that any properties made available for the LTRA market in this manner are not perfect substitutes for longer term LTRA:

- The short lease period may require relatively frequent moving, involving search costs in relatively tight market and moving costs
- The end of the lease period will require the tenant to find new accommodation at time when demand is high as the worker population increases (and supply may be low if properties switch back to STRA)
- The accommodation is being provided for a period when demand is low, not during the period when it is most needed to meet demand from temporary workers

Regardless, we note that a shift towards shorter duration leases may indicate some impact of the intervention on the LTRA market.[34]

To examine potential impacts on the duration of leases we use data provided by NSW Fair Trading, with data on bond refunds, including the following variables:

- Postcode
- Date of bond refund
- Days held

Data is provided for all bonds refunded from January 2021 to September 2025.

This allows us to infer the date at which the bond was paid i.e. when the tenancy commenced.

For each calendar month from January 2021 onwards we find:

- The number of bonds paid during the calendar month but refunded within 3 months of being paid[35]
- The number of bonds paid during the calendar month but refunded within 3-6 months of being paid
- The number of bonds paid during the calendar month but refunded within 6-9 months of being paid
- The number of bonds paid during the calendar month but refunded within 9-12 months of being paid

We then find for each calendar month (in which the bond is paid by the tenant) the tenancy duration, for tenancies that end with 12 months. That is, we examine tenancies of 12-month duration or less.

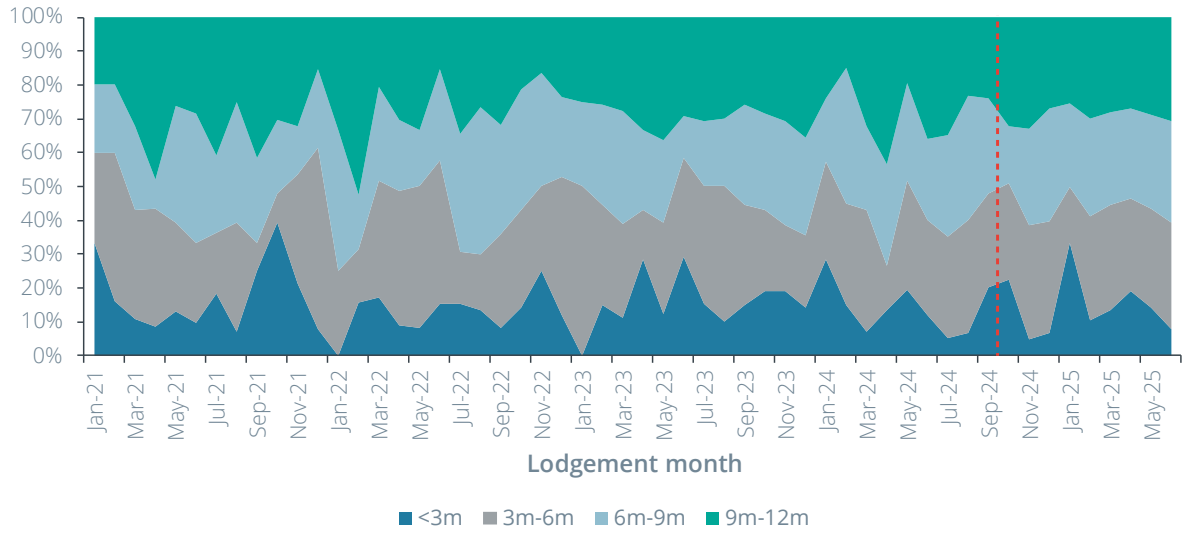
Figure 18 illustrates the composition over time. We do not observe a marked increase in the proportion of tenancies that end within 3 or 6 months.[36]

[34] We also note that increased availability of housing during the off-season, while not aligning with demand, may reduce the cost of living for workers that experienced reduced incomes during the off-season.

[35] We include a 14-day payment time frame.

[36] Note that we are not yet able to observe the number of bonds that were issued in October 2024 and refunded after 9m-12m. To account for this, we apply the historic average proportion of bonds lodged to infer the composition. Similarly for subsequent months and other tenancy durations.

Figure 18: Duration of tenancy for tenancies that end within 12 months



Source: Frontier Economics analysis of NSW bond data

To validate the observed lack of response, we perform statistical analysis to determine if the shares of the various tenancy duration bands have changed significantly pre and post intervention.[37]

Table 4 presents the results of the statistical analysis, testing the hypothesis that the proportions of the tenancy durations considered (as a proportion of tenancies of 1 year duration or less) have changed before and after the intervention.[38]

In all cases considered, we find no evidence of a shift towards tenancies of shorter durations following the intervention. That is, there is no evidence that the intervention has increased the supply of tenancies of duration less than 1 year.

Table 4: Hypothesis testing of impact on tenancy durations – proportions of bonds refunded within various durations relative to the bonds refunded within 12 months

Tenancy duration	Proportion pre-intervention	Proportion post-intervention	z-Score	Outcome
0m-6m	43.9%	44.0%	0.01	Do not reject
0mm-3m	15.1%	14.3%	-0.26	Do not reject
3m-6m	28.8%	29.0%	0.04	Do not reject
6m-9m	26.9%	26.1%	-0.12	Do not reject

Source: Frontier Economics analysis of NSW bond data

[37] That is, Jan 2021 through September 2024 and October 2024 through September 2025.

[38] Note that we use imputed totals of bonds refunded within 12 months as per FN 36.

We also test for the impact on the proportions of bonds refunded within various windows relative to all bonds lodged. The results are presented in Table 5. Again, we find no evidence of a shift towards tenancies of shorter durations.

Table 5: Hypothesis testing of impact on tenancy durations – proportions of bonds lodged

Tenancy duration	Proportion pre-intervention	Proportion post-intervention	z-Score	Outcome
0m-6m	19.5%	18.6%	-0.37	Do not reject
0m-3m	6.7%	6.1%	-0.47	Do not reject
3m-6m	12.8%	12.3%	-0.26	Do not reject
6m-9m	11.9%	10.4%	-0.52	Do not reject

Source: Frontier Economics analysis of NSW bond data

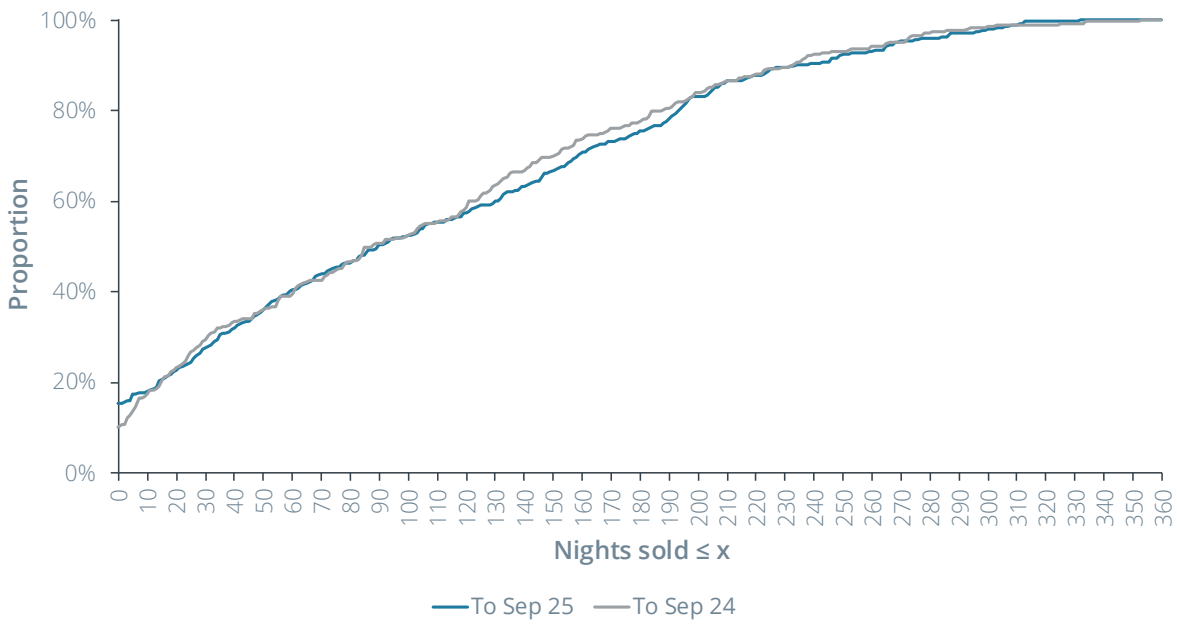
B.3 STRA evaluation methodology

Table 6: Classification of property type to hosted vs non-hosted

Hosted types		Non-hosted types	
Aparthotel	Hostel	Apartment	Place
Barn	Hotel	Bungalow	Studio
Bed & Breakfast	Hut	Cabin	Tiny house
Bus	Ranch	Chalet	Townhouse
Camper/RV	Resort	Condominium (condo)	Vacation home
Campsite	Serviced apartment	Cottage	Villa
Casa particular (Cuba)	Shipping container	Country house/chateau	
Corporate apartment	Tent	Earth house	
Dome house	Tipi	Estate	
Farm stay	Tower	House	
Farmhouse	Train	Island	
Guest house	Treehouse	Lodge	
Guest suite	Yurt	Loft	
Holiday park		Other	

Source: Frontier Economics analysis of AirDNA data

Figure 19: Distribution of nights provided – 12 months to Sept 2025 vs 12 months to Sept 2024 – Ballina



Source: Frontier Economics analysis of AirDNA data

B.4 Data cleaning

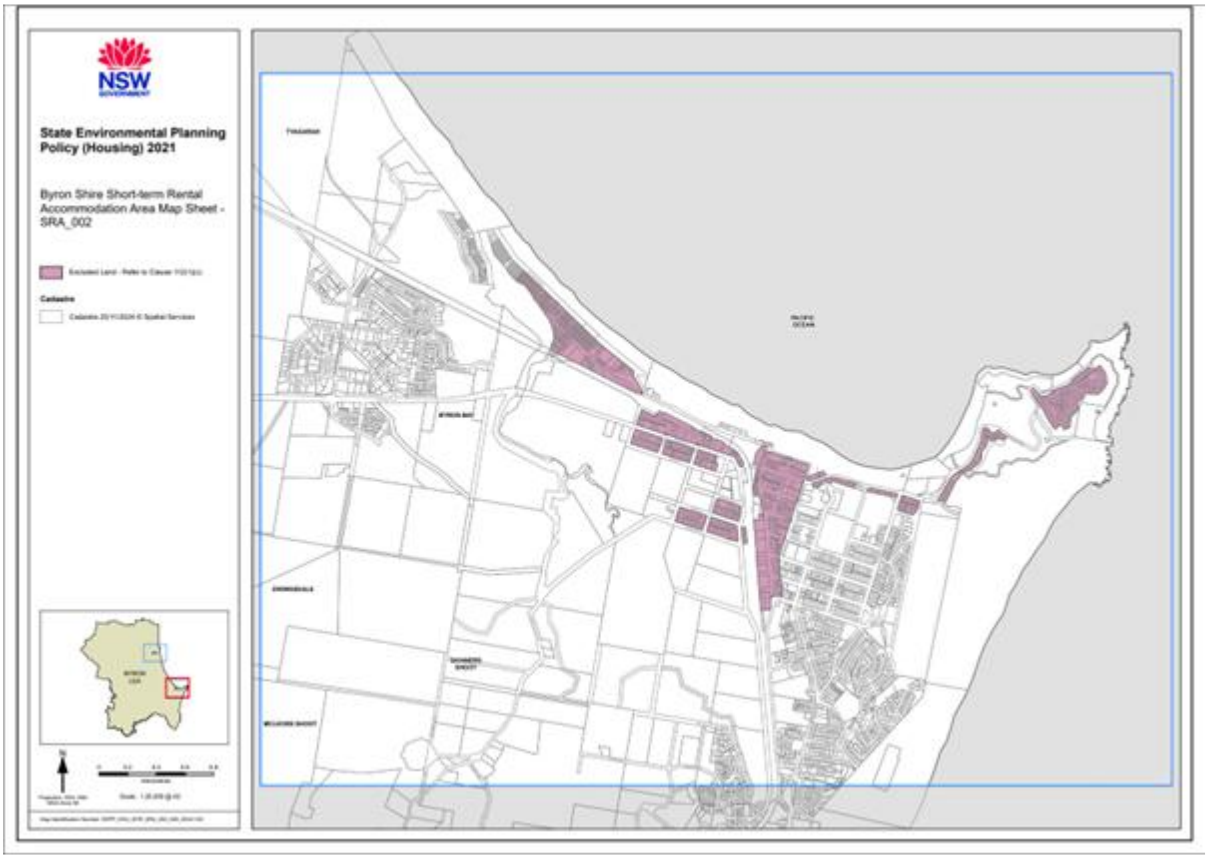
Approach to cleaning/allocating to exempt/areas etc

For the regions we examined in this analysis, there were three STRA cap statuses, each of which was assigned a binary variable. Properties were either exempt entirely from any caps, they were subject to a 180-day cap, or they were subject to a 60-day cap.

In some regions we examined, all STRA properties were subject to a single cap, and we were able to assign all STRA properties from this region to a specific cap. This was the case for Ballina, where all STRA properties are subject to a 180-day STRA cap. This was performed using R by simply setting the "180-day cap" variable as equal to 1 for all properties in the Ballina dataset, and setting the other STRA cap status variables equal to 0.

For the remaining two regions, STRA restrictions were not universally applied. Some properties were granted exemptions determined by the location of the property itself. In Byron Bay, large areas of the town are marked as exempt in maps provided by the NSW government. These areas are not subject to any cap, whereas the remainder of the town are subject to the 60-day cap. These exempt areas are marked on the NSW-provided maps in pink, as seen in Figure 20.

Figure 20: Exempt areas in Byron Bay



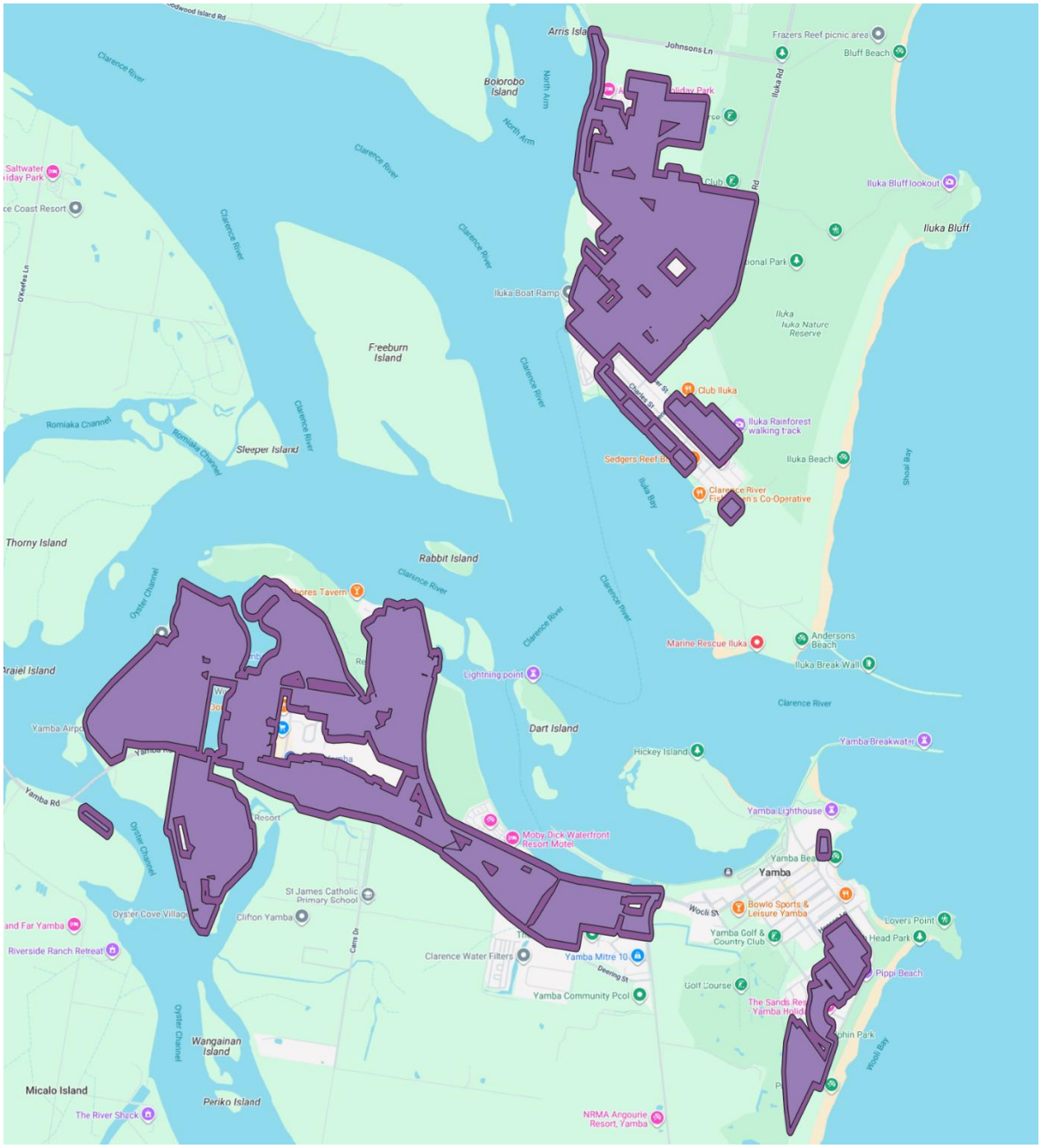
Source: https://www.byron.nsw.gov.au/Development-Business/Land-Use-Zoning/Short-Term-Rental-Accommodation

Similar exemptions were also present in Clarence Valley. To correctly assign the correct STRA restrictions to each STRA property in these regions, we imported the property-level dataset into QGIS and used the coordinates present in the dataset to overlay each property over a map of the area sourced from Google Maps. To identify exempt properties, we used the polygon tool to recreate the boundaries of the exempt areas over the top of the map layer. Any properties that fell within the boundaries was determined to be exempt from the cap that applied to that region.

While the AirDNA data provided longitude and latitude coordinates for each STRA property, these coordinates are often not precise. Airbnb offers hosts the choice of whether to display their property's exact location on their listings. If they opt to not share the exact location, Airbnb randomly assigns coordinates to the property. These coordinates are constrained to be within a 250-metre radius of the true location, and it is these coordinates that AirDNA provide in their datasets. Consequently, some properties that within the exempt area are likely to have been placed outside the boundaries by this random assignment, and some properties that are not in the exempt area have likely been placed inside the boundaries in the same way. This does not invalidate the analysis (by probability alone, we would expect that properties within the boundaries of an exempt region are more likely to be placed within that region than outside), but we would expect that it might dampen (but not erase) any observable effect of the STRA caps. To mitigate this, we extend out the boundaries of each exempt area by an additional 50 metres to decrease the proportion of exempt STRA listings that are misidentified as non-exempt. In some instances where properties have been placed in areas where there is no possibility that the location is precise and the only possible true location is within an exempt area (such as

properties placed on the beach of Byron Bay, beyond the exempt areas along the coast), the exempt area has been extended out to include these properties.

Figure 21: Baseline exempt areas in Illuka and Yamba, with 50m buffer



Source: Frontier Economics – Light purple is the baseline exempt area, whereas the darker purple represents the 50m extension or "buffer"

For the Byron Shire dataset, properties that fell within the exempted area were not subject to any cap, and properties that fell outside the exempted area were subject to a 60-day cap. Consequently, we set the value of the "No STRA cap" variable equal to 1 for the former, and the value of the "60-day cap" variable equal to 1 for the latter. All other STRA cap status variables were set equal to 0.

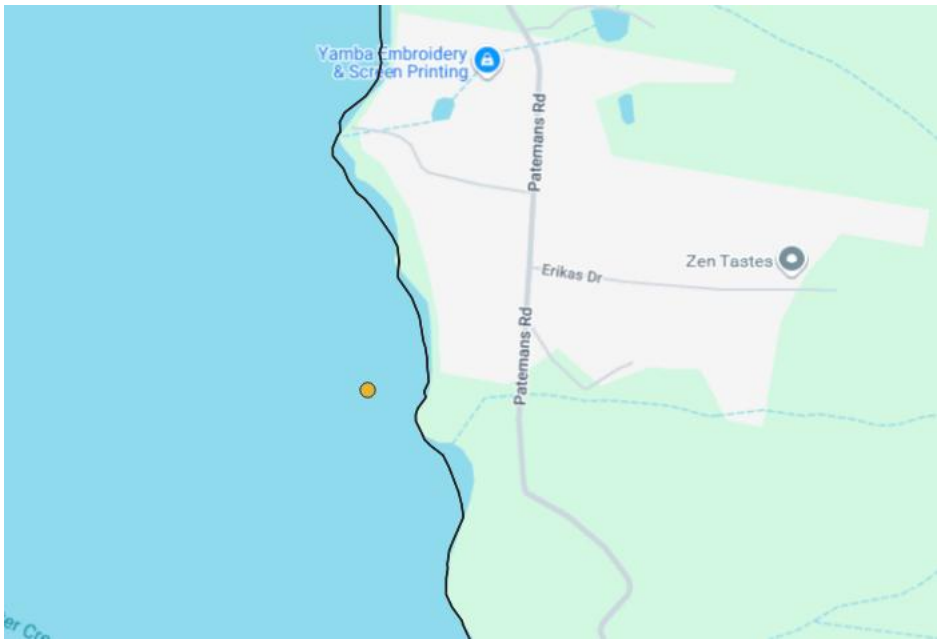
Similarly, for the Clarence Valley dataset, properties that fell within the exempted area were not subject to any cap, and properties that fell outside the exempted area were subject to a 180-day

cap. Consequently, we set the value of the "No STRA cap" variable equal to 1 for the former, and the value of the "180-day cap" variable equal to 1 for the latter. All other STRA cap status variables were set equal to 0. As Clarence Valley is a very large area with some towns further inland that are not comparable to Byron Bay, we also further filtered the dataset by only selecting properties in coastal regions of Clarence Valley. This was also accomplished using QGIS, by overlaying a polygon over the coastal regions of Clarence Valley and filtering out any properties that fell outside of this area.

In addition to location-based exemptions, there were also individual, property-level exemptions that still applied for specific types of STRA listing. For example, hosted STRA listings are exempt from any cap regardless of where they are located. These exemptions are not directly visible in the available data, and can only be inferred from context. To control for this, we filtered out any listing type that we judged as likely to be hosted, such as private room listings, hotel room listings or listings for tents and caravans.

We also attached postcode identifiers to each property listing to aid in our analysis. We did this by importing postcode shapefiles into QGIS and assigning postcodes to listings based on their coordinates. Some listings had their assigned postcodes adjusted when it was apparent that Airbnb's semi-random coordinates had placed the property in a neighbouring postcode, such as the case where there is a postcode border on the bank of a large body of water and the random assignment has placed the property in the water. The assignment of postcodes allows us to more easily target specific subsections of the datasets, such as only considering Byron Bay from the Byron Shire dataset.

Figure 22: Example of listing placed on the wrong side of a postcode border



Source: Frontier Economics

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