

# CGC 2024 Update New Issues Paper: South Australian Treasury Submission

South Australia welcomes the opportunity to comment on the 2024 Update New Issues paper with discussion on each issue outlined below.

The key South Australian position is that all changes to the transport assessment and the use of updated 2021 Census data should be deferred and considered in more detail as part of the 2025 Review process.

## Updated ABS 2021 Census data

South Australia supports the Commission's position to incorporate updated ABS 2021 Census data in the following areas:

### First Nations population

- Incorporating the ABS sub-state First Nations population estimates for 2021 into the 2024 Update.
- Adjusting the First Nations population projections (by state and age) based on the ratio between actual and projected First Nations population for 2021. South Australia notes this is consistent with the approach used in the 2018 Update, which relied on similar adjustments prior to the availability of projections based on the 2016 Census.

### Remoteness and socio-economic status

- Revision of the remoteness classifications to account for changes in the 2021 Census.
- Updating the measures of IRSEO, NISEIFA and SEIFA, incorporating the latest data from the 2021 Census.
- Shifting the non-state sector adjustment calculations in the Health assessment from SEIFA to IRSEO/NISEIFA based data from the 2024 Update onwards. South Australia agrees with the Commission's view that it aligns with other assessments that use IRSEO/NISEIFA.

### Discrete First Nations communities

- Updating the population of discrete First Nations Communities based on 2021 Census data.

### Other geographic classifications

- Utilising 2021 Census geographies to update ABS data on significant urban areas and urban centres in the Services to Communities assessments.

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When available, we would welcome the opportunity to review the indicative GST distributional impacts from all of the 2021 Census related adjustments.

South Australia notes the Commission's proposal not to re-estimate the synthetic rural road network in the 2024 Update and to consider this more fully as part of the 2025 Review.

Specific comments on the use of new census data in the Transport assessment are outlined below in the data issues for consideration section.

### Data issues for consideration

#### Justice – use of justice services of the First Nations population

The composition of the First Nations population in the 2021 Census is not comparable with the 2016 Census population projections. This reflects that over half the reported growth in First Nations population since the 2016 Census was due to non-demographic factors. On this basis, South Australia supports applying 2016 Census based use weights to 2016 Census based population estimates for First Nations people in the 2024 Update justice assessment.

Applying 2021 Census estimates of First Nation populations should be delayed until the use weights for the assessment are recalculated as part of the 2025 Review.

#### Transport – ABS 2021 Census – urban area geography data available

South Australia believes that all changes to the transport assessment and the use of updated 2021 Census data should be deferred and considered in more detail in the 2025 Review process. Deferral of all changes to the transport assessment will allow for a full reconsideration of the assessment and what data can be reliability applied to the modelled regression coefficients.

Public transport was significantly impacted by COVID which has resulted in ongoing shifts in working and commuter patterns that continue to impact the use of public transport. Data to support the transport assessment have been compromised by COVID, including key variables from the 2021 Census. There are significant concerns with proposed changes to the ABS SA1 areas that have been developed on 2021 Census data and whether these changes mean that their use in the Commission's calculation of population weighted density (PWD) is appropriate. In particular, whether PWD calculated on the 2021 Census SA1s are appropriate to apply to regression coefficients derived from 2016 Census data.

Updated topography and passenger number data should also not be applied in the 2024 Update to avoid piecemeal changes and potentially inconsistent outcomes in light of the 2025 Review process. Selective updating of data may bias the assessment further away from a true equalisation position.

#### *Significant impact of COVID on the transport assessment*

Previous submissions to the Commission on the Transport assessment, including the South Australian 2023 Update and Tranche 1 submission for the 2025 Review outlined the impact of COVID on the transport assessment, data availability issues, and whether the current assessment methodology is a fit for purpose measure of current or future

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urban transport needs. These points are not repeated here but provide relevant background to views raised as part of this submission.

*Urban Area Geography*

*Population weighted density (PWD)*

Under the 2020 Review methodology, PWD is calculated by summing the population density multiplied by the proportion of each individual SA1 in a Significant Urban Area (SUA).

As noted in South Australia’s response to the Tranche 1 papers in the 2025 review, there are inconsistencies in the treatment of certain SA1s that impact the calculation of PWD, including how geographic features; zoning features; and new developments are treated across SA1s. This inconsistent treatment can result in differences in PWD that reduce its effectiveness as a comparable measure across SUAs.

As part of the 2021 Census, the ABS recast certain SA1s. The recasting of SA1s, including the treatment of geographical features and zoning features can artificially impact the calculation of PWD.

Tables 1 and 2 from the new issues paper (reproduced below) identify the population and PWD changes from the 2021 Census relevant for the Transport assessment<sup>1</sup>.

**Table 1 Changes in 2021–22 capital city populations due to ABS revisions**

	Syd	Mel	Bri	Per	Ade	Hob	Can	Dar	Total
	'000	'000	'000	'000	'000	'000	'000	'000	'000
2016 Geography	4,777	4,723	2,429	2,141	1,353	214	440	131	16,207
2021 Geography	4,791	4,822	2,428	2,140	1,359	215	452	130	16,338
Change (%)	0.29%	2.10%	-0.05%	-0.02%	0.47%	0.55%	2.83%	-0.06%	0.81%

Source: Commission calculation based on ABS Estimated Resident Population data

**Table 2 Changes in 2021–22 capital city population weighted density due to ABS revisions**

	Syd	Mel	Bri	Per	Ade	Hob	Can	Dar	Ave
	People per km <sup>2</sup>	People per km <sup>2</sup>	People per km <sup>2</sup>	People per km <sup>2</sup>	People per km <sup>2</sup>	People per km <sup>2</sup>	People per km <sup>2</sup>	People per km <sup>2</sup>	People per km <sup>2</sup>
2016 Geography	6,393	4,209	2,999	2,566	2,507	1,911	3,006	2,564	3,269
2021 Geography	7,196	5,125	3,397	2,649	2,518	1,990	3,315	2,690	3,610
Change (%)	12.56%	21.76%	13.27%	3.24%	0.43%	4.18%	10.31%	4.90%	10.42%

Source: Commission calculation based on ABS Estimated Resident Population data

The data shows large increases in density for some capital cities despite little, or even negative, growth in overall capital city population. Given anecdotal evidence around a shift away from urban living in large cities due to COVID, do these results make sense? Could other factors such as shifts in the boundary and treatment of non-populated areas within SA1s be contributing to the results? The current approach to calculating PWD may

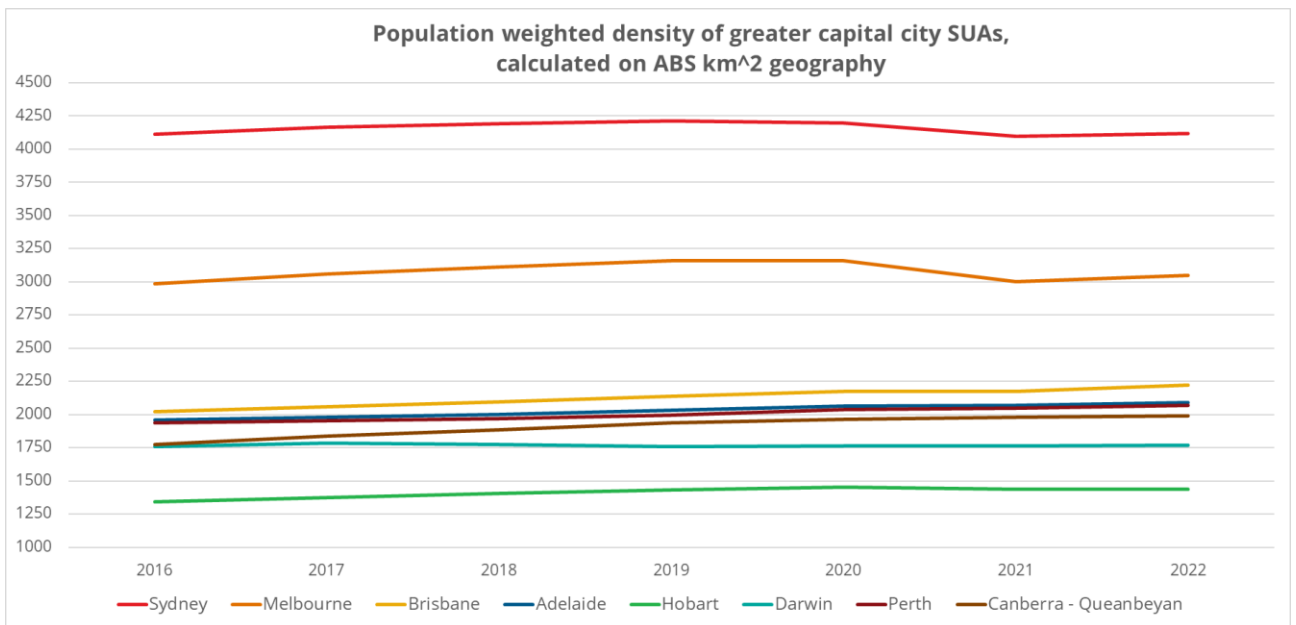
<sup>1</sup> The PWD calculation is based on preliminary population data.

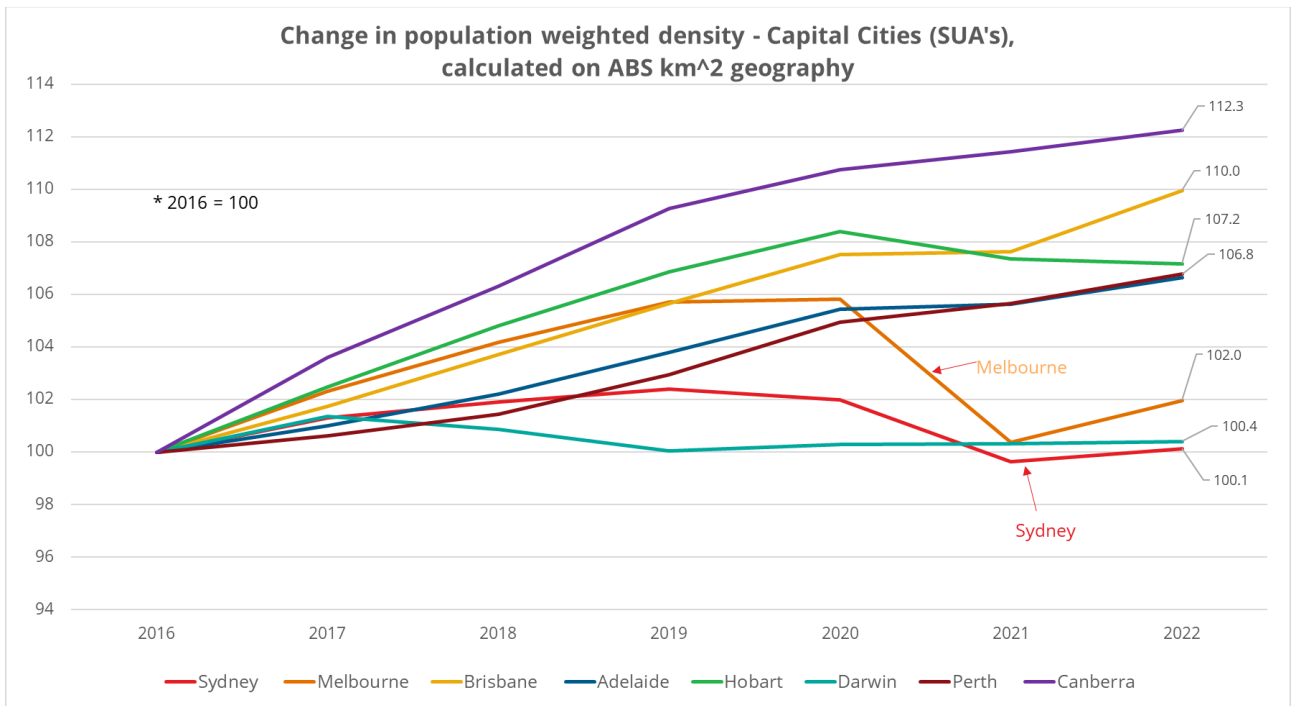
not be producing reliable and intuitive outcomes and this requires further analysis in a review process.

The use of SA1s in the calculation of PWD relies on the drawing of boundaries by the ABS. There are around 60,000 SA1s and it is not expected that the treatment of SA1s across SUAs would be consistent. More importantly, density calculations are not the primary purpose of an SA1. This leads to concerns regarding the reliability of the measure – particularly where significant changes are occurring.

The ABS separately publishes population data on a square kilometre basis. The population grid offers a consistently sized spatial unit to give a refined model of population distribution. Using this data, it is possible to create an alternative measure of PWD that is not impacted by the drawing of more arbitrary SA1 statistical boundaries (e.g. treatment of geographical features).

The charts and table below show the change in population weighted density by capital city significant urban areas (SUA) across Australia based on the per sq km geography. The spreadsheet accompanying this submission provides an overview of the methodology used to derive the presented information and the raw data for the Commissions information.





**Change in capital cities (SUA) population weighted density, calculated on ABS km<sup>2</sup> geography – Index 2016 = 100**

	2016	2017	2018	2019	2020	2021	2022
<b>Sydney</b>	100.00	101.28	101.85	102.33	101.92	99.74	100.20
<b>Melbourne</b>	100.00	102.24	104.03	105.51	105.59	100.02	101.48
<b>Brisbane</b>	100.00	101.79	103.85	105.83	107.77	107.75	110.14
<b>Perth</b>	100.00	100.69	101.56	103.10	105.15	105.66	106.69
<b>Adelaide</b>	100.00	101.07	102.33	103.97	105.66	105.69	106.68
<b>Hobart</b>	100.00	102.87	105.37	107.84	109.68	107.57	107.37
<b>Canberra</b>	100.00	104.01	107.29	110.50	112.01	111.65	112.15
<b>Darwin</b>	100.00	101.57	101.38	100.96	101.11	100.95	100.80

The change in PWD for the largest and densest capital cities compared to the Commission’s PWD calculation is stark.

While the density of Melbourne and Sydney initially increased from 2016 to 2019, following the onset of COVID the density of these cities decreased on a per sq km basis. The end result was virtually no change in PWD for these cities over the period from 2016 to 2021. This pattern is consistent with anecdotal evidence that there was a shift away from living in densely populated urban areas following the onset of COVID.

The large difference in the size and direction of PWD between the two measures calls into doubt whether the changes in PWD under the Commission’s methodology are accurately capturing underlying changes in density, rather than just boundary issues for SA1s between Censuses or other factors not relevant for measuring the demand for transport.

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If changes in density are due to boundary issues or other factors not relevant to transport demand, these shifts are not accounted for in the calculation of the regression coefficients used in the transport assessment based on the 2016 Census geographies. As such, it would be inappropriate to apply PWD calculated on the 2021 Census urban area geographies to the regression coefficients calculated on 2016 Census geographies.

This is similar to the view taken by the Commission in the application of updated First Nations people population estimates in the justice assessment. The use weights in the justice assessment are based on state data for offenders and defenders from 2015 to 2017 and 2016 Census estimated residential population. The Commissions' preliminary view, which South Australia supports, is that the 2021 Census First Nation populations should not be applied to the use weights calculated on 2016 population data. This reflects that the 2021 data includes non-demographic changes that are not accounted for in the calculation of use weights. This is the same situation in the transport assessment. The transport regression coefficients are calculated on data from 2023-14 to 2015-16 and the ABS 2016 Census. The changes in PWD using 2021 Census geography may be driven by non-demographic factors making it inappropriate to apply to coefficients calculated on 2016 data.

### *Broader questions – 2025 Review*

The density of capital cities on a per sq km basis also raises questions about the appropriateness of using PWD based on SA1s in the transport assessment.

As part of the 2020 Review, the Commission accepted that there was a strong relationship between density and public transport usage. Data was presented showing the relationship between public transport share of total passenger kilometres and population density in 2018-19. This same relationship exists in the density data on a per sq km grid geometry basis, with similar  $R^2$  values<sup>2</sup>. However, under the per sq km grid geometry, the difference in density between Sydney and Melbourne and the other capital cities is much smaller (e.g. under the CGC method Sydney is 2.9 times denser than Adelaide, but only 2 times denser on the per sq km geometry density measure). Although South Australia is not convinced that density is a material driver of public transport costs<sup>3</sup>, the current assessment places significant importance on density. As such, it is important that density is accurately and appropriately measured. Based on the discussion above, South Australia considers that the overall regression could be overstated based on the chosen measure of PWD. This is an issue that should be considered as part of the 2025 Review.

### *Network complexity*

ABS Census distance to work data is used as a proxy for network complexity in the transport assessment. The Commission is proposing to use 2021 Census distance to work data to update network complexity.

The 2024 Update New Issues paper notes that while COVID impacted public transport use, the complexity of networks was largely unaffected. The 2025 Review Transport assessment consultation paper noted that the Commission considered 2021 Census distance to work data were not likely to be distorted by COVID-19 lockdowns and are a reliable measure of network complexity.

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<sup>2</sup> See attached spreadsheet for calculations.

<sup>3</sup> After the ability to recover costs is considered, e.g. increasing economies of scale from density.

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As noted in the South Australian response to the 2025 Review Transport assessment consultation paper, on the basis that the 2021 Census instructed residents to list their ordinary place of work even if they were staying at home due to COVID-19, the distance to work data is less likely to be impacted by COVID. However, there is no way to accurately test this. The fact that the distance to work was relatively similar in the 2021 Census to the 2016 Census is not a reliable indicator in itself.

In addition, while the complexity of existing networks may not have been significantly affected by COVID, it does not mean that the updated 2021 Census data on network complexity is a more appropriate measure.

Given the overall issues with the Transport assessment, South Australia considers that any changes should be deferred until the 2025 Review.

### *Topography*

The Commission are proposing to use updated Geoscience Australia average slope data to update topography.

Consistent with the South Australian position to defer any updates to the Transport assessment until the 2025 Review, topography should also not be updated.

It is also noted that as part of the 2020 Review the Commission indicated that the mean slope data would not be updated during the Review period – extract from 2020 Review below.

### Updating the assessment

147 As required by the terms of reference, the Commission will incorporate the latest available data in the assessment during the annual updates. This will allow the assessment to reflect changes in State circumstances.

- The following data will be updated annually:
  - population of urban centres
  - population density
  - modelled passenger numbers.
- The following data will be updated when the 2021 Census information becomes available:
  - actual public transport passenger numbers
  - distance to work.
- Some of the assessment data will remain stable over time and will not be updated during the Review period:
  - mean slope data.

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*Passenger numbers*

In the 2023 Update, the Commission determined that passenger numbers from the 2021 Census were impacted by COVID-19 restrictions and not appropriate for use in the assessment. 2016 Census passenger data will continue to be used to model passenger numbers.

This is consistent with the South Australian view that all changes to the transport assessment should be delayed until the 2025 Review to undertake a complete review of the assessment. Alternative approaches for passenger numbers could be considered as part of the review such as indexing 2016 Census data by external measures.

*South Australian position - transport*

The current methodology for the transport assessment was introduced from the 2020 Review. COVID has significantly impacted the transport assessment and the appropriateness of updated data to be applied to the assessment. Given this is a new assessment, there is no data available to consider the magnitude of recent variations compared to historical trends.

While the Terms of Reference require the CGC to use the most up to date data in its assessments, this is prefaced by a requirement that it must be weighed against the quality and fitness for purpose of the available data. The latest data is not considered fit for purpose.

Further, the preferred approach of the Commission would see only select groups of data used in the assessment being updated. It is preferable that all data changes are considered together – selective updating may bias the assessment away from a true equalisation position.

Given the significant issues with the transport assessment, any changes, including the use of updated census data, should be delayed until the 2025 Review. This will allow for a full reconsideration of the assessment, including what data can be reliability applied to the modelled regression coefficients.

Payroll tax – remuneration of Australian Defence Force personnel and Australian embassy employees

South Australia notes that the public sector wages and salaries data provided by the ABS and used to calculate the 'taxable proportion' adjustment will now include the wages and salaries of Australian Defence Force personnel and Australian embassy employees.

South Australia therefore supports the discontinuation of a separate adjustment to remove the remuneration of Australian Defence Force personnel and Australian embassy employees from the measure of the payroll tax base as it is longer necessary. This reflects that the remuneration of these employees will be removed as part of the taxable proportion adjustment.



## **Other issues for consideration**

### National capital – negative assessed GST needs

South Australia believes that the National capital assessment should be discontinued if the assessment is immaterial.

In the 2023 Update, the assessment redistributed \$1 per capita to the ACT, which was well below the materiality threshold. South Australia notes that the assessment may now result in negative assessed GST needs for the ACT in the 2024 Update.

The existing materiality threshold for a driver is \$35 per capita and it is proposed to increase to \$40 per capita in the 2025 Review. Both materiality threshold levels are well above the estimated GST impact of the national capital assessment in the 2024 Update.

South Australia is supportive of the Commission's preliminary view to suspend the national capital assessment for the 2024 Update and believes the assessment should be ceased in the 2025 Review.

### Mining revenue – a separate assessment of nickel is material

South Australia supports introducing a separate assessment of nickel royalties if it is material. This is consistent with current mineral-by-mineral approach that reflects the underlying mining revenue capacity of states.

## **New Commonwealth payments**

South Australia supports the Commission's proposed treatment of Commonwealth payments that commenced in 2022-23 with the following exceptions.

### South Australian Genomics Lab

In the Commonwealth 2022-23 Final Budget Outcome, \$7 million was paid to South Australia for the South Australian Genomic Lab project. The new laboratory will be established within SA Pathology.

While the Commonwealth payments for the South Australian Genomics Lab are directed to the state entity SA Pathology, this strategic investment will facilitate enhanced cancer treatment accessibility for all Australians, especially for Australians affected by rare, less common and early onset cancers, where treatment options are often limited.

In light of its national role, South Australia believes that this funding should be treated as a non-impacting payment for GST distribution purposes.

### Digital technologies academy

As outlined in the Commonwealth 2022-23 Final Budget Outcome, \$10 million was paid to the Digital technologies academy project in South Australia under the Adelaide City Deal. This funding is intended for the construction of an educational facility specialising in digital technologies.

It is noted that the operational model for this initiative is yet to be determined, with collaborative input expected from both the University sector and the Skills training sector.

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This investment in post-secondary education will not be operated solely by the state, with the University sector taking a significant role. South Australia believes that this funding should be treated as non-impacting for GST distribution purposes.

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