

Submission to the

# Greater Adelaide Regional Plan

From Sustainable Population Australia – SA&NT branch

Saturday 19 October 2024

## 1. INTRODUCTION

**Sustainable Population Australia (SPA)** is an independent not-for-profit organisation seeking to protect the environment and our quality of life by ending population growth in Australia and globally, while rejecting racism and involuntary population control. SPA is an environmental advocacy organisation, not a political party.<sup>1</sup>

The Malinauskas Government recently released the draft Greater Adelaide Regional Plan ('the Plan') for public consultation. The draft Plan states that it has a long-term vision for 'sustainable growth.' It also states that Adelaide is internationally recognised as one of the most liveable cities in the world.

The Plan envisages that, by 2050, we are to expect an extra 670,000 Metro Adelaide residents, requiring 315,000 new homes. In this submission, we examine the environmental impact of this growth. We conclude that the draft plan has inadequately considered environmental impacts and recommend they are made explicit, along with costed measures to mitigate impacts.

## 2. ESTIMATED GREENHOUSE GAS EMISSIONS (GHG)

Here we provide a rough estimate of the GHGs generated until 2050. We believe that this analysis highlights major environmental impacts of the Plan.

The following items are included in our analysis:

- a) An estimate of the carbon footprint (embodied energy) of building 315,000 new homes.
- b) An estimated on-going, locally generated, household CO<sub>2</sub> emissions from an additional population of 670,000.
- c) All geographical sources (local, interstate overseas) of GHG emissions are included for building the 315,000 homes.
- d) GHG emissions generated from the manufacture or creation of other goods & services consumed at any time, from interstate or overseas, are not included.
- e) We assume that from 2024 until 2050, both Adelaide's (i) population and (ii) new housing stock, increase linearly.

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<sup>1</sup> Sustainable Population Australia website: <https://population.org.au/>

## 2.1 EMBODIED ENERGY

315,000 homes are to be built. We assume that new houses are built at an average area of 200 m<sup>2</sup>. Likewise, apartments and townhouses will have an average area of 160 m<sup>2</sup>.<sup>2</sup>

Studies have shown that it is reasonable to assume at least 1 tonne of carbon dioxide will be released for every square metre during construction of a new home.<sup>3</sup> Hence, 1 tonne of carbon dioxide (CO<sub>2</sub>) per m<sup>2</sup> implies 200 tonnes per separate house and 160 tonnes 'embodied carbon' per apartment or townhouse.

We can assume that over the period 2024-2050:

- 12% of new households are in apartments,
- 20% in new attached houses / townhouses and
- 68% in new separate houses

These values assume a higher share of smaller apartments and townhouses than in the current SA housing stock (AHURI, 2019, pp16-17).<sup>4</sup>

Buildings and infrastructure are directly responsible for almost one third of Australia's total carbon emissions, and indirectly responsible for over half of all emissions.<sup>5</sup>

By 2050, the total 'embodied carbon' or CO<sub>2</sub> emissions by building 315,000 houses, apartments, and townhouses, can thus be estimated:

**$(68\% \times 315,000 \text{ homes} \times 200\text{m}^2) + (20\% \times 315,000 \text{ homes} \times 160\text{m}^2) + (12\% \times 315,000 \text{ homes} \times 160\text{m}^2)$**   
which equals **58.97 million tonnes of CO<sub>2</sub> emissions** generated in the construction phase.

## 2.2 ON-GOING HOUSEHOLD EMISSIONS

Growth of Adelaide's population by 670,000 people will cause environmental impacts from various greenhouse gas emission sources, which include:

- Transport
- Industrial processes
- Energy Industries
- Manufacturing industries and construction
- Fugitive emissions from fuels
- Waste
- (Agricultural emissions will be principally from sources outside Metro Adelaide)

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<sup>2</sup> Australian Bureau of Statistics: <https://www.abs.gov.au/articles/average-floor-area-new-residential-dwellings>

<sup>3</sup> Sustainable Builders Alliance: <https://www.thesba.com.au/roadmap/carbonfootprint>

<sup>4</sup> Australian Housing and Urban Research Institute (AHURI) 2019, Audit of South Australia's current housing assets and mapping of future demand.

[https://www.housing.sa.gov.au/\\_data/assets/pdf\\_file/0003/97482/AHURI-Report.pdf](https://www.housing.sa.gov.au/_data/assets/pdf_file/0003/97482/AHURI-Report.pdf)

<sup>5</sup> Infrastructure Australia, 2024, Embodied Carbon Projections for Australian Infrastructure and Buildings. <https://www.infrastructureaustralia.gov.au/reports/embodied-carbon-projections-australian-infrastructure-and-buildings>

South Australia's greenhouse gas emissions reporting (2022) shows that per capita emissions were approximately 9 tonnes per year. Notably, this value already shows a large decline in historical emissions due to nation-leading grid renewable energy, and from recent large improvements in 'Land Use, Land Change & Forestry (LULCF). Other sources of emissions are expected to be harder to reduce in future.<sup>6,7</sup>

By 2050, the total greenhouse gas emissions by a population growth of 670,000 to 2.2 million people can be estimated:

**(670,000 people / 2) x 26 years x (9 tonnes per person)  
which equals 78.36 million tonnes of CO<sub>2</sub> emissions generated by households**

From 2024 to 2050, the total estimated carbon dioxide emissions based on the sum of:

(2.1) Embodied Energy, and

(2.2) On-Going Household Emissions

is estimated at **137.33 million tonnes**. Hence, based on current emissions intensities, implementing the Plan would add at least 137 million tonnes of new greenhouse gas emissions in South Australia by 2050.

To put this large number into perspective, we can compare these emissions to that of Australia's car fleet. On average, Australians drive around 12,100 kilometres by car every year,<sup>8</sup> each emitting around 1.7 tonnes of CO<sub>2</sub>. Therefore, 137 million tonnes of GHG generated by implementation of the Plan is like adding over 3 million petrol / diesel cars to the roads of South Australia for all 26 years of the period 2024 to 2050.<sup>9,10</sup> Currently, South Australia's has about 2 million registered vehicles of which 400,000 are not motorised.<sup>11</sup>

This short SPA study has not considered additional environmental impacts of the Plan such as loss of arable land, water shortages, natural habitat degradation, loss of urban tree cover, creation of other greenhouse gases, the impact of traffic on wildlife and air quality, loss of amenity etc.

### 3. REPORTS ON POPULATION AND THE ENVIRONMENT

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<sup>6</sup> SA Department for Environment and Water: <https://www.environment.sa.gov.au/topics/climate-change/greenhouse-gas-emissions> (see Figure 4)

<sup>7</sup> Australian Department of Climate Change, Energy, the Environment and Water, State and Territory greenhouse gas inventories: 2022 emissions. <https://www.dcceew.gov.au/climate-change/publications/national-greenhouse-accounts-2022/state-and-territory-greenhouse-gas-inventories-2022-emissions>

<sup>8</sup> RAA, 2024: <https://daily.raa.com.au/media-resources/many-of-australias-most-popular-vehicles-use-more-fuel-than-advertised/>

<sup>9</sup> Federal Chamber of Automotive Industries, 2023: <https://www.fcai.com.au/fcai-releases-2022-brand-co2-emissions-data/>

<sup>10</sup> National Transport Commission, 2021, Carbon Dioxide Emissions Intensity for New Australian Light Vehicles 2021:

<https://www.ntc.gov.au/sites/default/files/assets/files/Carbon%20Dioxide%20Emissions%20Intensity%20for%20New%20Australian%20Light%20Vehicles%202021.pdf>

<sup>11</sup> SA Department for Infrastructure and Transport, 2024, Registration and Licensing Statistics. [https://www.dit.sa.gov.au/registration\\_and\\_licensing](https://www.dit.sa.gov.au/registration_and_licensing)

**Australia's 2021 State of the Environment Report** states, "Population growth (despite reductions due to COVID-19), urban expansion, and associated land clearing and pollution continue to impact our environment, particularly in coastal areas where most Australians live...". Population was noted elsewhere in the full report as having a "very high impact" on biodiversity. Impacts are associated with urban expansion, tourism, industrial expansion, pollution, including development of infrastructure.<sup>12</sup>

**The 2023 South Australian State of the Environment Report** also clearly states "Our population is growing and there is no doubt that human activities are the greatest driver of environmental change" (p 16).<sup>13</sup>

**The Conservation Council of South Australia** carries out many campaigns and projects for environmental protection and repair. The effects of urban sprawl, human population growth and housing developments are considered by our organisation to be detrimental to their important work.<sup>14</sup>

**Sustainable Population Australia** released a Discussion Paper on **Population and Climate Change**. It states, "All governments have the option to use population policy to help reduce greenhouse gas emissions, either by minimising further population growth or supporting its gradual decline. This lever is more accessible to Australia than to most other countries."<sup>15</sup>

**Intergovernmental Panel on Climate Change (IPCC)** is the United Nations body for assessing the science related to climate change. It recognises that population growth has a multiplier effect with consumption in causing global warming.<sup>16</sup> Greater Adelaide should play its part in helping avoid the worst of climate change by not growing its population by 670,000 or 44% from today until 2050.

These scientific reports should be considered by State Planning and State Government, as part of the development of the Greater Adelaide Regional Plan.

#### 4. FINAL REMARKS

In the October Planning Ahead Newsletter, Craig Holden, Chair of the State Planning Commission says, "And we need to grow, so that all South Australians can have access to safe, secure and affordable housing." This is a remarkable assertion, contradicting the vast global evidence that population growth puts upward pressure on housing prices. Yes, South Australians do indeed want access to safe, secure, and affordable housing. However, the vast majority of ordinary South Australian do not need or even want "growth" to achieve that outcome. An exception might be those who expect to profit financially as a consequence of this growth.

Adelaide can have affordable housing if the availability of that housing exceeds or matches the population demand. Population stability will assist affordability by reduce demand. SPA agrees that a 30-year plan for Adelaide is desirable. However, Government, State Planning and Adelaide's residents

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<sup>12</sup> Australian State of the Environment 2021. <https://soe.dcceew.gov.au/sites/default/files/2022-07/soe2021-overview.pdf>

<sup>13</sup> SA State of the Environment 2023, Overview. <https://soe.epa.sa.gov.au/files/documents/SOER-Summary-Report.pdf>

<sup>14</sup> Conservation Council SA: <https://www.conservation.sa.gov.au/>

<sup>15</sup> Sustainable Population Australia, 2021, Population and Climate Change. <https://population.org.au/discussion-papers/climate/>

<sup>16</sup> Intergovernmental Panel on Climate Change: <https://www.ipcc.ch/>

should realise that massive population growth in our city is detrimental to our well-being as well as that of the environment.

SPA believes that government agencies and business and others have a growth obsession that acts against desirable environmental and social objectives.

Adelaide is a wonderful place to live but will not be improved by the addition of 670,000 additional people. Sustainable Population Australia believes that the Greater Adelaide Regional Plan accepts and promotes growth for growth's sake.

**Environmentally, the draft Greater Adelaide Regional Plan is unsustainable.**

## 5. RECOMMENDATIONS

1. The Greater Adelaide Regional Plan should present population growth not as an expectation but as a scenario and compare it with a scenario in which little or no population increase occurs.
2. The Plan should include an Environmental Impact Assessment for both scenarios, including greenhouse gas emissions, land use change, habitat loss, urban tree cover, pollution and implications for energy and water supply.
3. The Plan should include costed measures to mitigate environmental impacts, provide sufficient additional infrastructure and maintain public amenity.
4. The State Planning Commission should work with State and Federal Governments to greatly reduce immigration quotas to levels consistent with a stabilisation of Australia's and South Australia's population.

Sustainable Population Australia SA&NT would appreciate a response from the State Planning Commission on these four recommendations.

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