What are Travel Zone Projections (TZP)?

The Travel Zone Projections (TZP) are modelled small area estimates of land use by Travel Zone for 2016-2056. At a high level, the data covers three dimensions:

- **Time Period**: 5 yearly time periods from 2016 to 2056
- **Geography**: 3,758 travel zones in Travel Zone 2016 (TZ16) geography across NSW
- **Variables**: 60+ variables covering population, households, employment and students.

TZP provide a long-term view of the future aligned with the NSW Government's Common Planning Assumptions and population and economic projections. When modelling the possible land use, it should be understood there is no one single future. Therefore, these projections seek to represent a likely urban and regional future based on current data, trends and an understanding of policy/structural changes that may impact the future.

The projections rely on best available information as at December 2019 (i.e. prior to the Covid-19 pandemic). Caution is recommended as they are forward-looking estimates only and not meant to be absolute forecasts of population and employment for NSW.

Why does TfNSW prepare the projections?

The projections are developed to support a strategic view of NSW and are calibrated as an input into a variety of TfNSW travel models including the Strategic Travel Model (STM).

The TZP projections are not based on specific assumptions about future new transport infrastructure, but do take into account known land-use developments underway or planned, and strategic plans.

What are the key inputs?

The **base** year distribution of population is aligned to the National Census conducted by ABS in 2016 and **future** growth in population is aligned with population projections and housing supply forecasts prepared by Department of Planning, Industry and Environment (DPIE) in 2019.

Future employment is aligned with NSW Treasury economic forecasts and industry forecasts prepared using a Computerised General Equilibrium (CGE) model by Victoria University. The future distribution of employment growth is informed by a custom-built Future Employment Developments Database (FEDD) across NSW. Other data updates have also been incorporated, as shown in Figure 2 (see below sections).

What is new in TZP19?

A major model update and several enhancements were delivered with the new TZP19 model. The scope was expanded to cover the whole of NSW and a new employment methodology has been implemented after being developed collaboratively with other NSW Government Agencies via in the Common Planning Assumptions Group.

How much growth is projected for NSW?

According to the 2019 DPIE population projections and also the TZP19 model, NSW population is projected to grow to over 10 million people by 2036 with approximately 4.5 million dwellings and 4.9 million jobs. The annual average growth rates (AAGR) taper over the projection period to 2056 as shown in the summary table below.

Table 1: High Level Projection Outputs Summary for NSW

Projections	2016	2026	2036	2056	AAGR 2016-26	AAGR 2026-36	AAGR 2036-56
People	7,732,900	9,011,000	10,078,000	11,872,700	1.5%	1.1%	0.8%
Dwellings	3,517,400	4,064,900	4,517,400	5,287,300	1.5%	1.1%	0.8%
Jobs	3,754,900	4,437,800	4,933,100	5,718,100	1.7%	1.1%	0.7%

Household sizes remain relatively constant to 2056 with an average of 2.2 people per household. The demographic profile of people in NSW shifts towards an older population over the forecast period. Jobs growth is comparable to the growth in population.

How are the TZP19 different to the previous projections?

DPIE's 2019 population projections show that NSW will continue to grow. Compared to the 2016 DPIE projections, the fertility rate, life expectancy and interstate migration assumptions are lower, while the net overseas migration assumption is higher, reflecting recent trends observed.

Regional NSW is projected to grow at a slightly slower pace (compared to DPIE's 2016 set of projections), whilst Sydney's growth is stronger, driven by the increase in the net overseas migration rate assumption.

The TZP model adopts these assumptions, so population growth is focused in the Greater Metropolitan Area (GMA) where most overseas migrants settle. Approximately 86% of population growth is projected to occur the GMA (which is inclusive of Sydney, Central Coast, Newcastle and Wollongong). This is particularly seen in the period between 2036 and 2056 when population growth in the rest of NSW is only 0.3% per annum (whereas the GMA continues to grow at 1.1%).

For employment, approximately 82% of additional jobs to 2056 are also in the GMA. The ratio of population to jobs in the GMA is increasing compared to a decrease in the rest of NSW, (i.e. in regional areas jobs are growing at a faster rate than population).

## Comparison with TZP2016 v1.51

TZP19 covers all of NSW, whereas the previous set of projections (TZP2016 v1.51) only covered the GMA, therefore this comparison focuses on the GMA.

The projections for the Sydney GMA are comparable to TZP16 v1.51 in 2056, however growth in TZP19 is much higher in the first twenty years of the forecast and slows down post 2041. Later in the projection period, TZP19 shows a significant shift in population growth to Western Sydney, in line with the Greater Sydney Regional Plan.

A revised employment projection method is used in TZP19, so the new employment projections are not strictly comparable with previous projections.

Figure 1 below shows the difference in population, dwellings and jobs between TZP19 and TZP16 v1.51 projections datasets for the GMA.

Figure 1: Difference between Previous (TZP16) and New Projections (TZP19)
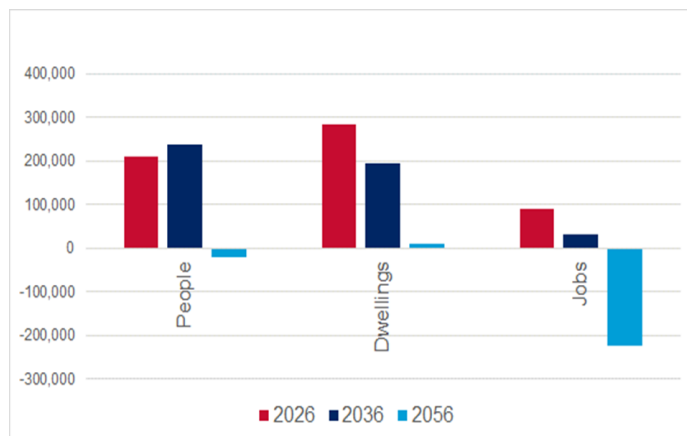
In TZP19, jobs growth is spread across all of the GMA with slightly stronger growth in the Central City District and the Western City District to support the increase in resident population as well as the development of the Aerotropolis in the Western City District.

Overall, it should be noted that there are fewer jobs in the Sydney GMA by 2056 in this new set of projections due to methodology changes whereby, in TZP19, employment by industry control totals were derived from Victoria University (VU) employment by industry forecasts for NSW and constrained to NSW Treasury forecast totals. Compared to TZP16 v1.51, there is a shift in employment shares away from the Central City District and Eastern District towards to Western City District and North District particularly by 2056.

TZP19 Methodology - overview

The detailed TZP19 methodology is documented in the TZP19 Technical Guide available from the TfNSW Corporate website and Open Data Hub Portal. This factsheet provides only a brief overview of the modelling approach.

In brief, DPIE's population and housing projections are disaggregated to Travel Zones using a number of small area input sources on current and future development trends. From this, population is further segmented by age and sex, household type, education type and workforce status.

Then, NSW employment by industry forecasts are calculated externally by Victoria University, and these forecasts are disaggregated to SA3 and then to Travel Zones using a number of small area input sources on current and future employment.

The following model structure diagram highlights the key data inputs used to create TZP2019. It also highlights the key links to the Population Synthesiser (Pop Synth), Strategic Transport Model (STM), Freight Movement Model (FMM), and the Regional Travel Model (RTM).

Figure 2: TZP19 Model Structure
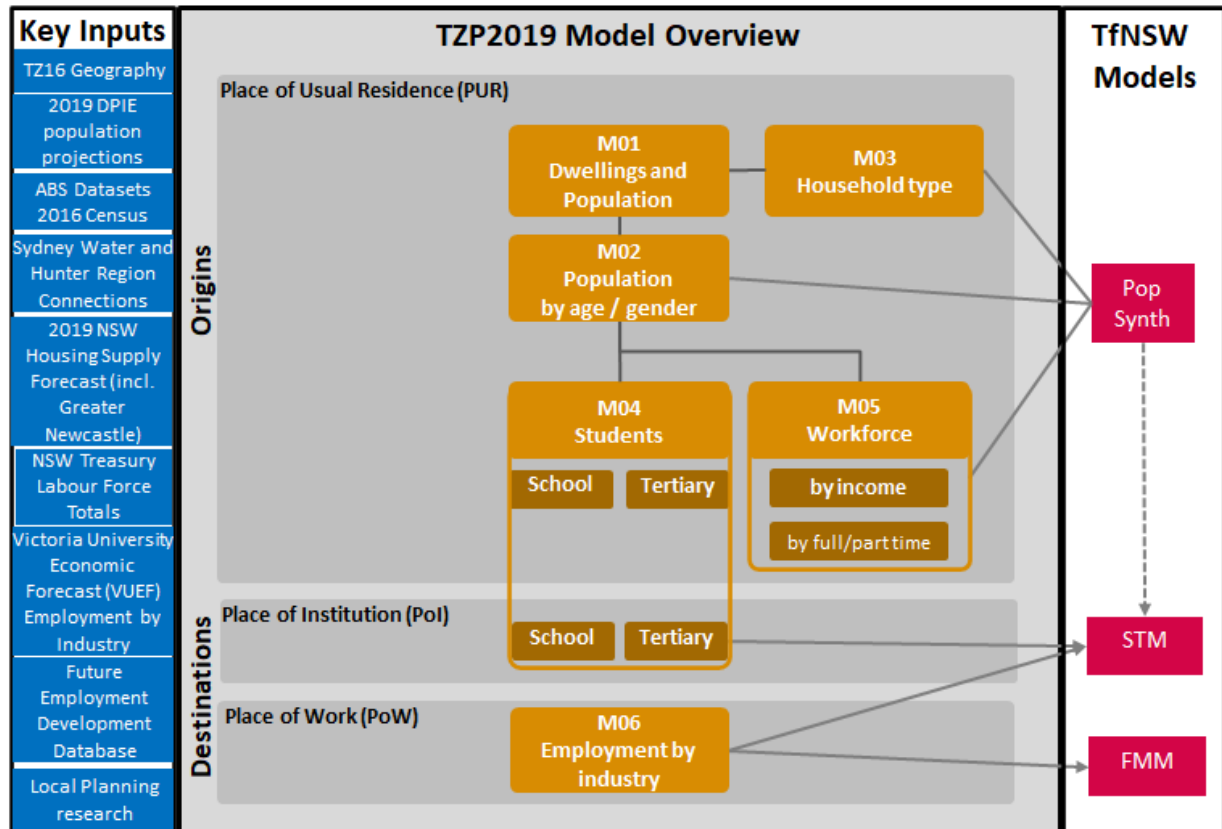
For more information about TZP19 please refer to the TZP19 Technical Guide available from the [TfNSW corporate website](#) and the [TfNSW Open Data Hub](#) or contact the Land Use Forecasting team at TfNSW using this [request form.](#)

The above form can also be used to provide feedback on the dataset, an Issues Register is kept by Land Use Forecasting for TZP19.

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