

30 September 2026
Productivity Commission

Re: Submission on the Housing Supply Regulation interim report

Dear Commissioners,

I'm an Associate at a mid-sized commercial architecture practice in Brisbane and the Gold Coast, and this submission is my own professional view. I built PETAL Explorer, a free, open-source tool that measures transit capacity across Brisbane, the Gold Coast and Perth, and I'm lead author of a peer-reviewed paper on the methodology, accepted for the Australasian Transport Research Forum in November.

I support the direction of the interim report. If we want more homes, land has to be zoned to allow them, they have to be feasible to build, and infrastructure has to serve them. The gap I'd like to help fill is a specific one: Reform Direction 2.2 asks for mid and high-rise apartments where there is "existing or readily expandable transportation infrastructure", but doesn't say how to measure it. My suggestions:

1. Adopt one open, capacity-based measure of transit accessibility to identify those areas.
2. Make the measure a shared, open national dataset, built on the General Transit Feed Specification (GTFS) data every state and territory already publishes, with the Commonwealth supporting it through its existing role in national planning reform.
3. Keep three storeys as a floor, and go higher where measured capacity supports it.
4. Set parking minimums from the same measure.

Transit is a sound basis for zoning for three reasons. First, it makes density productive: dense cities gain when people can reach jobs and each other, and transport investment manages congestion, so that a location's capacity to move people lets it absorb more homes without more road traffic. Second, it is where large public investment has already been made, in assets that deliver fewer productivity gains than they could while the land around them stays low density. Third, it can be measured consistently, at a time when data on infrastructure capacity is often opaque or unavailable, because every state and territory publishes timetables in the same open format. Water, electricity and sewerage need their own tests, but transit can be measured nationally today.

The measure matters as much as the principle. Most schemes that link zoning to transport use distance to station, sometimes combined with service frequency. Frequency-based indices like PTAL, which Victoria now uses to set parking rates, are an improvement on legacy schemes, but they treat five trains an hour and five buses an hour as the same. PETAL weights scheduled peak services by vehicle capacity and reliability, scores cells at 100m resolution, and links each score to a building height that location can support, based on bedroom density modelling. It gives developers, agencies, and governments one measure to work from: visible, because every score traces to the stops and services behind it, consistent, because the same method applies everywhere, and nationally viable, because it runs on published data. That replaces each jurisdiction defining "high quality" transit for itself. The method and code are open source (<https://www.petalexplorer.org>).

By way of example, I conducted a case study of two houses on adjoining 615m² lots at 127 to 129 Park Road, Woolloongabba, a short distance from the Boggo Road station interchange (case study attached). The site's cell scores PETAL 4A (134 effective units an hour), which could support 16 to 30 storeys (https://www.petalexplorer.org/?cell=r-031_c+006). Character Residential zoning allows two storeys. An indicative scheme, based on my experience in commercial practice, puts 70 apartments on the same land. That is the gap between what is possible and what is allowed, and it isn't isolated: the Queensland Productivity Commission found that 69% of residential land within a kilometre of Brisbane's train stations sits under low-density or character provisions. It also estimated that targeted zoning reform around South East Queensland's transport network could deliver net benefits of up to \$48 billion, more than double those of dispersed growth. Zoning tied to transit capacity would better capture the productivity-enhancing benefits of the infrastructure we've already built.

Zoning also has to reflect how buildings are engineered and built. Walk-up townhouses stop working at about three storeys, and above that, buildings need lifts and extensive scaffolding, which makes low-rise apartments rarely feasible to build. Taking the National Construction Code as given, engineering requirements step up at effective heights of 25 and 50 metres, roughly 8 and 16 storeys. PETAL's bands break at those points, and planning schemes should break at the same points of three, eight and sixteen storeys, so that height limits align with how buildings are built, rather than permitting building heights the market won't build.

Parking is the other feasibility constraint. Minimums force projects into expensive basements, adding cost and time that can make a project uneconomical to build, when the market could determine the rate of parking to provide. Victoria and Western Australia have tied minimums to transit, which points in the right direction, but frequency-based tests miss what a location can carry. Perth shows the effect. About 8,300 hectares of transit-served land scores PETAL 2 or better, yet sits outside WA's lower-rate area, while about 5,100 hectares scoring PETAL 1, served by fewer than ten effective bus services an hour, sits inside it. A capacity-based metric would catch both edges and give Reform Direction 2.5's "sufficient public transport connectivity" test a benchmark to measure against.

Taken together, zoning, feasibility and infrastructure each have to be right before a home gets built, and today they are decided separately, by different governments, on different assumptions. One open measure of what the transit can carry gives them a common reference. PETAL is a proof of concept of what that measure could be, built and working for Brisbane, the Gold Coast and Perth. It runs on data every state and territory already publishes, and the code is open source, so it can be extended to other cities from their timetable and zoning data.

With it, governments can show where to upzone and by how much, set parking to what a location needs, and plan infrastructure investment to align with zoned density. That would enable Reform Direction 2.2 to be operationalised on evidence, and deliver the gains the report is after: better use of the infrastructure we've already built, better use of well-located land, and more homes where people want to live.

Yours faithfully,

Tristan Clark

Attachments

1. Boggo Road case study, 127 to 129 Park Road, Woolloongabba
2. Clark and Perera, "Beyond frequency: a capacity-weighted and reliability-adjusted framework for measuring effective public transport accessibility", ATRF 2026