Opening up data for improved land supply measurement

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Abstract

Concerns have been expressed that planning assumptions prepared for Local Government Infrastructure Plans, and used by the South East Queensland Growth Monitoring Program to measure the capacity of planned supply, may significantly overstate supply.

Assessment of current planning assumptions for Brisbane, Gold Coast, Moreton Bay and Sunshine Coast, and comparison to available Unitywater Netserv Plan assumptions, indicates that they seek to identify a realistic level of ultimate development. However, there may be significant variations in the assessment of ultimate development and there is scope for improvements. There is also evidence consistent with the expectation that planning assumptions for Netserv Plans might tend to towards higher estimates of ultimate development, to help avoid the need for inefficient future upgrades of water networks.

Greater open access to data, including to enable industry input, could support improvements to land supply measurement over time. Measurement methods should simultaneously minimise inefficient future upgrades of water networks while also recognising the realistic rate at which development will take up supply and create a need for land supply and supporting infrastructure in other areas.

Introduction

Land supply and related infrastructure funding decisions should be based on what is required to improve outcomes for the community, but they tend to be mired in disagreement over the status of land supply and demand in an area. Disputed measurements make it hard to define the scale and nature of the problem and therefore constrain reaching an appropriate solution.

This paper considers the approach taken to measurement of land supply by the Queensland Government's South East Queensland (SEQ) Growth Monitoring Program (GMP) and the extent to which it may overstate supply. In particular, it looks at the base assessment of development yield, i.e. ultimate development, underpinning adopted planning assumptions as prepared for Local Government Infrastructure Plans (LGIPs).

The assumptions of the current LGIPs for the four largest local government areas (LGAs) in SEQ - Brisbane, Gold Coast, Moreton Bay and Sunshine Coast - are assessed and comparisons made to available Unitywater Netserv Plan assumptions for Moreton Bay and Sunshine Coast. This supports findings directed towards improved estimation of ultimate development, consistent with the interpretation of that term pursuant to the Minister's Guidelines and Rules for LGIPs and as adopted for the GMP's Land Supply and Development Monitoring (LSDM) reports.

The terminology used is that of the 2021 LSDM Report, with hypertext links provided to the definitions of that report where appropriate (DSDILGP 2021c).

Current circumstances

Efforts are being made through the Queensland Government's SEQ GMP, under the *SEQ Regional Plan 2017* (*ShapingSEQ*), to move towards a shared understanding of land supply and development activity data (DSDILGP 2021c).

The GMP's LSDM reports have adopted planning assumptions as prepared for LGIPs as a basis for measuring both the capacity of planned dwelling supply and the capacity of planned industrial employment supply, collectively referred to herein as 'planned supply'. In one case (Noosa), the planning assumptions used are as prepared for a Netserv Plan (by Unitywater).

Specifically, it is the ultimate development identified by the planning assumptions datasets, i.e. the growth from the base year of the assumptions to ultimate development, that is used to measure the capacity of planned supply.

Ultimate development is defined for LGIPS by the Minister's Guidelines and Rules (MGR). Taking into account the complementary explanation of 'planned density' in the MGR, and the associated method 'Requirement' of the LGIP Review Checklist, ultimate development is interpreted for this paper as:

> a realistic level and type of development when fully developed, having regard to the planning scheme and current development trends. (Queensland Treasury 2020; DSDILGP 2021a)

In 2021, the Department of State Development, Infrastructure, Local Government and Planning (DSDILGP) sought to further clarify how to determine a realistic level of development, informed by best practice methods research for the GMP. The guideline 'Local infrastructure planning Guidance for local governments and applicants (May 2021 – VS1.1)' indicates that an appropriate basis for determining planned densities and consequent ultimate development yield would be to adopt the following, in order of preference, subject to the availability of the relevant information at the property level:

- The estimated yield from approved structure plans, development plans or development approvals
- Stated developer intentions
- A default assumption derived from analysis of comparable local development examples
- Permitted density provisions from the planning scheme or other applicable instrument. (DSDILGP 2018, 2021b).

Quite apart from the LSDM reports' use of the LGIP and Netserv Plan planning assumptions in this way, those assumptions represent the best available comprehensive assessment of land supply and its take up for development over time. They inform local land use and infrastructure planning and funding decisions.

However, there are concerns that such ultimate development assumptions made for local planning assumptions datasets may significantly overstate land supply. The development industry has sought more engagement on assumed dwelling yields, opening them up to scrutiny and industry input. (UDIA 2022)

Potential for overstating supply

There are three primary ways in which ultimate development might overstate supply:

1. The assumed development yield, through a combination of assumed development density and developable land area, may exceed what is likely when the land is actually developed pursuant to the planning scheme, and/or

2. The assumed development yield may represent over-provision of a development type compared to expected demand, e.g. more multiple dwellings and fewer houses than may be sought by the market in that area, and/or

3. The availability of the land, or its feasibility, for such development yield or type may be beyond the relevant planning or market demand horizon.

In terms of item 3, the LSDM reports estimate scenarios for the realistic availability of planned supply, recognising that not all of the capacity identified by the planning assumptions can be expected to be realistically available for development up to the planning horizon (currently 2041 for *ShapingSEQ*). Improved methods are also being investigated in this respect. For example, the Financial Feasibility Model pilot study reported as part of the 2021 LSDM Report is one emerging tool, together with the consideration of other factors not addressed by the Model, which could improve the assessment of realistic availability. (DSDILGP 2021b, 2021c)

However, what about the base assessment of development yield and type? Given the available guidance:

- how do current methods and planning assumptions measure up, and
- is there an inherent conflict in using planning assumptions developed primarily for measuring future infrastructure demand to also measure land supply? For example, might there be a tendency to overestimate infrastructure demand to avoid under-provision in key parts of particularly closed water networks? Any such under-provision might inefficiently generate additional costs for future upgrades, e.g. for trunk sewerage mains.

Review of planning assumptions examples

Analysis of current methods for the purpose of this paper was limited to available published information, such as the LGIPs and Netserv Plans themselves and extrinsic material supporting them. For convenience, the focus is on the four most populous local government areas (LGAs) in SEQ: Brisbane, Gold Coast, Moreton Bay and Sunshine Coast. Also, due primarily to the open data policies of Unitywater, and facilitated by the Council's open data, some data is available publicly to enable more detailed analysis and comparisons for Moreton Bay.

Officially, the LGIPs for all LGAs have satisfied the following related 'Requirements' of the LGIP Review Checklist, as assessed by the local government itself and by an external reviewer that the local government selects from a panel appointed by the DSDILGP (Requirements as numbered in the LGIP Review Checklist):

13. The developable area excludes all areas affected by absolute constraints such as steep slopes, conservation and flooding.

14. The planned densities reflect realistic levels and types of development having regard to the planning scheme provisions and current development trends.

15. The planned densities account for land required for local roads and other infrastructure. (DSDILGP 2021a)

In terms of Netserv Plans, e.g. as prepared by Unitywater for Moreton Bay and Sunshine Coast, they are required by section 99BR of the *South-East Queensland Water (Distribution and Retail Restructuring) Act 2009* (the SEQ Water Act) to be endorsed by each respective council as being consistent with its planning assumptions (SoQ 2021). That does not mean,

however, that the Netserv Plan planning assumptions will be the same as the relevant LGIP for an area (DSDILGP 2021b).

The following table summarises the stated basis for planned density / ultimate development assumptions for residential development in the respective LGIPs and Netserv Plans.

LGIP / Netserv PLan	Basis for planned density / ultimate development

Brisbane LGIP	• Realistic level of development having regard to:
	  ○ Land use and yield provisions of planning scheme
	  ○ Recent development trends including development approvals
	  ○ Scale and land use mix of existing development
	  ○ External expert consultant advice
	  ○ Factors that affect probability / feasibility of development

Gold Coast LGIP	• Planning scheme – minimum lot size provisions primary input • Development trends, site, locational and ownership characteristics
Moreton Bay LGIP	• Sampling outcomes of recently completed development and development approvals • Sampling existing trends from similar developments, zones, precincts and areas • On average what the market is achieving or likely to achieve
Sunshine Coast LGIP	• Development approvals • Realistic development yield considering planning scheme, development trends, infrastructure and other matters • Low Density Residential Zone – vacant land develop to minimum lot size • Emerging Community Zone – develop to minimum lot size • Caloundra South, Palmview, Kawana and Maroochydore – yield forecast in relevant planning instrument
Moreton Bay and Sunshine Coast Netserv Plan	• Statutory planning instruments • Development approvals

Source: BCC 2018; CoGCC 2019; MBRC circa 2021; SCC 2017; Unitywater 2019a

The stated basis for planned density assumptions for LGIPs in the above table appears to seek to align with the MGR definition of ultimate development. However, in some cases the use of maximum density or minimum lot size provisions of planning schemes raises questions as to whether those maximum densities are likely to be achieved, on average.

For example, the adopted planned densities for the Medium and High density residential zones for Gold Coast are the maximum permissible densities identified by the respective zone codes.[1] In preparing its new Planning and Urban Growth (PUG) model, the detailed density/yield assumptions of which are not yet publicly available, the City of Gold Coast Council (CoGCC) has

> '…recalibrated the realistic estimation of development yields at small area level across all land use designations and zonings on the Gold Coast in order to establish a more reliable and realistic ultimate development scenario.' (DSDILGP 2021c)

This indicates that the current LGIP was not considered to be a sufficiently realistic ultimate development scenario, but also that the Council has made significant efforts towards improving ultimate development estimates for the PUG model.

[1] For the RD5 to RD8 density categories, which are expressed by the planning scheme as bedrooms per hectare, the densities assume on average the dwellings are two bedrooms.

To provide further insight, the following table compares relevant dwelling density assumptions of the Moreton Bay and Sunshine Coast LGIPs with the equivalent density assumptions of the Unitywater Netserv Plan.

Area	Dwellings per developable ha[2]	
	LGIP	Netserv Plan
Moreton Bay		
General Residential Zone:		
• Urban Neighbourhood Precinct	50-110	45-145
• Next Generation Neighbourhood Precinct	36-66	45-145
• Suburban Neighbourhood Precinct	11	14
Emerging Community Zone[3]	18-45	17.5-40.6
Centre Zone:		
• Caboolture Centre Precinct	85	45-227
• Morayfield Centre Precinct	70	91
• Strathpine Centre Precinct	70	91-227
• District Centre Precinct	45	45-91
Sunshine Coast		
High Density Residential Zone	50	73-364
Medium Density Residential Zone	40	73
Low Density Residential Zone	15	11.2
Emerging Community Zone	20	14

Source: MBRC circa 2021; SCC 2017; Unitywater 2019a

This table shows some significant variation between the densities assumed by the LGIPs and Netserv Plan, with the Netserv Plan densities more commonly, but not always, higher.

Detailed property level data available from Unitywater's website for ultimate development in Moreton Bay for the Netserv Plan, together with summary LGIP data published for Projection areas, provides the following further comparisons for ultimate development:

Moreton Bay Projection area	Dwelling type	2016 to Ultimate development (dwelling growth)	
		LGIP	Netserv Plan[4]
Inside Priority Infrastructure Area (PIA)			
Caboolture	Detached	7,724	8,712
	Attached	13,660	16,739
	Total	21,384	25,451

[2] Densities for Moreton Bay's Centre Zone and Urban and Next Generation precincts of the General Residential Zone and Sunshine Coast's High and Medium Density Residential zones are effectively site densities as they make no allowance for roads, parks, etc to take up part of the developable area. Densities for the other areas are net densities as they do make allowance for roads, parks, etc to take up part of the developable area.

[3] The Netserv Plan densities for the Emerging Community Zone in Moreton Bay are based on those reported for the Interim and Transition precincts (Unitywater 2019a).

[4] The Netserv Plan growth figures have the following main limitations for comparison to the LGIP figures:

- they are from 2017 to Ultimate development (2017 is the base year for the available data)
- they do not include parts of the growth potential, including nearly all of the 27,000 dwellings growth of the Caboolture West growth area, located outside the PIA.

These factors tend to reduce the Netserv Plan dwelling growth figures reported here compared to the total actual expected growth 2016 to Ultimate, particularly outside the PIA. Other factors affecting the comparison include:

- about 20,000 existing dwellings and 900 vacant parcels are also not captured by the demand forecasts used for the Netserv Plan figures. The effect of that in terms of net dwelling growth 2016 to ultimate is unclear, but it is unlikely to significantly reduce growth compared to that reported here, and
- depending on the extent to which the LGIP figures capture them as temporary accommodation, which is not counted here, the Netserv Plan dwelling growth figures may include a small component of visitor dwellings that is not captured by the LGIP figures. This would be less than 2000 dwellings across the whole local government area. (DSDILGP 2021c; Unitywater 2019b, 2019c)

Moreton Bay Projection area	Dwelling type	2016 to Ultimate development (dwelling growth)	
		LGIP	Netserv Plan[4]
Coastal Communities and Bribie Island	Detached	2,178	3,029
	Attached	2,428	4,247
	Total	4,606	7,276
North Lakes – Redcliffe – Moreton Bay Rail Corridor	Detached	10,696	12,873
	Attached	48,478	43,655
	Total	59,174	56,528
Strathpine	Detached	2,797	3,385
	Attached	10,631	14,150
	Total	13,428	17,535
Rural	Detached	1,534	2,337
	Attached	141	-23
	Total	1,675	2,314
Outside PIA			
Total	Detached	47,501	33,254
	Attached	18,358	10,675
	Total	65,859	43,929
Moreton Bay Local Government Area			
Total	Detached	68,430	63,589
	Attached	93,696	89,443
	Total	162,126	153,032

Source: MBRC circa 2021; Unitywater 2019b

Equivalent data is not publicly available to make a similar comparison for Sunshine Coast.

Although the comparisons are affected by somewhat different accounting for dwellings, for most of the Moreton Bay Projection areas the Netserv Plan ultimate development dwelling growth is about 20 per cent or more higher than the LGIP ultimate development dwelling growth. The main exception is the area outside the PIA, but that is because substantial components of the dwelling potential of that area are not captured by the available Unitywater demand forecasts, including nearly all of about 27,000 dwellings expected by the LGIP for the Caboolture West growth area (DSDILGP 2021c; Unitywater 2019b).

Findings

The indications from the above analysis are that, although planning assumptions do seek to identify a realistic level for ultimate development and therefore the capacity of planned supply, there may be significant variations in the assessment of ultimate development and there is scope for improvements.

This analysis has been facilitated by open access to at least some datasets from both Unitywater and Moreton Bay Regional Council. Greater open access to data, and consequent encouragement towards improved assumptions about a realistic level of development, including through industry input, could support improvements to land supply measurement over time.

The above analysis also provides evidence consistent with the expectation that planning assumptions developed to inform future demand for closed water supply and sewerage networks might tend towards higher estimates of ultimate development. From the perspective of planning for an adequate land supply, the need is for measurement methods to simultaneously address both:

- sensible planning to minimise the need for inefficient future upgrades of trunk sewerage mains and the like, and

- recognition of the realistic level of development expected in an area and also the realistic rate at which development will take up planned infrastructure capacity and create a need for land supply and supporting infrastructure in other areas.

References

BCC – *see* Brisbane City Council

Brisbane City Council 2018, *Brisbane City Plan 2014, Local Government Infrastructure Plan Extrinsic Material, Planning Assumptions*, June 2018, retrieved 31 December 2021, https://www.brisbane.qld.gov.au/planning-and-building/planning-guidelines-and-tools/local-government-infrastructure-plan/lgip-components-extrinsic-material-and-supporting-documents

CoGCC – *see* City of Gold Coast Council

City of Gold Coast Council 2019, *Local Government Infrastructure Plan, LGIP Extrinsic Material Planning Assumptions*, July 2019, retrieved 6 January 2022, https://www.goldcoast.qld.gov.au/Planning-building/Planning-our-city/Infrastructure-planning

DSDILGP – *see* Department of State Development, Infrastructure, Local Government and Planning

Department of State Development, Infrastructure, Local Government and Planning 2018, *2018 Land Supply and Development Monitoring Report*, retrieved 30 January 2022, https://planning.dsdmip.qld.gov.au/report/lsdm?release=2018&page=best-practice-research

Department of State Development, Infrastructure, Local Government and Planning 2021a, *LGIP Review Checklist, Approved form MGR 5.1 under the Planning Act 2016*, retrieved 31 December 2021, https://planning.statedevelopment.qld.gov.au/planning-framework/infrastructure-planning/planning-local-infrastructure

Department of State Development, Infrastructure, Local Government and Planning 2021b, *Local infrastructure planning Guidance for local governments and applicants*, May 2021 - VS1.1, retrieved 31 December 2021, https://dsdmipprd.blob.core.windows.net/general/local-infrastructure-planning-guidance-for-local-government-and-applicants.pdf

Department of State Development, Infrastructure, Local Government and Planning 2021c, *2021 Land Supply and Development Monitoring Report*, retrieved 23 January 2022, https://planning.dsdmip.qld.gov.au/report/lsdm?release=2021&area=gold-coast&page=residential

MBRC - *see* Moreton Bay Regional Council

Moreton Bay Regional Council circa 2021, *Local Government Infrastructure Plan (LGIP) Interim Amendment No. 1 – Planning Assumptions Extrinsic Material*, retrieved 6 January 2022, https://www.moretonbay.qld.gov.au/files/assets/public/services/building-development/mbrc-plan/background-studies/v6/planning-assumptions-extrinsic-material.pdf

Queensland Treasury 2020, *Minister's Guidelines and Rules*, under the Planning Act 2016 Version 1.1, commenced 11 September 2020, retrieved 29 January 2022, https://dsdmipprd.blob.core.windows.net/general/ministers-guidelines-and-rules-v1.1.pdf

SoQ – *see* State Of Queensland

State of Queensland 2021, *South-East Queensland Water (Distribution and Retail Restructuring) Act 2009*, retrieved 15 January 2022, https://www.legislation.qld.gov.au/view/pdf/inforce/current/act-2009-046

SCC – *see* Sunshine Coast Council

Sunshine Coast Council 2017, *Sunshine Coast Regional Council Local Government Infrastructure Plan, Background information for Planning Assumptions*, October 2017, Version 1, retrieved 6 January 2022, https://www.sunshinecoast.qld.gov.au/Development/Local-Government-Infrastructure-Plan

UDIA – *see* Urban Development Institute of Australia

Urban Development Institute of Australia 2022, *Policy Alert, SEQ Growth Monitoring Results*, retrieved 29 January 2022, https://e.udiaqld.com.au/t/ViewEmail/t/42C065BC571E9D602540EF23F30FEDED/CDC5DC635897A66120B193FBA00ED1DB?alternativeLink=False

Unitywater 2019a, *2019 – 2024 Water Netserv Plan (Part A), Appendix B – Schedule of Works*, October 2019, retrieved 9 January 2022, https://www.unitywater.com/building-and-developing/reference-library/water-netserv-plan

Unitywater 2019b, *Netserv Plan Planning Assumptions, UW Public Access DMaTT Layers, Moreton Bay Regional Council Water Demand Forecasts*, retrieved 15 January 2022, https://unitywater.maps.arcgis.com/apps/webappviewer/index.html?id=a7a671297aed49e98b447e6ef28cc9bc

Unitywater 2019c, *Netserv Plan Planning Assumptions, UW Public Access DMaTT Layers, Moreton Bay Regional Council Land Use*, retrieved 15 January 2022, https://unitywater.maps.arcgis.com/apps/webappviewer/index.html?id=a7a671297aed49e98b447e6ef28cc9bc